Annex A

DRAFT

REVISED NORTHERN IRELAND WASTE MANAGEMENT STRATEGY

DELIVERING RESOURCE EFFICIENCY
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PART 1: SETTING THE SCENE

Strategy development is as a continuous process, and the Waste Management Strategy for Northern Ireland is considered as a living document requiring regular review and revision to ensure that it remains relevant and the policies and actions contained therein are appropriate.

A scoping exercise was carried out in 2011 to consider the Waste Management Strategy in the context of EU requirements and policy developments in Northern Ireland and throughout the UK and Ireland since publication, in 2006, of the Northern Ireland Waste Management Strategy 2006-2020 entitled “Towards Resource Management” (the 2006 Strategy). The exercise developed and considered a number of options for how the Strategy might be revised, and proposed a ‘recast’ that would incorporate all of the requirements of the relevant EU Environmental Directives coupled with a continuation and development of policies in support of resource efficiency. It proposed a recast Strategy firmly based on the principle of adherence to the waste hierarchy while retaining the core principles contained in the 2006 Strategy.

European Union Context

This Strategy has been developed in the context of the relevant EU Environmental Directives and the current direction of EU policy towards life cycle thinking and a resource efficient Europe.

The EU Waste Framework Directive (2008/98/EC) (WFD) requires the establishment of waste management strategies and plans and sets out the elements that must be contained within them. It also introduces statutory targets for preparing for re-use and recycling of waste from households as well as preparing for re-use, recycling and other material recovery of construction and demolition waste. The requirements of the revised WFD have been transposed into NI legislation through the Waste Regulations (Northern Ireland) 2011.

The EU Landfill Directive (1999/31/EC) aims to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste, and contains targets for the reduction of biodegradable municipal waste going to landfills.

The Roadmap to a Resource Efficient Europe (RE Roadmap) which was published by the European Commission in September 2011 defines medium and long term objectives and the means for achieving them. The vision is of a European economy that by 2050 has grown and developed in such a way that respects resource constraints and planetary boundaries, and thus contributes to a global economic transformation. A key milestone is not just to manage waste but to recognise it as a resource and thereby create a ‘circular economy’ with residual waste reduced as far as possible. This will require a greater focus on waste prevention followed by increased recycling.
Northern Ireland Context

The 2006 Strategy reflects the move away from simply managing the waste we produce in a more environmentally friendly manner to preventing waste and managing resources. It is set out in three parts, with the key policies and actions presented as six policy strands. The strands are as follows:

- Waste Prevention
- Recycling and Recovery
- Waste Planning
- Data & Research
- Legislation & Enforcement
- Learning & Communication

The Waste Programme Board was established in 2010 as a non statutory Advisory Committee, under the chairmanship of the Minister of the Environment, to oversee and monitor implementation of the NI Waste Management Strategy. It comprises representatives from the Department, NILGA, the three district council Waste Management Groups, Environmental NGOs, and business groups.

In July 2011 the Board set up a Task Group to re-assess the 2006 Strategy’s targets and develop a prioritised programme of objectives and key performance indicators to ensure that the Strategy could deliver the overarching aims of the revised WFD.

The resulting Addendum to the 2006 Strategy identified a number of statutory targets, key performance indicators and legislative or policy requirements that will need to be met to maintain delivery and comply with the revised WFD. Targets and indicators were organised into four categories, and a prioritised programme of interventions was recommended as the basis for a revised delivery programme.

Programme for Government

The NI Executive’s Programme for Government 2011-2015 contains a specific commitment to achieve a household recycling or composting rate of 45% by the end of March 2015 under the objective ‘Protecting our People, the Environment and Creating Safer Communities’. This Strategy contributes to achieving this objective. The Programme for Government also contains a commitment to reduce the consumption of single use carrier bags by at least 80%.

Review of Performance

The 2006 Strategy aimed to provide the framework for addressing waste as a valuable resource to be managed and utilised. The six strands contained a number of actions and targets, and an assessment of progress against each was carried out as part of the scoping exercise for this Strategy. Of the 53
identified targets and actions, 42 were assessed as having been fully achieved either within or just beyond the set timescale.

While most of the actions related to non-statutory targets, all contributed towards meeting the statutory 2010 EU and Northern Ireland Landfill Allowances Scheme (NILAS) targets for the diversion of biodegradable municipal waste from landfill. For example the aspirational target for a household waste recycling rate of 35% by 2010 was achieved and, together with the reduction in the amount of waste produced through various awareness and education initiatives/campaigns, it contributed to a total of only 383,000 tonnes of biodegradable municipal waste in 2009/10 being landfilled against the statutory target of 470,000 tonnes.

**Key Strategic Drivers**

**Resource efficiency**

This Strategy moves the emphasis of waste management in NI from resource management (with landfill diversion as the key driver) to resource efficiency i.e. using resources in the most effective way while minimising the impact of their use on the environment. Therefore, this Strategy has a renewed focus on waste prevention (including re-use), preparing for re-use and recycling in accordance with the waste hierarchy. Making more efficient use of natural resources and facilitating increased re-use and recycling is expected to have a favourable impact on the NI economy and help to promote and support ‘green jobs’.

**Sustainable Development**

Northern Ireland’s Sustainable Development Strategy, (“Everyone’s Involved”), was adopted by the Northern Ireland Executive in May 2010. Acknowledging that none of us can avoid the implications of non-sustainable lifestyles, it sets out principles and strategic objectives to ensure socially responsible economic development while protecting the resource base and the environment for future generations.

This Strategy takes into account the guiding principles of the Sustainable Development Strategy and, in particular, the six strategic objectives which are:

- Building a dynamic, innovating economy that delivers the prosperity required to tackle disadvantage and lift communities out of poverty
- Strengthening society such that it is more tolerant, inclusive and stable and permits positive progress in quality of life for everyone
- Driving sustainable, long-term investment in key infrastructure to support economic and social development
• Striking an appropriate balance between the responsible use and protection of natural resources in support of a better quality of life and a better quality environment

• Ensuring reliable, affordable and sustainable energy provision and reducing our carbon footprint

• Ensuring the existence of a policy environment which ensures the overall advancement of sustainable development in and beyond government

Each Department has set out how they will contribute to achieving the priorities and strategic objectives of the Sustainable Development Strategy in the Sustainable Development Implementation Plan 2011-14 (“Focus on the Future”). OFMDFM, which has overall responsibility for monitoring the performance of Departments in delivering the Strategy, has established a Sustainable Development Concordat Group comprised of organisations from all sectors. The concordat is committed to positive action to support the delivery of the Sustainable Development Strategy and binds all Departments to delivering the objectives set out in the Sustainable Development Implementation Plan. The Sustainable Development Champions’ Group (SCG) is comprised of nominated officials at senior level as a first point of contact for each Department for issues surrounding sustainable development.

The Regional Development Strategy for Northern Ireland (RDS 2035 “Building a Better Future”) was published in March 2012 and informs the spatial aspects of all other strategies. It complements the Sustainable Development Strategy and highlights the contribution that recycling more waste and recovering energy from it can make to reduce carbon footprint and GHG emission. It recognises that managing our waste is a significant part of how we treat our environment and highlights the need to manage waste sustainably. This will be achieved through applying both the waste hierarchy, introduced by the Waste Framework Directive, and the proximity principle when developing treatment or disposal facilities in order to minimise the environmental impacts of waste transport.

Climate Change

While climate change is a global issue, it requires action at a number of levels. At the highest level the Kyoto Protocol secured commitments from 37 major industrialised countries and the EU to reduce greenhouse gas (GHG) emissions, and this led to the setting of an EU target to reduce GHG emissions from 1990 levels by 20% by 2020. The Climate Change Act 2008, which extends to Northern Ireland, established a legislative framework for the UK to reduce its GHG emissions by 80% from 1990 levels by 2050 and by 34% by 2020. The current NI Executive Programme for Government has set an ambitious target of working towards a reduction of at least 35% by 2025. In order to drive this forward it is the intention to introduce a NI Climate Change Bill to the Assembly by April 2014, with challenging long term and interim targets for GHG emissions on the face of the Bill.
The management of waste contributes directly to climate change through the emission of GHG from landfill sites and energy use. Overall, waste emissions account for around 3% of the UK’s GHG emissions. The NI Cross Departmental Working Group on Climate Change (CDWGCC) has identified, as a key responsibility for the Department, the progression of waste management policies which should deliver less landfill waste and hence reduce emissions.

The Green Economy

The global economy is fundamentally restructuring itself in the wake of recession whilst facing the challenges of managing finite natural resources and tackling climate change. There is a shift away from unsustainable consumption and production and a movement towards new, more environmentally friendly technologies and behaviours that can promote resource efficiency. We sometimes refer to this as the Green Economy.

Waste management can play its part in the creation of ‘green’ jobs, underpin existing jobs and increase regional productivity in a number of ways, for example, through;

- The development of the Strategic Waste Infrastructure Programme;
- Rethink Waste revenue funding, which provided £806k for 18 projects between 2010 and 2012, with £367k allocated for 2012/13 for 9 further projects;
- The development of policy on separate collections of recyclables and plans to restrict separately collected food waste going to landfill which will support the recycling and composting industries and emerging technologies such as anaerobic digestion and in-vessel composting;
- The adoption of waste quality protocols which have the potential to create cost savings and to increase sales of waste-derived products;
- The work of the North – South Market Development Steering Group (NSMDSG) in exploring opportunities for reprocessing facilities based on the island of Ireland;
- Continued delivery of resource efficiency support including financial incentives for businesses.

Health and Social well-being

This Strategy recognises that the proper management of waste can contribute to the health and social well-being of the people of Northern Ireland. Waste management must be carried out without endangering human health through pollution of water, air or soil or contamination of plants or animals. The waste management sector needs to ensure that local communities are facilitated to take an active role in re-use and recycling activities leading to a greater sense of community and social cohesion.
Overarching Principles

The Waste Hierarchy

The waste hierarchy is the cornerstone of EU waste policy and legislation, and is a core principle of this Strategy. The primary purpose of the hierarchy is to minimise adverse environmental effects from waste and to increase resource efficiency in waste management and policy.

As laid down in Article 4 of the WFD, the new waste hierarchy is a priority order for waste management to be applied as follows:

- Prevention;
- Preparing for re-use;
- Recycling;
- Other recovery, e.g. energy recovery; and
- Disposal.

While it is accepted that ‘Prevention’ is not technically a waste management measure, as it occurs before a material or object becomes waste, the reduction of waste per capita, through re-use or other policy initiatives is key to achieving the RE roadmap milestone of turning waste into a resource.

Preparing for re-use has been introduced as a new concept and the WFD ranks it above recycling in line with the aim of improving resource efficiency. The WFD hierarchy was introduced into NI legislation through the Waste Regulations (NI) 2011 and the Department produced guidance\(^1\) on its application under regulation 17(5). The WFD also allows that specific waste streams may depart from the waste hierarchy where this is justified by a life cycle assessment. The guidance describes what this means in practice for a number of common materials and products and includes an example of food waste for which current research shows that anaerobic digestion provides greater environmental benefits than composting and other recovery options.

Life cycle approach

The fundamental objective of the life cycle approach, or life cycle thinking, is to be aware of, and to take into account the overall impacts (environmental, economic and social) that a product or service will have throughout its whole life i.e. “from cradle to grave”. The aim of such an approach is to make decisions more transparent and from a sound basis.

At each life cycle stage, there is resource and energy consumption, and impacts created. Life cycle thinking aims to minimise the negative impacts while avoiding transferring the problem from one life cycle stage to another. The WFD introduces this approach and states that, when applying the waste management hierarchy, it may be necessary to depart from the strict

\(^1\) http://www.doeni.gov.uk/guidance_on_applying_the_waste_hierarchy.pdf
hierarchy for specific waste streams if this can be shown through life cycle thinking to deliver the best overall outcome.

