Department of the Environment
www.doeni.gov.uk

ENVIRONMENTAL POLICY DIVISION

THE WASTE PREVENTION PROGRAMME FOR NORTHERN IRELAND –

THE ROAD TO ZERO WASTE

30 September 2014

This document is available in alternative formats. Please contact us to discuss your requirements:

Hazel Audley
Department of the Environment
Environmental Policy Division
6th Floor
Goodwood House
44-58 May Street
Town Parks
Belfast BT1 4NN

E-mail: hazel.audley@doeni.gov.uk
Telephone 028 9025 4923
Textphone 028 9054 0642
Fax 028 9025 6079

CONTENTS

NORTHERN IRELAND WASTE PREVENTION PROGRAMME

EXECUTIVE SUMMARY

The Department of Environment in Northern Ireland (DOE) is responsible for the drafting of legislation on waste, the implementation of waste management policy and the promotion of a more sustainable approach to dealing with waste in Northern Ireland.

The Northern Ireland Waste Prevention Programme – "The Road to Zero Waste" builds on the Northern Ireland Waste Management Strategy – "Delivering Resource Efficiency".[1] The Programme is designed to have a favourable impact on the Northern Ireland economy, helping to promote and support 'green jobs', and for the protection of the environment and conservation of resources.

Summary of Actions

Action1 – Stakeholder Forum

The Department of the Environment will organise a stakeholder forum on waste prevention by December 2014.

Action 2 - Rethink Waste Communications Campaign

The Department of the Environment will develop a follow-up communications campaign to build on the success of the initial Rethink Waste campaign. The campaign will continue to include waste prevention messaging.

Food waste is considered a priority waste stream to tackle. The communications campaign will have a particular focus on preventing food waste and continue to support the Love Food Hate Waste campaign.

Action 3 – European Week of Waste Reduction

The Department of the Environment will continue to support an annual waste prevention week and promote waste prevention across local government, the public sector, the Third Sector, businesses, schools and the public throughout Northern Ireland.

Action 4 – Eco-Home Programme

The Department of the Environment will assess the feasibility of expanding the Eco-Home Programme across Northern Ireland.

[1] Northern Ireland Waste Management Strategy – "Delivering Resource Efficiency", http://www.doeni.gov.uk/waste_management_strategy

Action 5 – Eco-Schools Programme

The Department of the Environment will continue support for the Eco-Schools Programme, including the waste topic relating to waste prevention and recycling.

Action 6 – Carrier Bag Levy

The Department of the Environment will extend the carrier bag levy to low-cost reusable bags from January 2015.

Action 7 – Support for Voluntary Agreements with Business

The Department of the Environment will work with partners to ensure that voluntary agreements with business on waste and resource efficiency work well in Northern Ireland and include a focus on preventing waste.

Action 8 – Zero Waste Projects

The Department of the Environment will support “zero waste” projects through the Rethink Waste Fund.

Action 9 – Voluntary Construction Sector Schemes

The Department of the Environment will periodically review the effectiveness of voluntary environmental schemes within the construction sector in determining whether to consider statutory instruments in the future.

Action 10 – Voluntary Agreement for the Construction Sector

The Department of the Environment will work with partners and stakeholders to develop a follow-up voluntary agreement to Halving Waste to Landfill appropriate for Northern Ireland.

Action 11 – Reuse and Repair Network

The Department of the Environment will work with partners to develop a re-use and repair network throughout Northern Ireland, supporting re-use and preparing for re-use infrastructure.

Action 12 – Support to the Third Sector

The Department of the Environment will review the Rethink Waste Fund to provide appropriate support to the Third Sector to enable business growth and capacity to be expanded.

Action 13 – Re-use Quality Assurance

The Department of the Environment will:

- Engage with partners to influence supply chains
- Develop new business models to assist re-use businesses.
- Promote re-use assurance standards

Measuring Progress

There is no proposal to have a headline target for waste prevention at this time. To ensure that activities within the Waste Prevention Programme are on course to comply with the aims and objectives of the plan the following indicators will be monitored:

- Initially, the **amount of household waste arisings**. When more reliable data becomes available through other initiatives in the revised Waste Management Strategy, the amount of Commercial & Industrial Waste and Construction & Demolition Waste arisings will also be monitored.

- Initially, the **amount of household waste arisings per unit household expenditure** to assess trends relating to decoupling economic growth and waste arisings. Commercial & Industrial Waste and Construction & Demolition Waste arisings per unit GVA[2] will be monitored once reliable data becomes available.

[2] GVA, Gross Value Added, measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

PART 1 - OVERVIEW

1 Introduction

1.1 Waste is a key environmental, social and economic issue. In 2012/13 local authorities collected over 900,000 tonnes of municipal waste from businesses and households in Northern Ireland, just one part of the total waste arisings.[3] The treatment or disposal not only incurs a considerable cost to businesses and householders, but places increasing stress on the use of raw materials, energy, water and food. Although in recent years Northern Ireland has seen a decline in the amount of waste generated, we cannot afford to become complacent.

1.2 Northern Ireland has focused heavily on reducing the amount of waste we send to landfill. Figures for 2012/13, show that we are recycling and composting 38.7% of our Local Authority Collected Municipal Waste (LACMW). However, we are still producing almost 914,000 tonnes of LACMW per year, which equates to 1.12 tonnes of household waste per household.

1.3 In 2010 the population of Northern Ireland was estimated to be 1.8 million, (approximately 3% of the population of the UK) and is expected to grow by 10% in the next twenty years.[4] The estimated number of households in Northern Ireland is 715,200 and is expected to grow by 26% in the next twenty years. If we are to preserve our resources for future generations we have to move to a more sustainable lifestyle.

1.4 The intent of the Waste Prevention Programme is to assist Northern Ireland in moving along the "Road to Zero Waste", i.e. to drive waste up the waste hierarchy; to deliver resource efficiency.[5]

1.5 Developing a Waste Prevention Programme in Northern Ireland encompasses a number of actions, which will result in a broad range of benefits. Targeting at-source waste production reduces the amount and toxicity of waste before recycling, composting, energy recovery and landfilling become options. Waste prevention also includes measures to reduce the adverse impacts of the generated waste on the environment and human health. Waste prevention can be achieved by reducing the quantity of material used in the creation of products and increasing the efficiency with which products, once created, are used. Preventing waste by limiting unnecessary consumption and by designing and consuming products that generate less waste are forms of 'strict avoidance' of waste. Waste prevention also encompasses actions that can be undertaken when a product reaches its end-of-life: rather than discarding the product, the final user should consider re-use, repair or

[3] Northern Ireland Local Authority Collected Municipal Waste Management Statistics Annual Report 2012/13 - http://www.doeni.gov.uk/lac-municipal-waste-2012-13.pdf
[4] Northern Ireland Environmental Statistics Report 2012, NISRA
[5] The term "Zero Waste"' means different things to different people, but in effect is an "aspirational end point" where materials are not sent to landfill or other disposal.

refurbishment as options. Extending a product's lifetime or considering options like reuse are forms of prevention through 'diversion of waste flows'.