Polluter Pays principle

The polluter pays principle is a guiding principle at EU level. The principal holds that the waste producer and the waste holder should manage the waste in a way that guarantees a high level of protection to the environment and human health. Therefore the costs of waste management should be borne by the original waste producer, or by the current or previous waste holders. Thus the full cost of providing services to manage waste is passed on to the waste generator. The EU Landfill Directive reflects this principle in requiring that the price to be charged for disposal of waste should as far as possible cover the costs involved in the setting up, operation, closure and aftercare of a landfill.

Proximity principle

The WFD also establishes the principle of ‘proximity’ within the context of the requirement for Member States (MSs) to establish an integrated and adequate network of waste disposal installations and installations for the recovery of mixed municipal waste collected from households, including such waste collected from other producers, taking into account best available techniques.

The network is to be designed to enable the EU as a whole to become self-sufficient in waste disposal and recovery, and each MS to move towards this aim. The Directive requires that the network shall enable waste to be disposed of or recovered in one of the nearest appropriate installations by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health. However, it also makes it clear that each MS does not have to possess the full range of final recovery facilities.

Integration of Waste Streams

In the context of this Strategy, this means encouraging the development of waste management solutions that encompass all waste. This ‘holistic’ approach reflects the broader definition of municipal waste and seeks to explore the potential benefits of to be gained from co-treatment of different waste streams, including the sharing of waste infrastructure.

In agreement with the European Commission the way in which municipal waste is defined in NI has been broadened. Previously, the definition only included waste which was collected by Councils but this has been changed to include all waste from households and all wastes of a similar nature and composition to waste from households, whoever collects it. As a result, the definition now includes commercial waste which is similar in nature to household waste.
Overarching considerations

Joined-up Government

Taking sustained and effective action on the key drivers identified in this Strategy - Resource Efficiency, Sustainable Development and Climate Change - requires a co-ordinated approach right across government.

The primary mechanism for co-ordinating the work of government on sustainable development is OFMDFM’s Sustainable Development Champions Group (SCG). The purpose of the SCG is to promote sustainable development within their own department, to contribute to the co-ordination of cross-cutting sustainable development issues across government and to inform and support the work of Ministers and other cross-departmental groups.

Other relevant inter-Departmental groups include the DETI-led Sustainable Energy Inter-Departmental Working Group, the DOE-led CDWGCC, the DSD-

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**Definition of Waste**

- **Household Waste** is defined in the Waste and Contaminated Land (NI) Order 1997 (the 1997 Order) and Schedule 1 to the Controlled Waste Regulations (NI) 2002 (as amended) and means waste from a domestic property or other specified premises.

- **Municipal Waste** is defined in the Waste and Emissions Trading Act 2003 and means waste from households and other waste which is similar in nature to waste from a household. This includes C&I waste which is similar in nature to waste from a household.

- **Local Authority Collected Municipal Waste** is defined in the Waste and Emissions Trading Act 2003 (Amendment) Regulations 2011, and means waste that is collected by, or on behalf of, a district council.

- **Commercial and Industrial Waste** is defined in the 1997 Order and Schedules 3 and 4 to the Controlled Waste Regulations (NI) 2002 (as amended) and mostly means waste from premises used wholly or mainly for the purposes of a trade or business, sport, recreation or entertainment.

- **Construction, Demolition and Excavation Waste** is defined in Schedule 3 to the Controlled Waste Regulations (NI) 2002 and means waste from construction or demolition works, including waste from any preparatory works.
led Green New Deal Working Group and the DOE-led Climate and Energy Thematic Group (part of the Barroso Task Force).

Government leading by example

The Sustainable Development Strategy recognises that government has a leading role to play in driving forward the agenda on environmental performance and sustainability and resource efficiency.

The government estate in Northern Ireland is managed centrally by the Department of Finance and Personnel (DFP). This provides a consistent approach, requiring all Departments to set out their targets and actions on waste, energy, water, estate, travel and procurement within Departmental Action Plans. Specifically, in terms of waste, government has in place a unified waste contract for the separate collection of recyclable wastes. General waste bins have been removed from main office floors to promote waste prevention and encourage waste segregation and recycling, with positive results beginning to show.

Government recognises that as a major construction client, it has a significant role to play in driving the resource efficiency agenda. The whole life cycle of construction, from raw material extraction, through construction, building use and demolition, is energy, carbon and resource intensive. CPD and the Centres of Procurement Expertise (the “CoPEs”) have a key role to play in the drive towards sustainable construction by assisting the Public Sector to embed sustainable development considerations into its spending and investment decisions.

All-Island approach

This Strategy takes into consideration relevant resource efficiency policies and strategies across these islands and in other parts of Europe. In particular there are strong economic and environmental benefits in seeking to ensure a compatible and complementary policy framework exists north and south. We also need to avoid introducing perverse incentives which may make illegal cross-border activity lucrative. The Department and the Department of the Environment, Community and Local Government (DECLG) along with the NIEA and the Environmental Protection Agency (EPA) work closely on the development, implementation and enforcement of waste policy and legislation. This Strategy seeks to take an all-island approach to a number of specific waste policy areas including:

- The development of elements of the Waste Prevention Programme;
- Support for re-use and repair networks;
- Consideration of an all-island quality mark for re-use;
- Identification of and support for all-island solutions in market development for recyclables;
- Ensuring compatibility between producer responsibility schemes;
- Co-operation in enforcement activities.
Better Regulation and Enforcement

Environmental legislation has brought about significant improvements in environmental standards and quality of life. However, in order to work well, regulation needs to be clear, targeted and proportionate to ensure that the required standards can be more readily achieved.

The EU is the source of much of our environmental legislation and, appropriately, it has placed its Better Regulation Agenda as one of its core priorities. In Northern Ireland, the Better Regulation Agenda is led and co-ordinated by DETI.

In 2001 the then Northern Ireland Executive introduced the Northern Ireland Better Regulation Strategy which aimed to minimise the burden of red tape on business. It placed obligations on all Northern Ireland Departments to promote Better Regulation and provide clear guidance to regulated businesses.

Through the Northern Ireland Environment Agency’s “Better Regulation for a Better Environment” programme the Department, in partnership with the Better Regulation Board, aims to modernise and simplify its approach to regulation to maximise environmental benefits and minimise the costs to businesses that comply with the law. We describe the work of the Department and NIEA in more detail in section 6.

Funding

The Rethink Waste Fund was implemented in April 2010 to provide grants for projects aimed primarily at diverting municipal and household waste from landfill, and increasing recycling rates. In 2011 the Northern Ireland Executive gave a commitment to continue to support effective waste management by local government and provide funding for the Rethink Waste Capital Fund over the period 2011 to 2015 totalling £9.3million.

The Rethink Waste Fund provides for Capital and Revenue grant funds. Both grant funds are administered by WRAP (Waste and Resources Action Programme) on behalf of the Department. Grants under the Rethink Waste Revenue Fund are currently open to Community and Voluntary groups, the private sector, Councils and the three Waste Management Groups. Grants under the Rethink Waste Capital Fund are open to Councils and the three Waste Management Groups only.

Invest NI’s £12 million Sustainable Productivity Programme for the period 2012/13 to 2014/15 was launched in August 2012. This Programme which aims to achieve significant cost savings in business, delivers integrated support for resource efficiency measures across the full arena of energy, water, materials consumption and waste. Four pillars of activity underpin this programme – an interest free loan fund for energy efficiency measures, a capital grant for water and/or material saving measures, project management of resource audits, technical consultancy, sectoral initiatives and workshops, and industrial symbiosis activity.
PART 2: POLICIES AND ACTIONS

Section 1   WASTE PREVENTION

Waste Prevention is key to optimising resource efficiency across all waste streams and is at the top of the waste hierarchy. The WFD defines prevention as ‘measures taken before a substance, material or product has become waste that reduces:

- The quantity of waste, including through the re-use of products or the extension of the life span of products;
- The adverse impacts of the generated waste on the environment and human health; or
- The content of harmful substances in materials and products.’

This reflects the need to promote sustainable consumption and production through improved product design and consumer behavioural change. Waste prevention also has an important role in supporting measures to reduce the impact of climate change and in providing cost savings to householders and businesses.

The RE Roadmap calls for a transformation in our attitude to our natural resources through greater re-use and the decoupling of economic growth from resource use. While it does not set specific targets for waste reduction, it contains a milestone that waste generated per capita should be in absolute decline by 2020.

How are we doing?

The stabilisation of waste generation was one of the key aims of the 2006 Strategy. The figure below shows the trend for Local Authority Collected Municipal Waste (LACMW) arisings per capita from 2002 to 2010 and compares this with the Gross Value Added (GVA) per capita in the NI economy over the same period. In 2010/11 almost 1 million tonnes of LACMW was collected in Northern Ireland. Overall, LACMW arisings per capita have decreased by just over 9% since 2002. There was an annual increase in arisings per capita of 2% until a peak in 2005/06, since when arisings have fallen by more than 11%. Over the same period GVA per capita, corrected for inflation, has increased marginally. Although the graph suggests potential decoupling of the relationship between economic growth and waste generation at certain points during the period, a longer more consistent time series is required before one could definitively conclude on this.
This Strategy’s aim in respect of waste prevention is to maintain the downward trend in waste arisings in Northern Ireland and effect a decoupling of arisings from economic growth. Although there are currently no EU targets for Waste Prevention, any reduction in waste generated will have a significant impact on meeting EU landfill diversion targets.

1.1 Development of Waste Prevention Programmes

Under Article 29 of the revised WFD, member states must have in place Waste Prevention Programmes by December 2013. The Department aims to issue a draft Waste Prevention Programme (WPP) for Northern Ireland for consultation in early 2013. In developing a Programme the Department will consider the scope for a common approach on Waste Prevention initiatives with Ireland. Waste Prevention Programmes will be reviewed and revised every 6 years.

It is anticipated that the draft Programme may include the following policies and interventions:

- Developing a re-use policy in conjunction with the WPP;
- Building upon the success of voluntary agreements such as halving waste to landfill;
- Supporting the Hospitality and Food Service Sector agreement;
- Use of financial levers such as the carrier bag levy;
- Development of the communications and education programme;
- Promoting re-use and improving public perception of quality through quality assurance schemes;
- Sponsorship of awards that highlight and reward good practice.
It is expected that Rethink Waste funding will play an important role in underpinning the Waste Prevention Programme, especially with assistance to the Third Sector, in order to promote and support innovative, sustainable projects.

**Action:** The Department will consult on a draft Waste Prevention Programme for Northern Ireland in early 2013.

### 1.2 Producer Responsibility schemes

The adoption of EU Directives relating to producer responsibility (PR) and the consequent UK-wide producer responsibility schemes are explained in detail at section 3.2. A fundamental principle of current producer responsibility legislation is to incentivise the incorporation of eco-design in the manufacture of products. In particular, the PR schemes for packaging and waste electrical and electronic equipment encourage manufacturers to design their products to reduce the amount and type of materials used; improve the longevity of products and maximise the potential for re-use.

Voluntary responsibility deals brokered with the grocery retail sector and the hospitality and food sector also contribute to waste prevention through their

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<tr>
<th>Rethink waste funding has been used to fund a range of waste prevention initiatives including:</th>
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<tbody>
<tr>
<td>• FareShare received funding of £30,530 in the first round of the Rethink Waste revenue fund for their project to provide quality food, surplus ‘fit for purpose’ product from the food and drink industry. In the first 12 months a total of 48.3 tonnes of food waste was diverted from landfill.</td>
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<tr>
<td>• Business in the Community received £40,000 to provide small and medium sized businesses with practical support through audits &amp; action plans to reduce environmental impacts &amp; increase resource efficiency. In the first 12 months a total of 886 tonnes of waste was diverted from landfill.</td>
</tr>
<tr>
<td>• The ‘Incredible Edible Cloughmills’ project received funding of £5,440 in 2010/11. The project enables the Cloughmills Community to work in partnership with local business, Ballymoney Council, local schools and others to promote the concept of ‘growing your own vegetables,’ food sharing, and promoting actions to reduce the amount of food waste produced within households and the local schools.</td>
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commitment to the reduction of food and packaging waste – see section 3.3.
1.3 Environmental Management Systems

The promotion and development of environmental management systems (EMSs) across the business sector, particularly among Small and Medium sized businesses (SMEs), is essential to maximising resource efficiency and supporting economic growth. Research has shown that the largest cost savings to be obtained through adopting EMSs are in the areas of waste and energy. In particular EMSs can play a valuable role in identifying opportunities for waste reduction.

Currently businesses in Northern Ireland are supported through schemes such as Invest NI's “Sustainable Productivity Programme” and Belfast City Council's BITES Programme which is also financially supported by Invest NI/DETI. Additional Council-managed and Invest NI-supported resource efficiency programmes are being considered by several other Councils. The Sustainable Productivity Programme can provide support to businesses wishing to investigate or implement environmental (or energy management) systems.

A 3 year strategic partnership between NIEA and Business in the Community's ARENA Network up to the end of 2014 is designed to take 270 SMEs through an environmental audit and develop EMSs for 50 businesses. The partnership includes targets for reduction in CO2 emissions and diversion of waste from landfill.

The Construction Employers Federation (CEF) have, in conjunction with their members and with the support of government, developed Nvir-o-Cert, a simplified accredited EMS scheme aimed specifically at the smaller construction firms who would not normally have the resources to put in place a formalised EMS.

Environmental Management Systems

An environmental management system (EMS) is a structured framework for managing an organisation's significant environmental impacts.

It can help companies comply with environmental regulations, improve their resource efficiency, reduce emissions and reduce bottom line costs. There are different types of EMSs available and businesses may choose what is appropriate for the size, complexity, nature and risks posed by the business.

When implementing an EMS, businesses should consider the value of adopting a recognised standard or scheme, such as ISO 14001, the EU Eco Management and Audit Scheme (EMAS) or the British Standard BS 8555.
1.4 Carrier Bags Levy

It is estimated that we use around 240 million carrier bags per year in Northern Ireland, many of which end up being landfilled. If discarded, carrier bags may also become an unsightly litter problem.

As a consequence of a Private Members Bill introduced to the Assembly in 2011 the Climate Change Act 2008 was amended to provide for a levy on all single use carrier bags and the proposal is highlighted in the NI Executive’s Programme for Government. The aim of the levy, in support of a cleaner, greener Northern Ireland, is to reduce consumption of single use carrier bags by at least 80%. Although the primary focus of the levy is on waste prevention and resource efficiency any revenue raised by the scheme will be used to support environmental initiatives.

The initial levy (of 5 pence per bag) will be confined to single use carrier bags and is expected to be implemented by April 2013. However, the Department will bring forward additional legislation to increase the levy to 10 pence per bag and extend it to low cost reusable bags by April 2014. The policy objective is to avoid a scenario where low cost re-usable bags are discarded prematurely. This would have a negative environmental impact.

Departmental officials have worked closely with counterparts from Ireland to learn from their experience of bringing in a plastic bags tax in 2002. This engagement has proved invaluable in the development of best practice administrative arrangements for the Northern Ireland levy.

**Action:** The Department will bring forward legislation to introduce a 5p levy on single use carrier bags by April 2013 and bring forward legislation to increase the levy to 10p and extend it to low cost reusable bags by April 2014.

**Target:** to reduce consumption of single use carrier bags by at least 80% within the first year of operation.

1.5 Re-use

As a component of Waste Prevention, re-use is defined in the WFD as any operation by which products or components that are not waste are used again for the same purpose for which they were conceived. The WFD requires member states to take measures to promote the re-use of products.

In tune with this increasing emphasis on re-use the European Commission will, by 2016, examine the case for a mandatory 5% re-use target to be shown separately from the recycling target level in respect of Waste Electrical and Electronic Equipment.

NIEA has produced a number of regulatory position statements relating to re-use. These cover topics such as the sustainable re-use of greenfield soil in construction and on the re-use of asphalt road planings, helping to prevent these valuable materials from becoming waste in the first place.
Industrial Symbiosis

With the inclusion of re-use, as part of waste prevention, and preparing for re-use in the revised waste hierarchy, industrial symbiosis will play an increasingly relevant role in delivering the targets and objectives of a Waste Management Strategy that has resource efficiency at its core.

Within Invest NI’s Sustainable Productivity Programme industrial symbiosis activity brings together businesses and industries from all sectors to identify and realise significant opportunities for the commercial exchange of commodities including for example water, waste, energy, logistics and expertise. There will be increasing potential for commercial opportunities such as these to be grasped in the years ahead as businesses focus on cost savings, compliance with statutory obligations and achieving corporate goals. During the period 2009/10 to 2011/12 Invest NI’s funding of industrial symbiosis activity has achieved the following economic and environmental benefits:

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Sales £’s</td>
<td>5,111,735</td>
</tr>
<tr>
<td>Jobs Created</td>
<td>9</td>
</tr>
<tr>
<td>Diversion from Landfill (tonnes)</td>
<td>107,479</td>
</tr>
<tr>
<td>Cost Savings £’s</td>
<td>4,962,515</td>
</tr>
</tbody>
</table>

Government leading by example

As part of their commitment to the Halving Waste to Landfill initiative\(^2\), DRD Roads Service, in 2010/11, established a baseline for materials in their construction contracts. This involved measuring and recording the total quantities in tonnes of: potential waste produced, material recycled on-site, material reused on-site, material reused off-site and material sent to landfill, for contracts exceeding £300k. In that year, 89% of waste materials were reused on-site, 3% was reused off-site and only 8% was landfilled.

Obtaining data on re-use activities

In order to assess progress towards the aim of waste prevention (including re-use) it is important to understand and measure re-use activities. As a waste prevention programme is developed it will become more important to be able to identify and quantify household items as well as materials from commerce which get reused and to know how much is reused in construction activities. Strong links with the third sector and the emerging re-use networks will play an important role in enabling access to useful data to help monitor progress in moving waste up the waste hierarchy towards re-use and prevention.

\(^2\) [http://www.wrap.org.uk/content/what-halving-waste-landfill](http://www.wrap.org.uk/content/what-halving-waste-landfill). See also paragraph 3.6
Section 2   PREPARING FOR RE-USE

The WFD defines this activity as ‘checking, cleaning or repairing products or components which have become waste so that they can be re-used for their original purpose without further pre-processing’. Once a waste is prepared for re-use for its original purpose it ceases to be a waste and no further waste controls are placed on it. Examples of preparing products or components for re-use include: electrical equipment; furniture and carpets; bikes; paint and clothing.

The Department recognises the need to support and encourage the establishment and continuation of re-use and repair networks throughout Northern Ireland and the potential for co-operation through these networks on an all-island basis. The expansion of re-use and repair networks will promote the development of social enterprises at a community level and stimulate opportunities for green jobs.

Re-use not only diverts waste from landfill but also contributes to significant carbon savings when compared to recycling. For the re-use market to grow there has to be social acceptance and confidence in the quality of the goods being sold. The availability of a re-use quality accreditation mark would assist in providing this confidence, particularly for electrical and electronic goods. Additionally, the marketing of re-used goods would be assisted if the marks had a wider use, acceptability and profile. The Department will support the development of a certifiable re-use quality mark and work with DECLG in assessing the feasibility of introducing a quality mark on an all-island basis.

Rethink waste funding has been used to fund a number of initiatives focusing on re-use including:

- East Belfast Mission received £33,433 for development of bicycle repair & refurbishment workshop.
- Voluntary Service Lisburn received £70,000 to refurbish furniture for re-use.
Section 3 RECYCLING

After Waste Prevention, including re-use, the next priority is to separate waste materials for recycling. This not only reduces the environmental impact of waste, but also reduces the demand on natural resources. Recycling is defined in the WFD as ‘any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes’.

The aim is to increase materials resource efficiency through the promotion of recycling of waste based on a life cycle approach which balances consumption and production. A strong emphasis will be on ensuring that manufacturers, retailers and importers take responsibility for the costs of treatment and recycling of their products when they become waste in line with the ‘polluter pays’ principle.

Recycling some materials can have greater benefits than others and this will also depend on the type of recycling undertaken. Closed loop recycling, where recycled materials are being used for the same purpose, is much better for the environment than open loop recycling, where the recycled material is ‘downgraded’. An example of this is glass bottles being recycled into a new glass product rather than being crushed for aggregate. Recycling materials which have the potential to reduce carbon impact the most, such as Food, Paper/Card, dense Plastics, Textiles and non-ferrous Metals must be the priority.

3.1 Developing recycling potential

Separate collections

In order to optimise recycling, segregation of all waste materials at source is best, wherever possible. The WFD requires the separate collection of at least paper, metal, plastic and glass by 2015. The Waste Management Regulations (NI) 2011 place an obligation on Councils and private waste collectors to meet this requirement. Collecting these recyclate waste streams separately from other wastes improves the quality of recyclates by avoiding contamination with other wastes which can ultimately lead to valuable recyclates failing to meet waste acceptance criteria and being re-directed to landfill or other recovery. European Commission guidance3 issued in June 2012 indicates that in meeting this requirement, it is acceptable to collect these waste streams co-mingled providing this does not compromise the quality or quantity of the individual waste streams.

The WFD also requires member states to take measures, as appropriate, to encourage the separate collection of bio-waste with a view to composting and digestion of bio-waste.

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Waste collectors should be encouraged to develop appropriate collection systems where recycling performance is currently often poor e.g. in areas of social deprivation or multiple occupancy housing. This may necessitate novel and innovative waste collection systems responsive to the needs of the community. There is scope within the Rethink Waste Fund to provide financial assistance to meet this goal.

Waste collectors should also consider the scope for introducing more recycling ‘on-the-go’ and explore, in association with planning authorities, the potential for the introduction of alternative collection technologies.

**Action:** Waste collectors to ensure the separate collection of at least paper, metal, plastic and glass by 2015.

**Action:** The Department will review the criteria for Rethink Waste funding to ensure that there is an appropriate emphasis on supporting projects aimed at improving recycling performance in areas where it is currently poor.

**Quality of recyclates**

The WFD requires member states to take measures to promote high quality recycling. Achieving a better quality recycleate will help to facilitate increased ‘closed loop’ recycling which is more resource efficient.

High quality recycling is important because it can help support growth and the green economy by maximising the economic value of the waste material collected. It can also help increase public confidence and participation in recycling. The Department will work with the waste management industry to produce transparent, robust and consistent information on quality to facilitate the proper functioning of the recyclate markets. It is intended that this will result in the development of a code of practice for materials recycling facilities (MRF) operators and similar establishments.

Where bio-wastes (food and green waste) are collected and treated in open windrow, In-Vessel Composters (IVC) or Anaerobic Digestion (AD) facilities they will count towards EU targets for recycling where PAS 100 compost or, as appropriate, PAS 110 digestate is produced and subsequently used. Where compost or compost-like digestate does not meet the PAS standards but is used as a soil enhancer or for the benefit of agriculture it is classified as a recovery operation.

**Action:** The Department will consult on proposals for a code of practice for MRF operators by end of 2013.

**End of Waste and the development of Quality Protocols**

In recent years there have been a number of developments aimed at defining when a waste material ceases being a waste in order to support a more efficient use of resources. The WFD sets out ‘end of waste’ conditions that must be met and the European Commission has published end of waste
criteria for iron, steel and aluminium scrap. The next waste streams expected to be addressed by the Commission include copper scrap metal, recovered paper, glass cullet, plastics and biodegradable waste/compost.