2 Context

2.1 The EU Waste Framework Directive[6] (WFD) was established in 1975 and provided a legal framework for all EU waste legislation. It has been updated repeatedly in response to changes in the waste burden and waste management tools. The revised Waste Framework Directive of November 2008 seeks to position the EU as a 'recycling society', with broad aims "to avoid waste generation and to use waste".

2.2 Decoupling economic growth from the environmental impacts associated with waste generation is a key objective of the revised Waste Framework Directive (WFD). Stabilising waste generation is no longer enough, waste growth in Northern Ireland must now reverse[7].

2.3 The Roadmap to a Resource Efficient Europe, 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.

2.4 The revised WFD requires that Member States create national waste prevention programmes by 12 December 2013. The objective of these programmes is to present a co-ordinated national approach to waste prevention, delineating targets and policies with the aim of decoupling economic growth from the environmental impacts of waste generation. England, Wales, Scotland and Northern Ireland will all therefore be creating their own Waste Prevention Programmes to take account of local issues and needs.

2.5 With this goal in mind, Article 29 of the WFD asks that we:

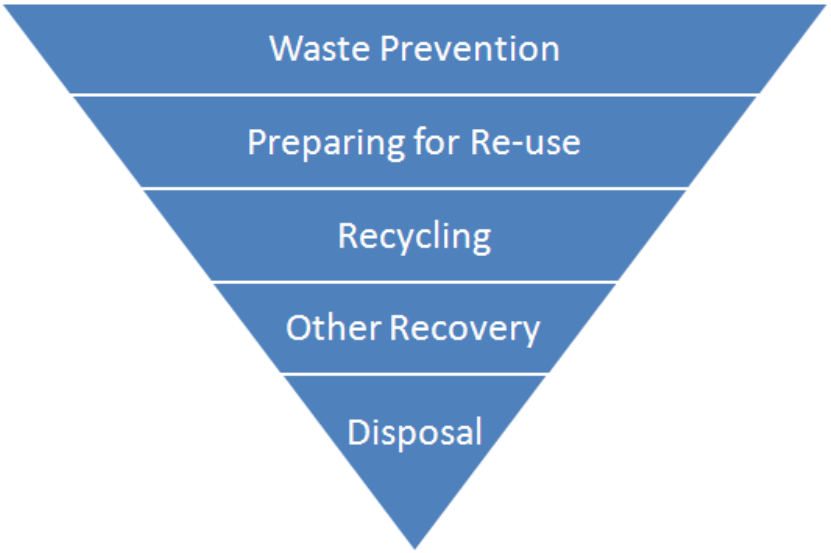
- Establish waste prevention programmes by December 2013,
- Assess existing national waste prevention measures,
- Define national waste prevention objectives,
- Evaluate the suitability of the strategies for inclusion in national waste prevention programmes,
- Take appropriate measures to promote product re-use,
- Support the establishment and development of re-use and repair networks, as well as public procurement criteria and quantitative objectives for re-use,

[6] Waste Framework Directive (Directive 2008/98/EC)
[7] Preparing a Waste Prevention Programme, Guidance Document, European Commission (2012).

- Determine qualitative or quantitative benchmarks for waste prevention measures,
- Adopt targets and indicators, if appropriate, to monitor and evaluate the success of waste prevention measures and progress towards objectives, and
- Review and revise waste prevention programmes at least every six years.

2.6 Article 4 of the revised WFD sets out five steps for dealing with waste, ranked according to environmental impact - the "waste hierarchy" see Figure 1. The waste hierarchy is the cornerstone of EU waste policy and legislation and its primary purpose is to minimise adverse environmental effects from waste and to increase resource efficiency in waste management and policy.

Figure 1. European Union Waste Hierarchy



2.7 Waste Prevention is key to optimising resource efficiency across all waste streams and is at the top of the Waste Hierarchy. It is followed by preparing for re-use, recycling, other recovery and disposal, in descending order of environmental preference.

2.8 The WFD defines prevention as measures taken before a substance, material or product has become waste - that will reduce:

- 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.

2.9 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.

2.10 There is also a complex relationship between waste and litter. Improved waste management and prevention policies may help address the issue of litter, in particular the problem of litter in the marine environment, and help in delivery of the requirements of the Marine Strategy Framework Directive (MSFD)[8]. The Department of the Environment published the Northern Ireland Marine Litter Strategy in 2013. The objective of the Strategy is aligned with the UK MSFD target of "an overall reduction in the number of visible litter items within specific categories/types on coastlines."

2.11 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 Resource Efficient Roadmap milestone of turning potential waste into a resource.

2.12 "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.

2.13 The WFD hierarchy was introduced into Northern Ireland legislation through the Waste Regulations (NI) 2011. The Department has published a package of guidance on the Waste Hierarchy, under regulation 17(5), to assist businesses and other organisations in Northern Ireland to make better decisions on waste and resource management[9].

3 Policy Framework

3.1 The Waste Regulations (Northern Ireland) 2011 came into operation on 8 April 2012 and transposed the revised WFD for Northern Ireland.

3.2 The stabilisation of waste generation was one of the key aims of the Northern Ireland Waste Management Strategy 2006-2020, published in March 2006. Entitled "Towards Resource Management", it reflected the move away from simply managing the waste we produce in a more environmentally friendly manner to preventing waste and managing resources.

3.3 It was 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

[8] http://eur-lex.europa.eu/legal-content/EN/ALL/;jsessionid=MplvTy5bjDlWQ281J2Fdn8QhjmDnG9WgJyBpwcKKXq4KNMqXQGnL!-1292256679?uri=CELEX:32008L0056

[9] http://www.doeni.gov.uk/niea/waste-home/authorisation/waste_hierarchy.htm

3.4 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 Northern Ireland Waste Management Strategy. It comprises representatives from the Department, NILGA, the three district council Waste Management Groups, Environmental NGOs, and business groups.