Where end of waste criteria have not been set at EU level, member states may develop their own. Accordingly, the NIEA have, since 2009, been participating in the development of a UK Quality Protocols programme. Quality protocols set out how to fully recover waste from a particular stream and turn it into a quality product. It defines the point at which waste ceases to be waste and can be used as a product without the requirement for waste management controls. By following quality protocols, producers can be confident that they are producing quality products from waste, providing confidence for end-users that the products are certified to relevant standards and do not fall under waste regulatory controls. Compliance with quality protocols is voluntary. If producers do not comply with the quality protocol in full, the waste will still be regarded as waste and the onward transfer and use of the waste will be subject to the requirements of the Waste Management Licensing Regulations (NI) 2003 as amended.

There are seven quality protocols currently in place in Northern Ireland relating to:

- The production and use of recycled gypsum from waste plasterboard
- The production of biodiesel from waste cooking oil and rendered animal fat
- Pulverised Fuel Ash/Furnace Bottom Ash (PFA/FBA)
- The production and use of quality outputs from anaerobic digestion of source segregated biodegradable waste
- The production and use of quality compost from source segregated biodegradable waste
- The production and use of processed fuel oil from waste lubricating oils
- The production and use of aggregates from inert waste

The NIEA will continue to work with the Environment Agency and other relevant authorities in developing further quality protocols, where they are relevant and beneficial to Northern Ireland. Currently, consideration is being given to developing protocols on biomethane, poultry litter ash and waste wood.

The Department also takes part in the EU-funded EQual project, due to run until 2015. The project aims to demonstrate to businesses and stakeholders methods to derive quality waste products without the need for waste regulation controls, in order to raise consumer confidence in using waste-derived products. To assist businesses e-tools are being developed to support end-of-waste decision making and for assessing compliance with quality protocols. The Department will continue to consider individual waste streams (e.g. incinerator bottom ash) for further development.

Market Development for recyclates

Maximising the value of resources that derive from waste materials requires the creation of demand-led markets involving the growth and maintenance of recycling, reprocessing and manufacturing infrastructure and of stable and profitable end markets. WRAP’s role in promoting market development addresses a number of key aspects including:

- Increasing the collection of quality waste materials for reprocessing – through supporting local authorities and collection and sorting service providers to capture more materials from householders and businesses;
- Developing protocols for the end-of-waste designation of waste-derived inputs to reprocessing;
- Building supply chain confidence in the performance of recycled content products leading to increased demand;
- Enabling financial investment into the reprocessing sector through a range of financial mechanisms and development of investor confidence;
- Building the competence and acumen of recycling sector businesses to gain investment and to grow;
- Providing current market data on commodity prices and economic indicators for supply and demand of key commodities, such as paper, card, plastic and glass.

These all impact on resource management in Northern Ireland by creating the conditions where economic gain is maintained and can grow, conserving materials resources, reducing dependence on landfill, increasing jobs growth in the recycling and reprocessing sector and its supply chains and reducing carbon emissions.

Invest NI continues to support Market Development by working with companies that demonstrate they are clearly adding value and introducing new or developing technologies, or are focussed on export sales as a way of increasing Northern Ireland’s productivity. Specifically, for the waste management sector, Invest NI will support businesses that can demonstrate development of sustainable markets for recyclable materials and how they can contribute to the wider aims of this Strategy to reduce the amount of waste produced and increase recycling. Support is also available to help companies with the implementation of resource efficiency projects.

The aim of the North South Market Development Steering Group (NSMDSG) is to drive forward a programme based on specific deliverables of mutual benefit and to exploit all-island economies of scale in the market for recycled materials. The Group will take action to implement an agreed work programme, through the Department of the Environment’s and Department of Environment Children and Local Government’s delivery bodies, WRAP and rx3 respectively. The Group has identified opportunities to develop all-island knowledge on waste management to support the development of markets for recovered waste resources. Opportunities for cooperation on common goals
in the areas of education, awareness and training have also been identified. Work recently carried out by the Group has included the All-Island Recycled Plastic Waste Arising Study and a study on bulky waste is currently being conducted.

Rethink waste funding has been used to fund a number of recycling initiatives including:

- **Down District Council** was awarded a Rethink Waste Fund (Capital) Grant of £432,623 in 2010/11 towards the cost of a new Household Waste Recycling Centre at Ballykine, Lisburn Road, Ballynahinch. The Centre became operational on 17 September 2011 and serves Ballynahinch and the surrounding catchment area and provides a full range of recycling facilities to reduce the volume of waste going to landfill. In the first year a total of 465 tonnes of waste was diverted from landfill.

- In 2011/12, Ballymena and Newtownabbey Borough Councils were awarded a joint grant of £242,400 to enhance collection of dry recyclables and broaden the range of materials that were able to be collected at the kerbside across two council areas.

- In 2011/12, Craigavon Borough Council was awarded funding from the Rethink Waste Fund. As a result of this project a gap was identified in the availability of recycling bins in areas of high social deprivation. Funding of £73,620 was awarded to provide recycling bins to cover this gap in service.

- In 2011/12, River Ridge Recycling was awarded a Rethink Waste Revenue grant of £50,809 to drive up the quality and amount of recycled material being recovered from the hospitality sector in the area.

- A Rethink Waste Revenue grant of £46,757 was awarded in 2011/12 to Innovation Ulster Ltd. This project facilitated 16 contracting companies in the construction sector to implement and operate a certifiable environmental management system (EMS) and waste management systems.

**Government leading by example**

Across the Government estate, a recycling contract was established in 2008 to separately collect and recycle food waste, paper, cardboard, shredded confidential paper, newspaper, plastic, metal, cans and glass. As a result,
across the Stormont Estate, an overall recycling rate of 71.5% was achieved in 2011/12. By working in partnership with staff and contractors, continued improvements to this recycling rate are expected to be made. Food waste is being separately collected from Parliament Buildings on a trial basis and is being sent to in-vessel composting. It is planned that this should be continued and rolled out across more of the Stormont Estate and NIEA has established separate food waste collections from a number of their facilities.

NIEA has implemented a fully accredited ISO 14001 environmental management system across each of its four main sites. In 2012 the benefits of this were:

- Sites within the scope of ISO 14001 accreditation recycled waste within the range 60-70%.
- All office paper was purchased from recycled sources containing 100% post consumer waste;
- New waste management contracts enabled NIEA to recycle a more diverse range of waste streams across all its sites and;
- NIEA put in place plans to pilot food waste collection for recycling from 2012.

3.2 Producer Responsibility

Producer Responsibility (PR) is aimed at shifting the costs of recovering, recycling or disposing of a product from the end user to the retailers, wholesalers and manufacturers in support of the polluter pays principal. PR is intended to give producers an incentive to employ eco-design in the development of products that:

- Use fewer resources;
- Reduce or eliminate the use of hazardous substances in their manufacture;
- Minimise waste from the product and reduce the amount of waste going to landfill;
- Are able to be repaired or reused, and;
- Are more easily treated, dismantled and recycled.

The EU has identified certain ‘priority waste streams’ for specific action through producer responsibility mechanisms and has adopted a range of legislation designed to support the polluter pays principal for these waste streams.

Packaging Waste

Packaging waste is the most significant waste stream dealt with under PR legislation. The EU Directive on Packaging and Packaging Waste (94/92/EC) sets a minimum recovery target (60%) and recycling target (55%) as well as material specific targets for glass, paper, plastic, wood and metals in order to minimise the impact of packaging waste on the environment. These
requirements are implemented through the Producer Responsibility Obligations (Packaging Waste) Regulations (NI) 2007 and only apply to businesses which handle more than 50 tonnes of packaging waste and have a turnover in excess of £2 million per annum (i.e. obligated businesses). In recognition of the potential to optimise packaging further and to address public concern about excessive packaging, the Department plans to introduce higher recycling rates for aluminium, plastic and steel for the period 2013-2017. The proposed recycling targets for each waste stream are set out in the table below and will be implemented through an amendment to the Packaging Regulations to take effect from 1 January 2013.

<table>
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</thead>
<tbody>
<tr>
<td>Paper</td>
<td>69.5%</td>
<td>69.5%</td>
<td>69.5%</td>
<td>69.5%</td>
<td>69.5%</td>
<td>69.5%</td>
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<tr>
<td>Glass</td>
<td>81.0%</td>
<td>81.0%</td>
<td>81.0%</td>
<td>81.0%</td>
<td>81.0%</td>
<td>81.0%</td>
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<tr>
<td>Aluminium</td>
<td>40.0%</td>
<td>43.0%</td>
<td>46.0%</td>
<td>49.0%</td>
<td>52.0%</td>
<td>55.0%</td>
</tr>
<tr>
<td>Steel</td>
<td>71.0%</td>
<td>72.0%</td>
<td>73.0%</td>
<td>74.0%</td>
<td>75.0%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Plastic</td>
<td>32.0%</td>
<td>37.0%</td>
<td>42.0%</td>
<td>47.0%</td>
<td>52.0%</td>
<td>57.0%</td>
</tr>
<tr>
<td>Wood</td>
<td>22.0%</td>
<td>22.0%</td>
<td>22.0%</td>
<td>22.0%</td>
<td>22.0%</td>
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Under these proposals the overall recovery rate will rise to 79% and the recycling rate to 72.7% 2017, thus ensuring that we meet the minimum EU Directive targets.

**Target:** To achieve the recovery and recycling rates for individual packaging waste streams as set out in the table by 2017.

**Target:** To achieve an overall recovery rate of 79% and overall recycling rate of 72.7% of packaging by 2017.

**Waste Electrical and Electronic Equipment (WEEE)**

The aims of the Waste Electrical and Electronic Equipment (WEEE) Directive (2002/96/EC) are to prevent WEEE arising, to encourage re-use and recycling and to improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment (EEE). The Directive sets targets for the recovery and recycling of different product categories of EEE and an overall collection target of 4kg of WEEE per person per annum.

A recast of the WEEE Directive has been adopted and will come into force across the European Union from January 2014. The Department will consult on legislative proposals to implement the recast Directive in 2013 through the amendment of the WEEE Regulations 2006 and associated Regulations. The proposals will include:

- A move to a collection rate of 45% of EEE placed on the market by 2018 increasing to 65% of EEE placed on the market by 2021;
- A broadening of the scope of the Directive to include more EEE and a re-definition of the categories;
• An increase to all recovery and recycling targets for all categories of EEE;
• The potential to introduce a mandatory re-use target of 5%;
• An obligation on distributors to provide for the collection of small WEEE at certain retail shops.

**Target:** To achieve a collection rate of 45% of EEE placed on the market by 2018 increasing to 65% of EEE placed on the market by 2021.

**Target:** To achieve the recovery and recycling targets for all categories of EEE as set out in the recast WEEE Directive

**Action:** The Department will consult on legislation required to implement the recast WEEE Directive by early 2013 to come into effect by January 2014.

**Restriction of Hazardous Substances (RoHS)**

Allied to the recast WEEE Directive, a revised EU RoHS Directive (2011/65/EU) will come into effect on 2 January 2013. The Directive restricts the use of certain hazardous substances in electrical and electronic equipment (EEE) and aims to protect human health and the environment by minimising the amount of potentially hazardous substances ending up in landfill sites and recycling processes. The restricted substances are lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers. The revised Directive broadens the scope of the products covered; widens the definition of EEE and requires all non-compliant products to be removed from the market by July 2019.