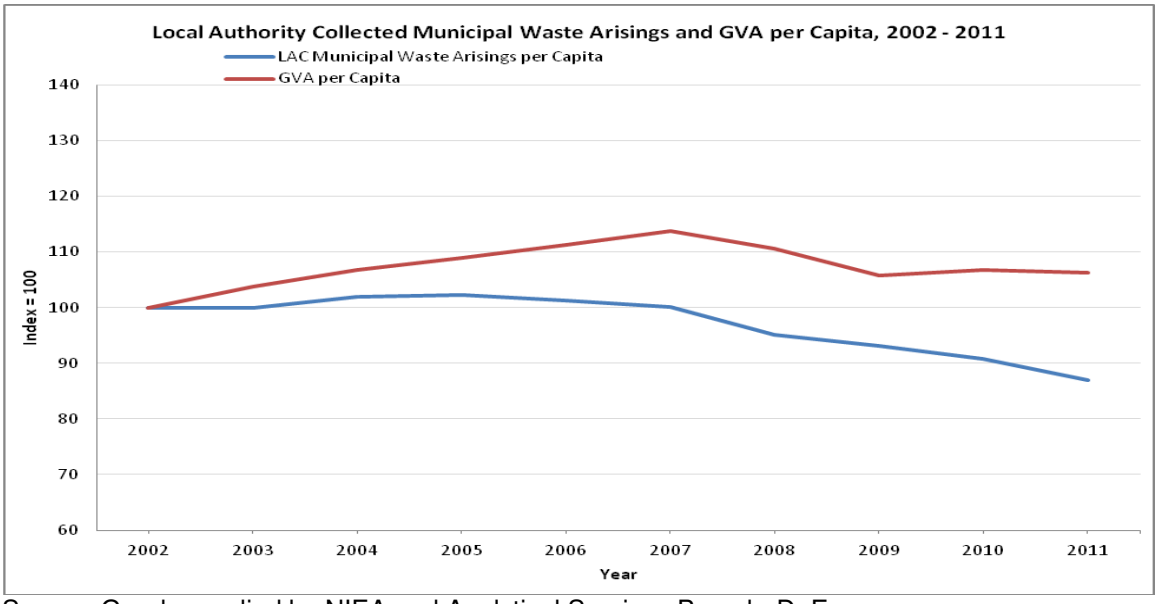
3.5 In July 2011, the Board set up a Task Group to re-assess the 2006 Strategy's targets and develop a prioritised programme of objectives and key performance indicators to ensure that the Strategy could deliver the overarching aims of the revised WFD. The resulting Addendum to the 2006 Strategy identified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

3.6 In October 2013 a revised Northern Ireland Waste Management Strategy – "Delivering Resource Efficiency" was published. This Strategy has moved the emphasis of waste management in Northern Ireland 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 Northern Ireland economy and help to promote and support 'green jobs'.

4 Progress to date

4.1 The stabilisation of waste generation was one of the key aims of the 2006 Strategy. The Figure 2 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 Northern Ireland 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 in Figure 2 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 definitive conclusions could be drawn.

Figure 2. Northern Ireland Local Authority Collected Municipal Waste Arisings and GVA per Capita 2002-11



Source: Graph supplied by NIEA and Analytical Services Branch, DoE

5 The Waste Prevention Programme Framework

5.1 Aim

The aim of the Waste Prevention Programme is to maintain the downward trend in waste arisings in Northern Ireland.

5.2 Objectives

- Decoupling economic growth from the environmental impacts associated with waste generation.
- To encourage people to use resources efficiently and generate less waste.
- To establish improved resource efficiency and waste prevention as an integral part of business management and project planning.

5.3 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.

5.4 The European Commission is proposing to present a report on waste prevention by the end of 2014. It will propose measures, if appropriate, including waste prevention and decoupling objectives, to be achieved by 2020. Revisions of this Waste Prevention Programme will take account of any future developments at a European level.

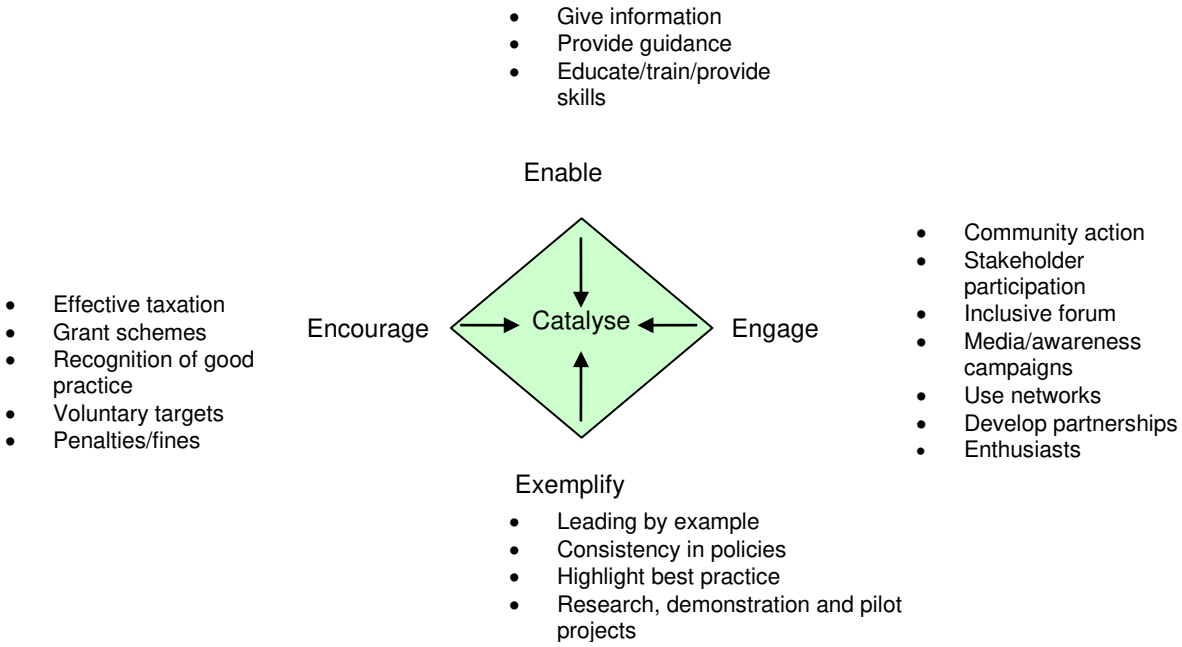
6 Policies and Actions

6.1 In March 2010 the Department of the Environment launched the Rethink Waste Campaign. The Department has since joined up its policies, communications, funding and delivery of other initiatives relating to resource efficiency under the Rethink Waste Programme. This also includes the WRAP (Waste and Resources Action Programme) Northern Ireland Delivery Programme. A major element of the Programme relates to waste prevention. The Department will continue to use the Rethink Waste brand to deliver resource efficiency.