**Batteries and Accumulators**

Although a relatively small waste stream, the increased collection and recycling of batteries provides a real opportunity to increase resource efficiency as too many still end up in landfill. Under the Batteries and Accumulators and Waste Batteries and Accumulators Directive (2006/66/EC) producers of batteries are responsible for the safe environmental disposal of waste batteries. Key requirements of the Directive include:

• Registration of all ‘producers’ e.g. manufacturers or importers of batteries;
• Collection target for waste portable batteries of 45% of average annual sales in the UK by 2016;
• A ban on the disposal of untreated automotive and industrial batteries in landfill or by incineration and a requirement for ‘producers’ to arrange for the collection and recycling of waste industrial and automotive batteries, and;
• Restrictions on the use of cadmium and mercury in the design and manufacture of new batteries;
The Directive is transposed through the UK-wide Batteries and Accumulators (Placing on the Market) Regulations 2008 which places obligations on producers, distributors and treatment facilities to meet the requirements of the Directive. For example, all producers manufacturing or incorporating over 1 tonne of portable batteries per annum must join a batteries compliance scheme and contribute proportionately to the cost of recycling and all distributors who supply more than 32kg of portable batteries must take back waste portable batteries at the point of sale.

**Target:** To achieve a collection rate of 45% of average annual sales in the UK of all waste portable batteries by 2016.

**End of Life Vehicles (ELVs)**

The End-of-Life Vehicles (ELV) Directive (2000/53/EC) aims to reduce the environmental impact of vehicles (cars and vans up to 3.5 tonnes) by introducing higher environmental standards for the treatment and dismantling of vehicles when they are scrapped. The principal objectives of the Directive are an increase in the recycling of ELV’s and their components and the improved environmental performance of all the economic operators involved in the life cycle of vehicles. The Directive was transposed by UK-wide Regulations in 2003.

The End-of-Life Vehicles Directive set an overall 85% re-use, recycling and recovery target from 2006, rising to 95% in 2015. For the 2015 target, energy recovery can contribute a maximum of 10% of the total. There has been significant investment in new technologies to recover increasing value from ELVs and, in particular, the treatment of automotive shredder residue (ASR). More capacity will be needed, however, to enable the 95% target to be met, with ASR likely to be a continuing focus.

**Target:** To achieve an overall re-use, recycling and recovery rate for end of life vehicles of 95% by 2015.

**Review of Producer Responsibility Schemes**

The various PR Regulations for each of the waste streams share a common financial obligation for producers to bear the costs of collecting, treating and recovery/recycling a proportion of their products to meet targets and minimum standards and have similar administrative processes such as producer registration, approvals of compliance schemes and the authorisation of treatment facilities. However, there are also significant differences between the regimes which has led to criticism, particularly from those businesses which have to comply with more than one set of Regulations.

The Department in conjunction with DEFRA, BIS and the other devolved administrations is currently reviewing the suite of producer responsibility legislation with the aim of developing more coherent and consistent PR regimes capable of delivering more effective environmental outcomes and
targets at least cost to business. It is planned to issue a public consultation document, impact assessment and draft amending Regulations by April 2013.

This review will tie-in with a ‘fitness check’ of certain EU PR legislation (including the Packaging and Packaging Waste Directive, Batteries and Accumulators Directive and End of Life Vehicles Directive) being carried out by the European Commission. In addition the Department will play an active role in the concurrent review of the Producer Responsibility Initiative Model in Ireland being led by DECLG with the aim of ensuring a higher degree of compatibility between PR regimes north and south and reduce the potential for illegal activity due to the existence of perverse incentives.

**Action:** The Department will consult on revised PR Regulations by April 2013.

**Tyres**

Used tyres represent a particular niche problem waste stream, both environmentally and logistically. The Department continues to work closely with DECLG, District Councils, the tyre manufacturing industry, the waste industry and other partners to tackle the issue of illegal activity and poor legal compliance. A Departmental Used Tyres Working Group was established in 2011 to identify the scale of the problem of used tyres in Northern Ireland and to draw up an action plan to tackle the problems associated with this waste stream. The action plan included the commissioning of a survey, on an all-island basis, to identify the scale of the problem and an examination of the regulatory and enforcement frameworks surrounding the used tyre industry.

The survey report, due in September 2012, will include a suite of recommendations to address the issues surrounding the mismanagement of used tyres. The Environment Committee to the Northern Ireland Assembly also commissioned a report into used tyres which also set out specific recommendations which the Department will be considering for taking forward. In addition a task group on used tyres, established by the Waste Programme Board, has provided a report. The findings and recommendations of these reports will inform the work of the Department in developing proposals in partnership with the waste management sector to address the policy, regulation and enforcement concerns.

**Action:** The Department will finalise the Used Tyres Action Plan by February 2013.

**3.3 Voluntary Agreements**

The establishment and implementation of voluntary agreements is becoming increasingly important in ensuring best use of resources. The Courtauld Commitment, first launched in 2005, is aimed at improving resource efficiency and reducing the carbon and wider environmental impact of the grocery retail
sector. It is delivered UK-wide through WRAP who work in partnership with leading retailers, brand owners, manufacturers and suppliers.

Phase 2 of the Commitment, which ran from 2010-2012, had three targets:

- To reduce the carbon impact of all grocery packaging by 10% through reduced packaging weight, increased recycling rates and increased recycled content;
- To reduce household food and drink waste by 4%, and;
- To reduce traditional grocery product and packaging waste in the grocery supply chain by 5%.

Initial results are encouraging in respect of meeting or exceeding these targets. The Department will work with WRAP, DEFRA, the other devolved administrations and the retail sector to develop proposals for a continuation of the Courtauld Commitment beyond 2012, with a renewed focus on reducing the amount and impact of food waste and packaging.

A voluntary agreement involving many of the leading companies from the UK Hospitality and Food sector was launched in June 2012. The agreement aims to cut food and associated packaging waste by 5% and to increase the overall rate of food and packaging waste that is being recycled, sent to AD or composted to 70% by the end of 2015. The voluntary agreement, which was developed with industry and all four UK governments, builds on WRAP’s research, and work already being undertaken by the sector to enhance its waste management strategies.

Organisations that opt to sign up to the agreement either join as signatories or supporters, depending on their role within the sector, with signatories reporting directly against the two main targets. The voluntary agreement will be overseen by a Steering Group, which will include signatories and supporters. The group will have responsibility for providing input to voluntary agreement strategy, reviewing progress on delivery against the targets, and sharing good practice.

**Target:** To achieve a reduction in food and associated packaging waste by 5% and to increase the overall rate of such waste which is recycled, sent to AD or composted to 70% by 2015.

### 3.4 Municipal Waste Recycling

**How are we doing?**

The 2006 Strategy contained a non-statutory target for recycling and composting of Household wastes of 35% by 2010. The figure below shows the trend for Household Waste Recycling since 2002. In particular there were large gains between 2002 and 2005/06 and slightly reduced gains in the years since then. In 2010/11, 37.3% of Household Waste was recycled or composted, exceeding the 2006 Strategy target.
The trend for recycling of LACMW is quite similar to that of Household waste, as indicated in the figure below. In 2010/11, 35.5% of all LACMW arisings were recycled or composted. This figure has risen continuously since 2002, although the rate of increase has slowed somewhat in recent years compared to the large gains achieved between 2002 and 2005/06.
Municipal waste recycling targets

The WFD sets a recycling target (incl. preparing for re-use) of 50% of household waste by 2020. The Directive indicates that this target may also include waste from other origins which are similar to waste from households. This is a statutory target which must be met in order to comply with the WFD and avoid potential EU fines.

The NI Executive’s Programme for Government introduces an interim recycling target for household waste of 45% by 2015.

However, following the outcome of a public consultation a new recycling policy in 2011, it is planned to introduce a statutory recycling target of 60% by 2020 for LACWM. The Department will consult on proposals next year for the statutory target with the intention of introducing a draft Bill into the Assembly in early 2014 with a view to it receiving royal assent before the Assembly dissolves in 2015. It is anticipated that achieving this more ambitious target will ensure that the WFD target and the interim PfG target relating to household waste are both met. The consultation surrounding the introduction of legislation to introduce the statutory target will seek views on who the target should apply to, the scope of the definition of ‘recycling’, sanctions and penalties for the regime, and any other issues that come to light during the consultation process.

Through the Local Authority Support programme, delivered by WRAP, Councils will continue to be given technical support and advice in the provision of improved services to householders and local businesses on kerbside collection, home composting, communication tools, training and procurement.

**Target:** To achieve a recycling rate of 50% (including preparing for re-use) of Household waste by 2020.

**Target:** To achieve a recycling rate of 45% (including preparing for re-use) of Household waste by 2015.

**Target:** To achieve a recycling rate of 60% (including preparing for re-use) of LACMW by 2020.

**Action:** The Department will consult on legislative proposals to implement a LACMW recycling target of 60% to be achieved by 2020.

3.5 Commercial & Industrial Waste recycling

How are we doing?

The 2006 Strategy contained a non-statutory target of 60% of Commercial and Industrial (C&I) waste to be recycled by 2020. In the absence of mandatory reporting surveys have been used to determine C&I waste arisings
and levels of recycling. The latest Northern Ireland C&I survey\(^5\) published in 2011, which covered the year 2009, estimated that there was almost 1.3 million tonnes of C&I waste collected in Northern Ireland, 0.8 million tonnes of which was from the industrial sector and 0.5 million tonnes from the commercial sector. Of this 1.3 million tonnes, 70% was diverted from landfill. The figure below shows the destination of C&I arisings in 2009.

Significant benefits have been brought about in the C&I sectors through the promotion of Environmental Management Systems to support all business sectors. Furthermore, plans for the separate collection of recyclables from businesses and proposals to restrict separately collected food waste from food producers and retailers going to landfill will have a significant impact on diverting C&I waste away from landfill and moving it up the waste hierarchy. In addition, the launch of a number of quality protocols in Northern Ireland that specifically target certain C&I waste streams e.g. food and green waste and pulverised fuel ash and furnace bottom ash offer the potential to recycle these wastes.

**Monitoring and reporting**

Currently, there is no statutory mechanism for collecting and reporting data on Commercial and Industrial (C&I) waste. Commercial waste which is collected by District Councils is monitored and reported through the WasteDataFlow system but there is no comparable system in respect of the C&I waste which is privately collected.

Waste surveys have, historically, been commissioned in order to determine information relating to C&I arisings and recycling figures which is required by the European Commission under the Waste Statistics Regulation (Regulation (EC) No 2150/2002) and in order to report against the 2006 Strategy target.

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\(^5\) Northern Ireland Commercial & Industrial (C&I) Waste Estimates, WRAP, November 2011
However, waste surveys of this nature are generally subject to poor response rates and hence have a high level of uncertainty attached to their resultant estimates.

Waste operators, as part of their licence/permit conditions, are required to provide information on the waste that they handle but, currently, there is no specific statutory requirement on them to provide the level of detail through these returns which would be necessary to obtain accurate and comprehensive information on C&I waste arisings and recycling levels.

Given the lack of comprehensive or sufficiently robust data on C&I waste it is considered inappropriate, at this time, to set a recycling target specifically for C&I waste. This Strategy acknowledges, however, the increasing importance of managing waste in a more integrated way and the need to ensure that all resources are managed efficiently. The introduction of a statutory recycling target for C&I waste in the near future is therefore considered desirable. The European Commission has also indicated the possibility of proposing recycling targets for C&I waste by 2014.

In order to facilitate the setting of a statutory recycling target for C&I waste in the future and to improve the capacity to report on possible future EU targets the Department intends to consult on proposals to introduce a statutory requirement on waste operators to provide specified data on C&I waste as a condition of their license or permit.

**Action:** The Department will consult on proposals to introduce a statutory requirement on waste operators to provide specified data on C&I waste by December 2013.

### 3.6 Construction & Demolition Waste recycling

**How are we doing?**

The latest CD&E waste survey published in 2011, which covered the 2009/10 financial year, estimated that there was just over 3.5 million tonnes of CD&E waste arisings in Northern Ireland. Only a certain proportion of CD&E waste arisings are subject to the revised Waste Framework Directive, i.e. non-hazardous CD&E waste excluding uncontaminated stones and soil, and this accounted for 1.2 million tonnes, of which 70% was diverted from landfill. The figure below shows the destination of CD&E waste arisings for the year 2009/10.

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Construction, Demolition and Excavation Waste (excluding uncontaminated soils and stones) destination, 2009/10

- Re-use: 12%
- Recycling: 40%
- Recovery: 18%
- Disposal (landfill): 13%
- Unknown: 17%

(Data and chart supplied by Analytical Services Branch, DoE)

Construction & Demolition waste recycling targets

The WFD sets a recovery target (incl. preparing for re-use, recycling and other material recovery) of 70% for all non-hazardous construction and demolition waste by 2020.

The 2006 Strategy set an aspirational recycling and re-use target of 75% for CD&E waste by 2020. However, this target includes the re-use of excavated naturally occurring material which is not included in the WFD target. It is therefore likely that the WFD target will be more challenging to achieve and, on that basis, will be the target aspired to in this Strategy.

**Target:** To achieve a recovery rate (including preparing for re-use, recycling and other material recovery) of 70% for all non-hazardous construction and demolition waste by 2020.

Much progress has been made under the Better Regulation work programme on setting voluntary standards for recycling and recovering certain well-managed wastes from the C&D sector. The introduction of quality protocols for certain materials e.g. gypsum, aggregates and flat glass enables these materials not only to be recycled but turned into quality products which no longer fall under the waste regulatory controls. Further development of ‘C&D’ focussed quality protocols is expected in the future.

**Government leading by example**

In order to contribute to meeting the 75% target for CD&E wastes, the Government Construction Clients’ Group (GCCG)\(^7\) has, in its Sustainability

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\(^7\) GCCG comprises representatives from all NI government bodies involved in construction.
Action Plan for 2012-15 set targets for reducing waste during construction and operation, including the following:

- Each CoPE has set a percentage waste to landfill reduction target for each year to achieve a 75% (or better) recycling or re-use of construction, demolition and excavation wastes by 2020;
- Government construction projects shall include a minimum of 10% by value of recycled content;
- Each CoPE shall sign up to the commitment of WRAP’s Halving Waste to Landfill;
- Government construction contractors and their supply chain to achieve a CEEQUAL or BREEAM rating of ‘excellent’ for all new build projects and a rating of ‘very good’ for all refurbishment projects.

CPD and the Centres of Procurement Expertise (CoPES) will consult with industry representatives through the Construction Industry Forum for Northern Ireland (CIFNI) to develop proposals for environmental management systems (EMS) in construction procurement. The Construction Employers Federation (CEF), a member of CIFNI, has developed Nviro-O-Cert, which is designed specifically to help smaller construction firms to implement an accredited EMS.

Halving Waste to Landfill initiative

Halving Waste to Landfill is a voluntary agreement, brokered by WRAP, which provides a framework through which industry can support and deliver against the industry target of halving waste to landfill by 2012. By supporting Halving of Waste to Landfill, an organisation will undertake to adopt a common approach to measuring and reporting on progress. The Commitment’s clear supply chain approach to measurement and common metrics helps signatories to achieve year on year improvement and generate significant cost savings. By supporting the Commitment – and delivering against it – a business can cut its costs and reduce its carbon footprint. Signing up formalises a commitment to embed sustainable policies and practices, and measure and report your success. All parts of the construction supply chain have a part to play – clients, design teams, contractors and their subcontractors, suppliers, manufacturers and waste management contractors. Building on the success of Halving Waste to Landfill and the strong relationships with the sector resulting from this voluntary agreement, WRAP will investigate options for driving forward resource efficiency within the Construction sector beyond 2012. There will be a focus on designing out waste in the construction supply chain. Web-based tools and guidance on best practice will be promoted alongside maintaining relationships with key stakeholders, such as Central Procurement Directorate and construction trade bodies.
Section 4 OTHER RECOVERY

At present we cannot prevent, reuse or recycle all of our waste. However, some residual waste has value in the form of recoverable energy and other by-products such as soil conditioners. The Department supports efficient energy recovery from residual waste in accordance with the waste hierarchy which can deliver environmental benefits, reduce carbon impacts and provide economic opportunities.

Both anaerobic digestion and thermal treatment facilities provide energy from waste. Energy from waste can contribute to meeting NI’s non-fossil fuel obligations and Government’s policies on renewable energy, as well as helping NI meet its landfill diversion targets. In addition, the mechanical biological treatment (MBT) of waste can produce a fuel (sometimes referred to as Refuse Derived Fuel (RDF)) which may also provide energy from waste through subsequent thermal treatment, for example, in a cement kiln, power station, incinerator or gasifier.

The benefits of recovery include preventing some of the negative greenhouse gas impacts of waste in landfill. Preventing these emissions offers a considerable climate change benefit, with the energy generated from the biodegradable fraction of this waste also offsetting fossil fuel power generation, and contributing towards our renewable energy targets.

4.1 Waste Infrastructure

Background

The primary aim of the Strategic Waste Infrastructure Programme established in 2008 is to ensure that Northern Ireland meets its share of the EU Landfill Directive targets and to help ensure that individual Councils meet their NI Landfill Allowance Scheme (NILAS) targets for 2020. However, surety of compliance with landfill diversion targets is not the only basis for the Programme. Other potential benefits include:

- Provision of Best Value solutions for individual Councils;
- Mitigating the effects of Landfill Tax on ratepayers;
- Fulfilling the obligation on Northern Ireland as a whole to adhere to the principle of self-sufficiency and not to be dependent on external capacity at a future date;
- A viable means of addressing any future landfill restriction on food waste;
- A viable means of addressing a potential EU ban of all biodegradable material from landfill by 2025;
- Provision of a recovery option for waste which would otherwise be landfilled and therefore provide environmental and carbon benefits.

In determining how to manage the procurement of the infrastructure necessary to achieve compliance, local government identified a preferred model based on three separate projects to be procured under the auspices of
its three Waste Management Groups. The Strategic Waste Infrastructure Programme was established in 2008 to support the local Waste Management Groups in their procurements. Oversight of the individual procurements is managed through the Waste Infrastructure Programme Board. A Programme Delivery Support Unit (PDSU) has been jointly funded by the Department and the Strategic Investment Board to provide specialist advisory services to the WMGs and the Department.

Scope of Programme

An Analysis of the waste infrastructure requirements in NI to meet EU Obligations was commissioned in October 2011\(^8\) to take account of the new definition of municipal waste and developments in respect of waste arisings, recycling and available merchant capacity since the commencement of the Programme. While it confirms that all three projects are no longer required to achieve compliance at NI level, the other potential benefits identified above, allied with the high degree of risk attached to waste infrastructure procurements generally, provide a strong rationale for continued support for each of the procurements. At the same time there is a need for a more ‘holistic’ approach to Programme direction and management as identified in the Programme Gateway of November 2011. In the context of ongoing risks to project delivery continued funding of all three procurements indefinitely is not sufficient of itself to guarantee compliance, and the future direction of the Programme will focus available resources on providing a reasonable level of assurance of meeting Landfill Directive obligations at NI level rather than on the delivery of the projects per se.

**Action:** Waste Management Groups will implement plans in respect of residual waste infrastructure procurement.

**Action:** The Department will focus available Strategic Waste Infrastructure Programme funding on providing a reasonable level of assurance of meeting the EU Landfill Directive obligations.

Export of waste

The UK Plan for Shipments of Waste sets out Government policy on shipments of waste for disposal to and from the United Kingdom. The principle of the UK Plan is to underpin the aim of self-sufficiency in the disposal of waste.

Under the UK Plan there is scope for residual waste which has undergone basic treatment (removing some recyclables, sorting and shredding) to be transferred between Northern Ireland and Ireland in either direction. There may, therefore, be some scope for facilities in Ireland to provide a commercially competitive interim solution to Councils’ landfill diversion obligations, pending the introduction of appropriate locally-based facilities for

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\(^8\) Analysis of 2020 Residual Waste Infrastructure Requirements in Northern Ireland, DOE/SIB, March 2012
addressing Northern Ireland’s longer term needs. The Department is considering a change to the Transfrontier Shipment (TFS) fees structure which should facilitate regular movements of pre-treated waste to Ireland.

There are no plans to alter the UK Plan to relax the current ban on shipment of untreated waste from Northern Ireland to any facility in Ireland or vice versa. The NIEA has published a Regulatory Position Statement\(^9\) on exports of treated residual municipal waste to the EU for energy recovery. The statement provides clarification on exports of mixed municipal waste and the need for treatment prior to exporting. The European Commission has indicated that they expect such waste to have undergone ‘substantial’ treatment and regulators across the UK are considering how this could be accommodated and reflected in further guidance to waste operators.

**Action:** The Department will consult on proposals to introduce a change to the TFS fees structure in Northern Ireland by January 2013.

**Supporting Energy policies**

The plans for waste infrastructure in Northern Ireland need to be flexible enough to adapt to changing feedstock over time. As more waste is recycled, we need to understand how to adapt to recover the best value from what is left, while delivering the best environmental outcomes. Innovation and the appropriate use of new technologies need to be encouraged where they provide that flexibility. Given the proposed introduction of a ban on the landfilling of separately collected food waste there is scope for the development of alternative technologies including anaerobic digestion (AD) and in-vessel composting (IVC) to complement these changed circumstances in the future.

**Support for Anerobic digestion and In-vessel composting**

The development of AD facilities is eligible for financial support under the Renewable Heat Incentive and Northern Ireland Renewables Obligation (NIRO). Since 2005, the NIRO has been successful in stimulating increased levels of renewable electricity. Under the system, AD operators are eligible for 4 Renewable Obligation Certificates (ROC’s) per MWh for installations up to 500kW capacity; 3 ROC’s per MWh for installations between 500kW and 5MW capacity with those installations over 5MW capacity eligible for 2 ROC’s per MWh. Proposals are being taken forward which could see a stepped reduction in the amount of ROC’s available for the larger installations, over 5MW. However, in order to continue momentum towards meeting the 2020 target for 40% energy from renewable sources, DETI have committed to extending the lifetime of ROC’s for existing installations from 2033 until 2037. DETI are currently reviewing NIRO in the context of developments at a UK level.

By Autumn 2012, DETI will have legislation in place to give effect to the renewable heat incentive (RHI) for a range of renewable heat technologies. The Northern Ireland RHI tariff for bio-methane production (including from AD) will be 3p per KWh and this will be available for the lifetime of the technology, to a maximum of 20 years.

The Department will continue to maintain close liaison with DARD on issues relating to agricultural waste infrastructure and with NI Water in relation to the disposal of sewage sludge, so that any opportunities for utilising feedstock from the municipal waste stream in AD or IVC facilities can be exploited.

Waste Management Plans

On behalf of their constituent Councils, the three WMGs will review and revise their WMPs by August 2013. Thereafter, formal reviews will take place at intervals of no more than six years. The revisions will address the detailed facilities and locations for the management of municipal waste and will include a specific provision for the management of all waste streams.

**Action:** Waste Management Groups will review and revise their Waste Management Plans by August 2013.

4.2 **Planning considerations**

**Current Planning Policy and Waste Management**

Planning Policy Statement 11 ‘Planning and Waste Management’ (PPS11) was published in 2002 and sets out the Department’s policies for the development of waste management facilities. It seeks to provide the highest environmental standards in development proposals for waste management facilities and explains the relationship between the planning system and those authorities responsible for the regulation and management of waste.

Since publication of the 2006 Waste Strategy a major programme of planning reform has been advanced. This includes the introduction of a number of interventions aimed at improving planning performance in the short and longer term. For example, in relation to the time taken to process planning applications the use of pre application discussions seeks to ensure that all relevant information is included when formal applications are submitted.

**Removal of the requirement for BPEO**

The Best Practicable Environmental Option (BPEO) is included in PPS11 as a key principle in pursuing greater sustainability in waste management. Proposals for Waste Collection and Treatment Facilities (Policy WM2); Waste Disposal (WM3) and Land Improvement (Policy WM4) are therefore currently required to demonstrate BPEO.