6.2 The 2006 Strategy incorporated the behaviour change model designed for the UK Sustainable Development Strategy into waste management. This conceptual framework will continue to be used to ensure an integrated approach to waste prevention. Figure 3 shows how waste prevention initiatives are represented in the model.

6.3 Within this Waste Prevention Programme, policies and actions are presented under the three activities associated with the main waste streams: household activity, commercial & industrial activity and construction & demolition activity. There will be a number of actions where overlap will occur. Each area will include details on current activities and proposed activities for the future. In addition, there is a separate section on Reuse (including Preparing for Reuse) as activities relating to re-use are cross-cutting.

Figure 3. Waste Prevention Initiatives and the Behaviour Change Model.



6.4 Engagement is a key aspect of the model. Stakeholders have a desire to be involved in shaping future messaging, on discussions on future initiatives, and to engage communities from the "bottom up". The Department of the Environment will arrange a stakeholder forum for waste prevention as a first step to ensure more open and accessible engagement. It is envisaged that from this forum a number of working groups focusing on different areas will be formed that will inform future reviews of the WPP.

Action1 – Stakeholder Forum

- The Department of the Environment will organise a stakeholder forum on waste prevention by December 2014.

PART 2 - AREAS FOR ACTION

7 Household Activity

7.1 Rethink Waste Communications Campaign

7.1.1 In January 2009, Morrow Communications was appointed to provide communications advice for the Department of the Environment in support of the Northern Ireland Waste Management Strategy 2006-2020 (NIWMS). Morrow Communications was specifically tasked:

- to carry out an audit of communication activity in relation to the NIWMS
- to revise the Wake Up To Waste website
- to provide a detailed and comprehensive Communication Action Plan covering a two year period

7.1.2 An assessment of the need for a communications action plan was conducted by Morrow Communications. The report concluded that "There is a critical demand for a new, creative and innovative integrated communications strategy that can generate momentum and public awareness around the aims of the Waste Management Strategy".

7.1.3 The previous communications campaign, "Wake Up to Waste", had been run by (the former) Environment and Heritage Service and was concluded in 2006. This campaign raised awareness of the need to divert waste from landfill with a particular focus on recycling. It was recognised that there had been a considerable time-lag since this campaign with the momentum perceived to have been dissipated.

7.1.4 The resultant Communications Action Plan has been developed to project the aims of the NIWMS to a wide range of audiences with a focus on waste prevention. The Rethink Waste brand, Figure 4, was developed for the new campaign.

Figure 4. Rethink Waste logo

7.1.5 Prior to the campaign commencing, a benchmark research survey[10] was conducted in March 2010 to determine current attitudes amongst the Northern Ireland public on waste and particularly waste prevention. The resulting segmentation cluster analysis identified three groups, which were used to inform the focus for advertising campaigns and other activities:

- Cluster 1 - Unmotivated & uninformed (20% respondents)
- Cluster 2 - Responsible & Informed (41% respondents)
- Cluster 3 - Somewhat Active but time pressured (39% respondents)

7.1.6 In March 2010, the Rethink Waste Campaign was formally launched seeking to assist in a cultural shift towards waste prevention and resource management and improved environmental quality in Northern Ireland. It also aimed to raise awareness of the simple steps that people could take to reduce the amount of waste sent to landfill and improve our environment for future generations. In October 2010, the Love Food Hate Waste NI campaign commenced, targeting food waste prevention. A communications action plan included public relations activity, use of social media, advertising and opportunities for key stakeholder involvement. The current campaign formally concluded in November 2013.

7.1.7 Two websites have been established, the Rethink Waste site focusing on waste prevention and recycling – www.rethinkwasteni.org, and the food waste prevention site – http://ni.lovefoodhatewaste.com/. These websites are administered by WRAP.

Action 2 - Rethink Waste Communications Campaign

- The Department of the Environment will develop a follow-up communications campaign to build on the success of the initial Rethink Waste campaign. The campaign will continue to include waste prevention messaging.
- Food waste is considered a priority waste stream to tackle. The communications campaign will have a particular focus on preventing food waste and continue to support the Love Food Hate Waste campaign.

[10] Millward Brown Ulster benchmark survey, March 2010.

7.2 European Week of Waste Reduction

7.2.1 The European Week for Waste Reduction was launched as a 3-year project supported by the LIFE+ Programme of the European Commission to run until July 2012 but has continued to take place in the following years. The EWWR aims at organising multiple actions during a single week, across Europe. The objectives of EWWR are:

- To raise awareness about waste reduction strategies and about the policies of the European Union and its Member States on this subject
- To promote sustainable waste reduction actions across Europe
- To highlight the work accomplished by various participants, through concrete examples of waste reduction
- To encourage changes in the behaviour of Europeans (consumption, production) in everyday life

7.2.2 In 2013, Northern Ireland increased the number of activity registrations by 400%, from 543 in 2012 to 2,335 registrations. Northern Ireland was only second to Italy in the number of activities registered.

7.2.3 In recognition of the innovative ideas and activities generated by EWWR, the Department of the Environment presents awards and certificates generally in the following categories:

- Local Authority / Public Authority Category
- Association / Non-Governmental Organisation Category
- Business / Industry Category
- Educational Establishment Category
- Youth Organisation Category
- Creative Industry
- Judges' Favourite

7.2.4 The Department intends to continue with its support for EWWR (or a similar waste prevention themed week).

Action 3 – European Week of Waste Reduction

The Department of the Environment will continue to support an annual waste prevention week and promote waste prevention across local government, the public sector, the Third Sector, businesses, schools and the public throughout Northern Ireland.

7.3 Eco-Home Programme

7.3.1 Eco-Home is based on the Green Home Programme in Ireland. Since 2007, the Environmental Education Unit of An Taisce and the Environmental Protection Agency has worked in partnership to develop and implement the Green Home Programme under the National Waste Prevention Programme (NWPP). Through the Green-Schools Programme (as Eco-Schools is known in

Ireland) young people were bringing the environment message from schools into their homes but in an informal manner. This prompted the Environmental Protection Agency (EPA) in Ireland to work in partnership with the An Taisce Environmental Education Unit to develop a more formal 'Framework'/ 'Tool'/ 'Vehicle' to deliver this very important message in a more formal, structured and measurable manner; hence the birth of the Green Home programme to be piloted through schools and then all interested hubs, to include business, community groups, etc. As a result, the Green Home Programme was identified as a means to advance EPA objectives in relation to household waste reduction.

7.3.2 Research from Ireland's Green Home Programme shows that individuals who fully integrate Green Home actions into their living can save several hundred euros on their household bills. Research in 2011 indicated this saving to be averaging around €325 per household. There are now in excess of 20,000 households associated with the Green Home programme in Ireland. Based on the data findings in 2012, an estimated potential saving of around €320 per annum is possible for households that fully engage with the Green Home programme. An estimated overall combined household savings from 25% of all Green Home participant households involved is around €1,600,000 per year. These estimations from the Green Home Programme give a sense of scale of the potential savings.

7.3.3 In Northern Ireland a pilot for Eco-Home was launched in February 2013, operated by Keep Northern Ireland Beautiful (KNIB) and supported by Belfast City Council and the Rethink Waste Programme. The scheme sought to support and advise householders on ways to save money on their household bills whilst at the same time protecting the environment. The programme focused on four key household themes; waste prevention, water conservation, energy conservation and sustainable transportation and extends the Eco-Schools message beyond the school gates and into the wider community.

7.3.4 Eco-Home provides householders with the most up-to-date tips, advice and relevant links on ways to reduce waste, conserve water and energy around the home and to use more sustainable travel options. It also includes different action plans for each of the four themes which suggest various ways in which households can incorporate the tips and advice into day-to-day life, thus helping them to save money. The programme is tailored to the needs of households in Northern Ireland with all information and advice tailored to a local context. This is an important part of the programme in order to directly link local households to information to help them to become more sustainable, and to help homes reduce, reuse and recycle.

7.3.5 The Department of the Environment intends to work with partners to look at the feasibility of expanding the scheme across Northern Ireland.

Action 4 – Eco-Home Programme

The Department of the Environment will assess the feasibility of expanding the Eco-Home Programme across Northern Ireland.

7.4 Eco-Schools Programme

7.4.1 The Eco-Schools programme was developed in 1994 on the basis of the need for involving young people in finding solutions to environmental and sustainable development challenges at the local level, as identified at the UN Conference on Environment and Development of 1992. The programme was initiated by Member organisations of the Foundation for Environmental Education with the support of the European Commission.

7.4.3 The Eco-Schools Green Flag, awarded to schools with high achievement in their programme, is a recognised and respected eco-label for environmental education and performance.

7.4.4 In Northern Ireland, the Eco-Schools Programme is operated by Keep Northern Ireland Belfast, an environmental charity, and is supported by commercial sponsorship, the Department of the Environment and other organisations. The majority of local councils also offer invaluable practical support for the programme.

7.4.5 Northern Ireland was the first country in the world to award a Green Flag to one of its schools. This was Downpatrick Nursery on 15 June 1994. There are currently 1,151 schools[11] registered in Northern Ireland; approximately 96% of the total number of schools.

7.4.6 The programme aims to make environmental awareness and action an intrinsic part of the life and ethos of a school. This includes the students, teachers, non-teaching staff and parents, as well as the local authority, the media and local businesses in the activities. Eco-Schools endeavours to extend learning beyond the classroom and develop responsible attitudes and commitment, both at home and in the wider community. The participatory approach and combination of learning and action make it an ideal way for schools to embark on a meaningful path to improving the environments of schools and their local communities, and of influencing the lives of young people, school staff, families, local authorities, NGOs, and all other bodies involved in this vitally important area of work. The programme covers 10 topics: waste; litter; energy; water; transport; healthy living; biodiversity; climate change; school grounds; and global perspective.

7.4.7 As well as providing core funding to Eco-Schools, the Department of the Environment has also provided additional funding for the waste topic through the Rethink Waste Programme. This has included developing teachers' resources and a series of reading books, "Rubbish Monster"[12] series for different levels of key stages. Other EU nations have requested permission to translate and use the "Rubbish Monster" books. In addition, the Eco-Schools Programme has been pro-active in promoting EWWR within the educational sector.

[11] As at 31 March 2014
[12] http://www.eco-schoolsni.org/Partner-Resources.aspx

7.4.8 The Department of the Environment intends to continue to support the Eco-Schools Programme as the central plank to its education programme for waste prevention and recycling.

Action 5 – Eco-Schools Programme

The Department of the Environment will continue support for the Eco-Schools Programme, including the waste topic relating to waste prevention and recycling.

7.5 Carrier Bag Levy

7.5.1 It has been estimated that until recently we used around 300 million single use carrier bags per year in Northern Ireland, many of which ended up being landfilled or discarded prematurely. Many discarded carrier bags contributed to Northern Ireland's litter problem.

7.5.2 Carrier bag charging was introduced on 8 April 2013 through The Single Use Carrier Bags Charge Regulations (Northern Ireland) 2013. Since that date a 5 pence levy has been imposed on new single use carrier bags. Retailers are required to pass the levy on to their customers and to forward the proceeds to the Department of the Environment. So far, £3.4 million of receipts have been allocated to local community based environmental projects – including 251 projects which successfully bid for financial support from the environmental Challenge Fund.

7.5.3 However the primary focus of the levy is on waste prevention and resource efficiency. The aim is to reduce consumption of single use carrier bags and therefore to benefit the environment by cutting carbon emissions and air and water pollution associated with unnecessary carrier bag production, transportation and disposal. Trends from the first quarter of charging, if sustained, point towards an annual reduction in single use bag numbers of over 70% - which would equate to at least 200 million fewer bags every year. The Department intends to publish validated data from the first year of the levy in August 2014.

7.5.4 From 19 January 2015 the 5 pence levy will be extended to *all* new carrier bags with a retail price of less than 20 pence - to encourage shoppers to reuse all types of bags and protect the environment.