However, the Department considers that the statutory Strategic Environmental Assessment (SEA) required to be undertaken by the three Waste Management Groups as part of preparing their Waste Management Plans
duplicates the BPEO process and intends to remove the link with BPEO for plans and waste proposals. This is in common with the approach in other UK administrations. The Department proposes therefore to clarify the implications for planning early in 2013 to coincide with the publication of this Strategy.

The SEA Directive (2001/42/EC) was transposed into NI legislation through the Environmental Assessment of Plans and Programmes Regulations (NI) 2004. It applies to a range of public plans and programmes at national, regional or local level. The Directive requires the preparation of a report that identifies and evaluates the likely significant effects on the environment of implementing a plan or programme. The report will also include the measures that will prevent, reduce and as far as possible offset the identified adverse affects.

Although it is proposed to remove BPEO for plans and waste proposals, the concept remains one of a number of non-statutory tools that Waste Management Groups may choose to use to assess different waste management options in the development of their regional plans.

Applications for planning permission for waste facilities in NI will be assessed on their merits having regard to the existing policy framework including this Strategy, the Regional Development Strategy, Planning Policy Statements, the local development plan and all other material planning considerations.

**Action:** The Department (Planning and Local Government Group) will clarify the updated position on the removal of BPEO for waste proposals going through the planning process on its website and through advice to planning staff to coincide with the publication of the final Waste Management Strategy.

**Review of Planning Policy**

The Department is committed to undertaking a comprehensive consolidation and review of existing planning policy in order to bring forward a single regional planning policy statement which will be needed in advance of the transfer of planning powers to Councils.

Existing planning policies are currently detailed and operational in nature. However, in preparing for the introduction of the new two-tier planning system it is intended that the new consolidated planning policy document will be simpler, shorter and much more strategic in focus.

Officials are at the early stage of scoping the document. As part of this scoping, consideration is being given to the range of subject policies to be included in the document; the appropriate level of detail, how it will fit into the reformed planning system, and any necessary transitional arrangements.

**Action:** The Department aims to consolidate and review existing planning policy and consult on proposals for a single regional planning policy statement by the end of 2013.
Section 5  DISPOSAL

Reducing the amount of waste that goes to landfill has been the main priority of successive waste strategies. We still rely too heavily on landfilling waste – not only is this an inefficient use of resources but it contributes to climate change and is unsustainable.

The diversion of waste from landfill, particularly those materials that can be recycled through closed loop processes and biodegradable wastes, will result in significant reductions in Carbon Impact. Landfilling of biodegradable material leads to the generation of Methane (CH₄), a Greenhouse Gas that is around 25 times more potent than Carbon Dioxide (CO₂). The most recent annual report of the Cross Departmental Working Group on Climate Change (May 2012) states that the waste sector contributed 657kt CO₂e.

5.1  EU Landfill Diversion targets

The EU Landfill Directive has set targets for the reduction of biodegradable municipal waste (BMW) going to landfill to 50% of 1995 levels by 2013 and 35% of 1995 levels by 2020. Based on the revised definition of municipal waste this means that in Northern Ireland no more than 612,000 tonnes of BMW must be landfilled by 2013 and no more than 429,000 tonnes of BMW by 2020.

How are we doing?

Information on the amount of municipal waste (under the revised definition) has only been available since 2009, as indicated in the figure below. In 2010/11 a total of 526,770 tonnes of BMW was sent to landfill and, while the 2013 target has already been met, more needs to be done to ensure that the 2020 target is achieved.
Future EU policy is set to underpin the waste hierarchy through a revision of the Landfill Directive and the stated intention of the European Commission to consider bringing forward proposals to introduce a ban on all biodegradable waste being sent to landfill by 2025.

**Target:** To landfill no more than 612,000 tonnes of BMW by 2013 and no more than 429,000 tonnes of BMW by 2020.

### 5.2 Northern Ireland Landfill Allowance Scheme (NILAS)

This Strategy emphasises the need to reduce dependency on landfilling across all waste streams. However, a significant proportion of municipal waste is collected by District Councils in Northern Ireland and this has historically and will continue to be a focus of landfill diversion. The Northern Ireland Landfill Allowances Scheme (NILAS), introduced in 2005, sets the maximum amount of BMW which can be landfilled by Councils i.e. Biodegradable Local Authority collected municipal waste (Biodegradable LACMW) annually up to 2020. The scheme has proven to be highly effective in driving actions by Councils in promoting recycling, re-use and in diverting Biodegradable LACMW from landfill and has also acted as a catalyst in the development of proposals for waste treatment facilities through co-operation between Councils.

**How are we doing?**

In each year since 2005/06, Northern Ireland’s biodegradable LACMW arisings have been below the NILAS target amount for that particular year, as indicated in the figure below.
NILAS was reviewed in 2009 and it was concluded that the scheme continued to play an important role in landfill diversion for the foreseeable future. The Department proposes to conduct a further review of the scheme after legislation has been put in place to implement proposals on a statutory target for LACMW recycling and on a landfill restriction on food waste to ascertain whether it continues to be a necessary and appropriate mechanism to divert waste from landfill. There are, however, other significant financial, legislative and environmental factors which will increasingly drive diversion from landfill as we move forward.

**Target:** To landfill no more than 320,000 tonnes of biodegradable LACMW by 2013 and no more than 220,000 tonnes of biodegradable LACMW by 2020.

**Action:** The Department will review NILAS after legislation has been put in place in respect of the statutory target for LACMW recycling and on a landfill restriction on food waste.

### 5.3 Supporting Policies

**Landfill Tax**

Landfill Tax was introduced in 1996 and is payable by landfill site operators who may pass on the cost by way of increased charges to those disposing of waste at their sites. The standard rate for 2012/13 is £64 per tonne for active wastes and this is set to increase to £80 per tonne in 2014/15. It has become the primary fiscal lever to drive down the landfilling of waste.

Landfill tax is currently administered by HM Revenue and Customs on behalf of the Treasury (HMT). The Department will explore with DFP the potential to
argue for Landfill Tax to be devolved, whereby the NI Executive would have the power to set a rate of Landfill Tax appropriate to local circumstances and should provide a more transparent link between the revenues raised and the funding of environmental projects.

**Action:** The Department will submit a business case to DFP on the potential for Landfill Tax to be devolved by September 2014.

### Landfill Restrictions

The EU Landfill Directive sets out criteria which control the nature of wastes accepted at landfill primarily to protect the environment and human health. As a result, certain wastes such as tyres, gypsum waste, liquid waste and infectious clinical wastes are not permitted in landfill.

There are, though, wider benefits in terms of resource efficiency and carbon impact in banning certain other wastes from landfill. Research, commissioned by government administrations across the UK, was carried out through WRAP in 2009/10 on the feasibility and practicalities of introducing landfill bans and restrictions. Their report\(^\text{10}\), issued in March 2010 concluded that the greatest net benefits would derive from banning paper/card, food waste, green waste, metals, textiles, wood and glass in that order. Greater benefits were derived when upstream segregation was carried out. Appropriate lead in times were found to be critical to effective implementation and to derive maximum outcomes particularly given the need to develop appropriate infrastructure. Based on this research, the Department subsequently consulted on proposals for banning the landfilling of certain biodegradable and recyclable wastes. It considered whether the introduction of such bans would make an effective contribution to meeting the key objectives of increasing resource efficiency and reducing greenhouse gas emissions.

The EU Resource Efficiency Roadmap highlights the significant impact of the food and drink value chain in the EU, causing 17% of the direct GHG emissions and accounting for 28% of material resource use. On this basis the Roadmap contains a milestone of halving the disposal of edible food waste by 2020. A waste compositional analysis for NI carried out in 2008 estimated that 25.6% of all kerbside collected waste per household is organic catering (food) waste, equivalent to 206kt per annum. Reduced food waste can contribute to improving resource efficiency and food security at a global level, and would contribute to a reduction in GHG emissions resulting from their disposal in landfill.

Following these considerations, the Department will consult on legislation which will give effect to a restriction on landilling food waste. It is proposed to introduce an obligation on District Councils to provide receptacles for the separate collection of food waste from households; a requirement on all food waste producers to source segregate food waste and a ban on separately collected food waste being landfilled.

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\(^{10}\) Landfill Bans: Feasibility Research by WRAP/Eunomia, March 2010
The Department will continue to review the potential to introduce further landfill restrictions over time in light of addition research and evidence and in line with the direction of future EU policy.

**Action:** The Department will consult on legislative proposals to introduce a restriction on landfilling food waste by June 2013.

**Capturing methane at landfill sites**

The Landfill introduced the requirement to collect landfill gas (LFG) from all landfills receiving biodegradable waste which must then be treated and used. If the collected gas cannot be used to produce energy, it must be flared. LFG is comprised mainly of Methane and Carbon Dioxide. While both are greenhouse gases, the global warming potential of Methane is more than 20 times that of CO2 and flaring is considered an acceptable means of reducing the global impact of LFG emissions where it cannot be used to generate energy.

Modern engineered landfill sites are designed to capture and utilise LFG through active and passive collection systems. Utilisation of LFG is roughly divided into electricity generation, with a link to the nearest distribution ‘grid’, or ‘direct’ use. The latter is primarily for outlets within close proximity to the site including combined heat and power systems for commercial premises. In the case of smaller landfills with much less gas producing potential, there is the option of micro-generation using micro-turbines to provide electricity for use in-situ. Gas capture and flares or engines have been installed at 17 landfill sites in Northern Ireland, with engines to be installed at 3 further landfill sites in the current year. The total representative gas flow is 9,344 m$^3$/hr, and around 61% of this is utilised by gas engines at 3 operational sites and 3 closed sites\textsuperscript{11}.

**Hazardous Waste**

Hazardous waste comes from a wide range of sources, including households, businesses of all types and public services, such as the Health Service, schools and universities. Although Northern Ireland does not have any specialised Hazardous Waste disposal sites per se, the management of certain hazardous wastes, for example, hazardous wastes that are generated from households, does take place here. However, other hazardous wastes, such as those produced by industry, are for the most part shipped to Britain for disposal. Shipments of hazardous waste between Northern Ireland and Ireland for specified disposal operations are allowed provided they are in accordance with EC Regulation No. 1013/2006 on Shipments of Waste and the UK Plan for Shipments of Waste.

**Action:** The Department will issue a Hazardous Waste policy statement by December 2013.

\textsuperscript{11} Information provided by Land & Resource Management branch NIEA
Section 6 BETTER REGULATION AND ENFORCEMENT

6.1 Better Regulation

In 2008 NIEA began an ambitious programme of Better Regulation, designed to modernise the environmental regulatory framework, simplify guidance and better target its enforcement activities; and in doing so, improving how it tackles those who do not comply with the law and undermine legitimate businesses.

In 2008, NIEA’s Better Regulation for a Better Environment, set the framework for the Better Regulation Programme, which is focused around the four key areas of:

- Compliance Assistance
- Compliance Assessment
- Streamlined Permitting
- Better Enforcement

Risk-based Regulation

The Better Regulation Programme has also made significant progress in developing a risk-based approach to regulation. In the context of this Strategy this means that the five principles of “good regulation” are applied in managing all waste materials; vis-à-vis, that all regulatory activities and actions should be;

- Proportionate
- Accountable
- Consistent
- Transparent
- Targeted

The aim of this risk-based approach to regulation is to ensure that regulatory activities are streamlined and focused appropriately where they need to, thereby reducing the burden on business. NIEA have rolled out a risk assessment model to provide greater consistency across regulatory regimes.

Simplified Advice and Guidance

The often complex nature of waste regulation can make it difficult for businesses to comply. The benefit of having clear and concise guidance is palpable; for both the regulated and the regulator.