7.5.5 The carrier bag levy should not be viewed in isolation – but rather as an integral part of a wider resource efficiency initiative. As well as achieving efficiency gains associated with reduced consumption, bags are also iconic. The carrier bag initiative will therefore be effective in communicating the wider "reduce and reuse waste" message, encouraging the behavioural change which we need to build a more resource efficient society.

Action 6 – Carrier Bag Levy

The Department of the Environment will extend the carrier bag levy to low-cost reusable bags from January 2015.

7.6 Rethink Waste Capital Fund

7.6.1 In May 2010, the Rethink Waste Capital Fund was launched by the Department of the Environment, providing funding to Councils and Waste Management Groups for initiatives which boost waste prevention and recycling in order to meet EU targets. The Fund is administered by WRAP, on behalf of the Department of the Environment.

7.6.2 The Rethink Waste Capital Fund assists councils to increase levels of recycling by providing funding to cover the capital costs of improving or extending their existing waste collection, re-use and recycling infrastructure. Over the past four years, capital grants totalling in excess of £8.8 million have been made available to Councils under the grant scheme.

- 2010/11 - 44 grants were allocated funding totaling £4.38 million
- 2011/12 - 11 grants were allocated funding totaling £1.012 million
- 2012/13 - 11 grants were allocated funding totaling £2.09 million
- 2013/14 – 10 grants were allocated funding totaling £1.37 million

7.6.3 Although the funding provides grants predominantly for recycling projects, grants have been awarded to improve reuse infrastructure at civic amenity sites and to develop reuse/preparing for re-use centres. The grants have also stimulated partnerships between the Third Sector and local government.

7.6.4 The current fund is due to run until 31 March 2015, and is likely to be extended to at least 31 March 2016.

8 Commercial and Industrial Activity

8.1 Overview

8.1.1 It has been estimated that UK businesses could save up to £23bn a year at little or no extra cost through more efficient use of energy and materials. £18bn could be saved alone by just using raw materials more cost-effectively and reducing waste, with better use of energy and water accounting for savings worth £4bn, and just under £1bn, respectively. Of course many businesses already review their efficiency as it makes good business sense. However, we must ensure that resource efficiency becomes the default choice across the whole economy and not just be considered as the realm of the developing green sector. Improving resource efficiency will not only contribute to a resource efficient and low carbon economy but will deliver economic opportunities and

growth, improved productivity and profitability, and ensure local businesses remain competitive in the global market.

8.1.2 A WRAP report in 2011, Northern Ireland Commercial & Industrial (C&I) Waste Estimates 2009[13], estimated Commercial and Industrial waste arisings in 2009 at 1,288,996 tonnes and as outlined in Table 1.

Table 1. Total arisings divided between business sectors.

	Business Sector	Waste (tonnes)	% of total
Industrial	Food, drink & tobacco	243,856	19%
	Textiles / wood / paper / publishing	103,848	8.1%
	Power & Utilities	125,645	9.7%
	Chemical / non-metallic minerals manufacture	141,820	11%
	Metal Manufacturing	146,746	11%
	Machinery & equipment (other manufacture)	53,725	4.2%
Commercial	Retail & Wholesale	207,326	16%
	Hotels & Catering	78,402	6.1%
	Public administration & social work	53,783	4.2%
	Education	9,514	0.7%
	Transport & Storage	40,271	3.1%
	Other services	84,060	6.5%
	Total	**1,288,996**	**100%**

Source: WRAP

8.2 Business Resource Efficiency

8.2.1 Invest Northern Ireland (Invest NI) is Northern Ireland's regional economic development agency. It is a non-departmental public body (NDPB) of the Department of Enterprise, Trade and Investment (DETI). Invest NI provides a wide portfolio of support for Northern Ireland businesses which have a total annual expenditure of more than £30k on water, energy, waste and raw materials. The aim of this support is to improve the competitiveness, productivity and sustainability of local businesses through identification and achievement of cost savings in the consumption of water, energy and raw materials.

8.2.2 In 2012, Invest Northern Ireland launched a three year Sustainable Productivity Programme which includes a range of activities designed to help the business community achieve operational savings in water, energy and materials use and also identify new opportunities within the high growth renewable energy market. The four strands of the Sustainable Productivity Programme include an Energy Efficiency Loan Fund; Industrial Symbiosis Services; a Capital Grant scheme and Project Management support.

[13] http://www.doeni.gov.uk/niea/northern_ireland_ci_waste_estimates_2009_v4_2.pdf

8.2.3 Invest NI provides practical resource efficiency advice and waste guidance delivered through its website, www.investni.com, and the Northern Ireland business information portal www.nibusinessinfo.co.uk. As another useful resource Invest NI has also published the following practical guides: Water Efficiency Guide - http://secure.investni.com/static/library/invest-ni/documents/water-efficiency-guide-a-practical-guide.pdf , Hotel Sector Resource Efficiency Guide - http://secure.investni.com/static/library/invest-ni/documents/hotel-efficiency-guide.pdf ,
Waste Minimisation Guide - http://secure.investni.com/static/library/invest-ni/documents/waste-minimisation-efficient-management-for-cost-savings.pdf

Invest NI also provides tailored support to qualifying businesses to assess and reduce energy, water and materials costs:

8.2.4 A free audit can identify and prioritise projects to reduce the cost of water, energy or materials in qualifying companies. These companies can also access up to 5 days of further free technical consultancy to help them take forward projects that will realise cost savings in a timely and cost effective way.

8.2.5 This technical support can address a wide range of questions to help firms progress suitable projects to the point of implementation and can include, for example: identification of cleaner processing technologies; opportunities for using renewable energy or improving energy efficiency; accessing more sustainable water sources; minimising product losses; reviewing packaging requirements or use; environmental or energy management systems; equipment specification and identification of suppliers of more efficient equipment.

8.2.6 Finance from Invest NI to help companies install new energy saving equipment is also available: Interest-free energy efficiency loans of between £3k and £400k are available through Carbon Trust. The size of loan available will depend on the energy saving potential of any particular project – please see: http://www.carbontrust.com/client-services/northern-ireland

8.2.7 A Resource Efficiency Capital Grant Scheme. This scheme operates under competitive periodic calls (based on available approved budget) with the aim of encouraging Northern Ireland SME businesses to install equipment that will result in water or material efficiencies, beyond regulatory requirements, through the provision of a capital grant of up to £40,000. Examples of eligible projects include: Equipment to recover value from waste and effluent streams; Equipment to recover materials that would otherwise be vented to the atmosphere or discharged to land or waterways; Equipment that improves the efficiency of raw material consumption through improved processing or equipment that enables re-use of waste materials in-house; Equipment that makes use of sustainable resources such as rainwater, groundwater or borehole water.
The scheme has been so successful that the approved budget level was met during the third call in September 2013. Subsequently, the Scheme is currently closed for 2014/15.