NetRegs\textsuperscript{12} is a partnership between NIEA and the Scottish Environmental Protection Agency (SEPA). It provides free online advice for businesses covering all environmental topics. The environmental advice provided is kept up to date and accurate and, importantly, can be viewed according to

\textsuperscript{12} www.netregs.org.uk/
business sector. Complementary advice is available on the NI business information website.\footnote{www.nibusinessinfo.co.uk/}

This partnership approach to producing sector specific guidance also extends to the work being carried out between NIEA and industry, to provide guidance on specific topics for mutual benefit to business and the environment e.g. the “Sustainable Use of Greenfield Soil in Construction and Development”\footnote{http://www.doeni.gov.uk/niea/index/about-niea/better_regulation/niea_soil_guidance.htm} and “Guidance on the Production of Fully Recovered Asphalt Road Planings”\footnote{http://www.doeni.gov.uk/niea/a4_road_planing_info__guidance-2.pdf}.

<table>
<thead>
<tr>
<th>The following key projects and milestones have been completed under the Better Regulation Programme:</th>
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<tr>
<td>• The creation of an NIEA-wide Environmental Crime Unit (December 2008)</td>
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<td>• Evaluating the effectiveness of Environmental Management Systems as a measure of environmental compliance and performance (Jan 2009)</td>
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<td>• DARD/DOE Better Regulation and Simplification Review (March 2009)</td>
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<td>• Develop a risk assessment methodology for environmental regulations (March 2009)</td>
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<tr>
<td>• Publication of six Waste Quality Protocols and regulatory position statements for waste greenfield soils (between 2010 and 2011)</td>
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<tr>
<td>• Publication of the revised NIEA Enforcement Policy (Jan 2011)</td>
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<tr>
<td>• Developed a system for online licence and permit applications (May 2012)</td>
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Environmental Better Regulation Agenda

A Better Regulation White Paper, setting out policy and legislative proposals for implementing the Environmental Better Regulation Agenda, was published for consultation in March 2011. Subsequently, the Department has been considering proposals for an Environmental Better Regulation Bill with the overall aim to reduce environmental regulatory burdens on business and at the same time to enhance protection of the environment. At present the Department is focusing on:

- Developing specific proposals for administrative penalties and sanctions;
- Developing specific proposals for unified investigatory powers;
- Considering policy options in respect of environmental permitting;

\footnote{www.nibusinessinfo.co.uk/}
\footnote{http://www.doeni.gov.uk/niea/index/about-niea/better_regulation/niea_soil_guidance.htm}
\footnote{http://www.doeni.gov.uk/niea/a4_road_planing_info__guidance-2.pdf}
• Considering policy options in respect of criminal sanctions and penalties.

**Action:** The Department will, subject to Executive agreement, consult on detailed proposals for a Environmental Better Regulation Bill by April 2013.

### 6.2 Enforcement

In adopting the principles of Better Regulation and taking a risk-based approach to how we regulate waste activities, a certain degree of responsibility is being placed upon the waste industry to do the right thing. When the regulator takes a step back from the lower risk activities, allowing businesses to “get on with job”, it is essential that unscrupulous operators do not undercut legitimate businesses and that the regulator has an effective suite of penalties and sanctions to be able to take swift and appropriate action. At the other end of the spectrum, serious criminality has far reaching implications for the environment and human health, for the health of the legitimate waste industry and on Northern Ireland’s susceptibility to incurring hefty EU infraction fines.

A number of specific work strands are being taken forward to ensure that the mechanisms are in place to tackle the various levels of illegal activity. In terms of new legislation, as indicated above, proposals are being developed and options considered for an Environmental Better Regulation Bill.

The NIEA published a revised enforcement policy in January 2011. The revised policy provides guidance on the appropriateness of taking prosecution proceedings and how financial benefit should be taken into account when considering prosecution.

**Tackling organised environmental crime**

A significant amount of illegal activity in the waste sector over the past decade has involved organised crime. Activities such as large scale illegal dumping, fuel laundering and metal theft must be tackled through concerted multi-agency action. To complement this approach, an Environmental Crime Unit was established in the NIEA in December 2008 to provide additional expertise in criminal and financial investigations. The NIEA have developed a strategic partnership with the PSNI covering all environmental crime involving the exchange of information and joint investigations where appropriate. The NIEA also take an active role in the Cross-Border Fuel Fraud Group under the auspices of the multi-agency Organised Crime Task Force to tackle the issue of waste residue resulting from illegal fuel laundering. The growing issue of metal theft also needs co-ordinated action involving the Department of Justice, NIEA and other relevant authorities. The Department intends to strengthen existing provisions which will assist the PSNI as well as commence powers which will enable authorised officers to stop and search vehicles, as well as seize and detain vehicles, plant etc where it is suspected that offences have occurred.
**Action:** The Department will introduce two commencement Orders to give effect to Articles 5, 9, 14, 15, 16, & the remainder of the Schedule to the Waste (Amendment) (Northern Ireland) Order 2007, as well as Articles 1 and 2 of the Waste and Contaminated Land (Amendment) Act 2011 by April 2013.

The Department has worked closely with DECLG in dealing with the consequences of the large scale illegal landfilling of waste from Ireland which occurred in the early part of the last decade. A Road Map for tackling these illegal waste movements was agreed in 2007 between both jurisdictions and this has resulted in a programme of work, agreed by the authorities North and South, to remove the illegal waste from Northern Ireland. Evidence obtained at initial investigation stage and during the removal of the waste has been passed to the relevant authorities to facilitate prosecutions.

**Action:** The Department, in partnership with key stakeholders, will implement a programme of action to repatriate illegally landfilled waste originating from Ireland.

**Flytipping**

The illegal deposit of waste on land, often referred to as ‘fly-tipping’, is being tackled through partnership working between NIEA and Councils. The Waste and Contaminated Land (Amendment) Act (NI) 2011 made provision for District Councils to take enforcement action under Articles 4 and 5 of the 1997 Order, although these have not been commenced. However, a 12 month pilot study to develop operational arrangements on fly-tipping was launched in June 2012 and 11 District Councils signed up for the study which is governed by an agreement between NIEA and each participant council.

The purpose of the pilot study is to further develop the partnership approach, increase the Agency’s clean up experience, and collect data to inform a future review of the Fly-tipping Framework. Under the conditions of the study, NIEA will be responsible for waste deposits of more than 20m³ of non-hazardous waste, with Councils responsible for amounts below this threshold. In the case of hazardous waste the division of responsibility is based on waste type. The results of the pilot study will be assessed to inform the way forward.

**Clean Neighbourhoods**

The Clean Neighbourhoods and Environment Act (Northern Ireland) 2011 came into effect on 1 April 2012 and contains a range of legislative measures to improve the quality of the local environment by giving Councils additional powers to deal with litter, fly-posting and graffiti, dogs, noise, statutory nuisance, nuisance alleyways, abandoned and nuisance vehicles and abandoned shopping trolleys.
Section 7 COMMUNICATION AND EDUCATION

Rethink Waste Campaign

The Rethink Waste campaign, launched in March 2010, seeks to effect a cultural shift towards waste prevention and resource management and improved environmental quality in Northern Ireland. It also aims to raise awareness of the simple steps that people can take to reduce the amount of waste sent to landfill and improve our environment for future generations. The campaign has activities and elements to promote the brand and the 3 “Rs” (Reduce, Reuse, Recycle), and includes opportunities to reach members of the target audiences, including businesses, community and voluntary sector, local communities and the education sector.

Effective behavioural change towards waste prevention and reinforcement of recycling behaviour will ultimately result in a cost saving in the need for extra, future infrastructure and collection facilities as well as reducing the risk of EU fines. This level of behavioural change and action requires a concerted strategic effort. A Communications Action Plan that includes public relations activity, advertising and opportunities for key stakeholders to get involved has been devised and will run until late 2013. The following initiatives have been taken forward as part of this Action Plan:

- **Cookery demonstrations**
  'Love Food, Hate Waste’ Cookery Demonstrations were started in November 2010 aimed at engaging with the public and helping them to reduce food waste. The demonstration package offered the opportunity for partnership working with Councils and have been widely covered in local media.

- **Composting demonstrations**
  These demonstrations are incorporated in local Council-led events throughout the year. The composting demonstrations assist in promoting home composting and thus diverting organic waste from landfill. They include a visual display of household items suitable for composting, information on how to get started, details of what not to compost and an interactive session.

- **Big Spring Clean**
  During 2011 and 2012 the Department partnered with TIDY NI for the Big Spring Clean. Although the primary message of this event relates to litter, previous Big Spring Cleans highlighted the proportion of litter collected that could have been recycled. With sponsorship from Rethink Waste the message has been broadened to recycle any waste produced.

- **Educational tools**
  Waste education links into a wide range of curriculum subjects and areas; in particular maths (waste audits and statistics), science (the
study of different materials for recycling), English (discussion of waste issues and debate) and art (posters and craft work with ‘waste’ materials). The Rethink Waste website contains a number of educational resources such as factsheets, ideas for teachers, and activity books.

- Eco-schools
  Part funded by the Department, and administered by TidyNI, the aim of Eco-Schools is to make environmental awareness and action an intrinsic part of the life and ethos of the school, both for staff and pupils. Over 750 schools in Northern Ireland are registered. Eco-Schools in Northern Ireland have been working closely with the Department on a Rethink Waste project and this has resulted in the launch of new teacher information sheets and classroom activities for key stage 1, 2 and 3.

Two websites have been established, the main site, rethinkwasteni.org, and a dedicated food waste prevention site, lovefoodhatewasteni.org. Traffic to both sites has been steadily increasing and each contains practical hints and tips on waste prevention.

A Rethink Waste advertising campaign commenced in January 2011 to raise awareness and understanding of waste prevention and recycling issues and give the audience tangible, practical tips for action in support of being responsible and playing their part in cutting down the amount of waste we produce.

Although the Department will retain strategic oversight of education and communication, it will consider the most appropriate way of delivering future campaigns and communication plans from the autumn of 2013.

**Action:** The Department will secure funding to sustain waste prevention and recycling communications post 2013 by April 2014.
Successful delivery of the aims, actions and targets set out in this Strategy requires the support, commitment and engagement of all the people of Northern Ireland. While leadership from Government is essential to ensure that the pace of change is maintained, it will be vital for the key stakeholders from all sectors, government and non-governmental to play their part through effective partnership working. A key aspect of delivery will be through the development of Waste Management Plans by the three regional District Council Waste Management Groups.

The Department will establish a programme delivery process and, as part of this, will develop a Programme Initiation Document setting out the plan of approach, scope and goals. The programme will be managed by the Department and this will entail regular monitoring and reporting on the targets and actions contained in this Strategy. The Waste Programme Board, chaired by the Minister of the Environment, will have an oversight role and will be presented with progress reports at regular intervals. Those bodies with responsibility for various aspects of the Strategy will be directly accountable to the Board for their timely delivery. The Board will serve as the forum for the discussion of strategic waste issues informed by the Strategy delivery progress reports.
**ANNEX 1**

**NI Waste Management Strategy – List of Supporting Documents**


The Waste Regulations (Northern Ireland) 2011 [2011 No. 127]


Addendum and Delivery Programme to the N.I. Waste Management Strategy 2006-2020 [June 2011]


Draft Statement of Waste Policy – For Consultation [DECLG, 2010]


Planning Policy Statement (PPS) 18: Renewable Energy [DOE, August 2009]

Climate Change Act 2008 (c.27)

Climate Change (Scotland) Act 2009 (asp 12)


Consultation on the Introduction of Restrictions on the Landfilling of Certain Wastes [DOE, June 2010]


Waste Management – A Northern Ireland Analysis [DOE, March 2010]

Analysis of 2020 Residual Waste Infrastructure Requirements in Northern Ireland [DoE/SIB, March 2012]


Consultation on the Legal Definition of Waste and its Application [Defra, January 2010]


Tackling Priority Materials in Northern Ireland [WRAP, April 2012]