8.2.8 With the inclusion of re-use, as part of waste prevention, in the revised waste hierarchy, industrial symbiosis will play an increasingly relevant role in delivering resource efficiency. Industrial symbiosis brings together businesses and industries from all sectors to identify "synergies", taking the form of the transfer and exchange of physical materials, energy and by-products. Invest NI also provides "industrial symbiosis" services which generates opportunities to identify and match excess resource in one business - like waste, transport, storage, skills, production capacity or energy with another where it could be profitably used. Industrial symbiosis activities include business workshops to identify potential matches between business participants along with follow-up visits and engagements with individual businesses to progress matches.

8.2.9 Invest NI will continue to promote resource efficiency for Northern Ireland businesses through its Sustainable Productivity Programme, the approval period of which will expire in March 2015. During 2014/15 the programme will undergo an independent Evaluation and a subsequent Economic Appraisal will dictate Invest NIs resource efficiency support to Northern Ireland businesses beyond March 2015.

8.3 Environmental Management Systems

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

8.3.2 In addition to Invest NI, businesses in Northern Ireland are also supported through schemes such as the STEM Project and the Belfast City Council BITES Programme that promote resource efficiency and waste prevention.

8.3.3 The STEM Project (Sustainable Together through Environmental Management) is a two year project, part financed by the European Union's INTERREG IVA Cross Border Programme managed by the Special EU Programmes Body. It is designed to work with 220 businesses across 11 cross-border Council areas to help identify cost savings in energy, waste and water. The scheme is open to small and medium sized businesses (SME). The STEM Project to date has successfully worked with over 300 businesses collectively saving them over £500k per annum, 80% of these businesses stated that they are now more competitive as a result of participating on the STEM Project and 35% are now able to access new markets.

8.3.4 Belfast City Council's Economic Development Unit, the BITES programme (Business Improvements Through Environmental Solutions) seeks to assist companies by showing them how to save money, increase competitiveness, operate more efficiently and reduce risk exposure by adopting a more environmentally friendly approach to their business. By encouraging

business operators to meet their social responsibility aims and promoting conscientious behaviour from staff, the overall environmental performance of a business can be significantly improved. The one year programme consists of five modules: Environmental Management Systems; Resource Efficiency; Energy; Water; and Purchasing and Transport. The programme is now supported by Invest NI and ERDF funding.

8.3.5 ARENA Network, the environmental arm of Business in the Community was established in 1995 to coordinate all business environmental initiatives in Northern Ireland. The Network is directed by a steering group comprising representatives of all the leading business organisations in Northern Ireland, including the Institute of Directors, Confederation of British Industry Northern Ireland, Northern Ireland Chamber of Commerce and Industry, Chartered Management Institute, Federation of Small Businesses and Society of Local Authority Chief Executives.

8.3.6 NIEA has entered into a strategic partnership with Business in the Community (BITC). As part of this contract, 270 SMEs will be subject to an environmental audit with the aim of achieving a financial saving of up to 0.45% as a percentage of turn-over. This will take place over a 3 year period to 31 Aug 2014 with funding of £450k. In addition, ARENA will help to develop environmental management systems for 50 businesses. The partnership includes key performance indicators for reduction in CO_2 emissions and diversion of waste from landfill.

8.3.7 WRAP also provides a practical guide to developing an EMS[14]. Organisations can work through the guide, section by section, using it to support them during the development of systems and processes necessary for their own EMS.

8.4 Voluntary Agreements with Business

8.4.1 Voluntary agreements (or responsibility deals) have provided a constructive mechanism for different industries to tackle resource efficiency and waste prevention in particular. In conjunction with WRAP, the Department of the Environment has provided support to a number of voluntary agreements with business in Northern Ireland and the UK. Businesses operating in Northern Ireland are currently signed up to several agreements.

8.4.2 Hospitality and Food Service Agreement

8.4.2.1 WRAP, working with all four UK Governments, has identified that the Hospitality & Food Service sector is in a strong position to make a considerable contribution to reducing food and associated packaging waste. This will save money and reduce environmental impacts. In June 2012, a UK-wide voluntary agreement was launched by WRAP on behalf of the UK, Scotland, Wales and Northern Ireland governments.

[14] http://www.wrap.org.uk/content/your-guide-environmental-management-systems-ems

8.4.2.2 The Hospitality and Food Service Agreement is a voluntary agreement to support the sector in reducing waste and recycling more. Research by WRAP[15] indicates that if avoidable food waste was prevented and unavoidable food waste diverted to anaerobic digestion (AD), the potential savings to industry would be more than £720 million a year.

8.4.2.3 The Agreement is flexible to allow any size of organisation to sign up, from multi-national companies to smaller businesses, from sector wholesalers/distributors to trade bodies. There are different ways of signing up depending on the size of business.

8.4.2.4 WRAP has worked closely with interested and relevant organisations and individuals to determine the targets for the Agreement. The targets will be owned by WRAP and collectively delivered by signatories. WRAP will deliver this Agreement across the UK through its national programmes.

8.4.2.5 The Agreement aims to cut food and associated packaging waste by 5% (a CO_2e reduction of 234,000 tonnes), the equivalent of approximately 100 million meals, by the end of 2015. This will be against a 2012 baseline and be measured by CO_2e emissions. It also aims to increase the overall rate of food and packaging waste that is being recycled, sent to anaerobic digestion or composted to 70% (a CO_2e reduction of 336,000 tonnes) by the end of 2015.

8.4.2.6 Across the UK there are now 185 signatories and supporters of the Agreement, covering approximatley 24% of the sector. 26 of these are either based in or have operations in Northern Ireland. There are 4 local signatories and 8 supporters operating wholly within Northern Ireland.

8.4.2.7 WRAP NI will be holding a number of focused workshops and training activities with signatories in relation to best practice, data capture and reporting as well as seeking to attract further signatories and supporters.

8.4.3 Courtauld Commitment

8.4.3.1 The Courtauld Commitment was launched in 2005 as a voluntary agreement aimed at improving resource efficiency and reducing the carbon and wider environmental impact of the UK grocery retail sector. The Courtauld Commitment supports the UK government's policy goal of a 'zero waste economy' and the objectives of the Climate Change Act to reduce greenhouse gas emissions by 34% by 2020 and 80% by 2050. WRAP is responsible for the agreement and works in partnership with leading retailers, brand owners, manufacturers and suppliers who sign up and support the delivery of the targets.

8.4.3.2 There have been three phases to the Commitment:

- **Courtauld 1** (2005-2010) looked at new solutions and technologies so that less food and primary packaging ended up as household waste.

[15] The Composition of Waste Disposed of by the UK Hospitality Industry, July 2011, WRAP

Across the UK during the course of Courtauld 1, 1.2 million tonnes of food and packaging waste was prevented, with a monetary value of £1.8 billion.

- **Courtauld 2** (2010-12) not only aimed to reduce primary packaging and household food and drink waste, but also focused on reducing secondary and tertiary packaging, and supply chain waste. It encouraged the sustainable use of resources throughout the whole supply chain. The results for Courtauld 2 will be reported in Autumn 2013. Three Northern Ireland businesses were signatories of Courtauld 2.
- **Phase 3 of the Courtauld Commitment**[16] was launched in May 2013 and aims to reduce the weight and carbon impact of household food waste, grocery product and packaging waste, both in the home and the UK grocery sector, by 5% overall by 2015, from a 2012 baseline. This translates into a cumulative reduction of 1.1 million tonnes of waste, 2.9 million tonnes of CO_2e and a cost benefit of £1.6 billion to industry and consumers. There are now 52 signatories to Courtauld 3, including three Northern Ireland businesses. WRAP NI continues working to attract further signatories. At the conclusion of the three phases of the Courtauld Commitment, a 20% reduction in household food waste could be achieved.

Action 7 – Support for Voluntary Agreements with Business

The Department of the Environment will work with partners to ensure that voluntary agreements with business on waste and resource efficiency work well in Northern Ireland and include a focus on preventing waste.

8.5 Rethink Waste Revenue Fund

8.5.1 In September 2010, the Rethink Waste Revenue Fund was launched by the Department of the Environment, providing funding to Councils, Waste Management Groups, the private sector and the third sector for waste prevention, re-use and recycling projects. The purpose of the fund is to target a range of interventions which will promote resource efficiency and generate clear environmental benefits, including interventions to encourage the prevention of waste, the re-use of materials and higher rates of recycling, thereby achieving diversion from landfill and assisting society to move towards "zero waste". The Fund will support "zero waste" projects. The fund is administered by WRAP, on behalf of the Department of the Environment.

8.5.2 Councils, Waste Management Groups, the private sector and the Third sector are able to apply for funding under the Rethink Waste Revenue Fund. Over the past three years, Revenue grants totalling in excess of £1.43 million have been made available under the grant scheme.

- 2010/11 - 7 grants were allocated totalling £240K.
- 2011/12 - 11 grants were allocated totalling £566K.

[16] http://www.wrap.org.uk/node/14621

- 2012/13 - 9 grants were allocated totalling £367K.
- 2013/14 - 9 grants were allocated totalling £262K.

8.5.3 The current fund is due to run until 31 March 2015, and is likely to be extended to at least 31 March 2016.

8.5.4 The Department of the Environment continues to seek opportunities to support the recovery of materials from waste. Currently the Department is a partner in the ReNEW project (Resource Innovation Network for European Waste), a €5 million project funded by Interreg IV:B North West Europe programme. The programme aims to increase cooperation between research and business to create value from waste. The project commenced in January 2013 and will run until June 2015. It will stimulate collaboration between researchers, SMEs and public bodies in North West Europe working to develop recovery processes and meet future market needs. In addition, it will accelerate innovation through a series of targeted support measures in an "innovation pipeline" which will select the most promising processes and support their development, exploitation and commercialisation.

Action 8 – Zero Waste Projects

The Department of the Environment will support "zero waste" projects through the Rethink Waste Fund.

9 Construction and Demolition Activity

9.1 Overview

9.1.1 In economic terms, construction is one of the largest sectors in Northern Ireland but it has been significantly impacted by the economic recession with the value of construction output falling 13% between 2007 and 2009. Evidence suggests that waste arisings have also fallen significantly as a result. There is even more importance in ensuring that the sector is provided with support to improve sustainability and resource efficiency in order to be competitive.

9.1.2 A WRAP report in 2011, "Construction, demolition and excavation waste arisings, use and disposal in Northern Ireland 2009/10"[17], estimated Construction, Demolition and Excavation Waste (CDEW) arising from construction, demolition and excavation activities in 2009/10 at 3,550,202 tonnes as outlined in Table 2.

[17] http://www.doeni.gov.uk/niea/cdew_arisings_use_and_disposal_in_ni_2009-10.pdf

Table 2. Estimated arisings of CDEW in 2009/10 by waste type

	Waste Type	Estimated Arisings 2009/10 (tonnes)	Proportion of Total Arisings (%)
Non-hazardous waste	Mixed hard inert	1,035,069	29.2
	Wood	15,022	0.4
	Glass	1,130	0
	Plastic	1,339	0
	Bituminous mixtures	71,691	2.0
	Metals	7,907	0.2
	Soil	2,318,275	65.3
	Insulation	917	0
	Gypsum	1,719	0
	Other non-hazardous waste	77,581	2.2
Total non-hazardous waste		**3,530,650**	**99.3**
Hazardous	Wood, glass & plastic	7	0
	Metals	102	0
	Soil	9,124	0.3
	Insulation	999	0
	Gypsum	146	0
	Other hazardous waste	9,174	0.3
Total hazardous waste		**19,552**	**0.6**
Total waste arisings		**3,550,202**	**100**

Source: RPS Planning & Development

9.1.3 The same report made a mass balance assessment to determine the fate of CDEW as outlined in Table 3.

9.1.4 This data shows scope to increase the recycling and recovery rates further through increased landfill diversion and improved sorting and segregation of mixed CDEW streams. The greatest environmental and financial savings could be made by minimising waste generation. However it should be acknowledged that huge strides have been made by the industry over the last decade to become more resource efficient.

Table 3. Summary of the fate of CDEW generated in Northern Ireland 2009/10

Fate	Parameters included	Tonnes	Proportion (%)
Re-use	Re-used on site	560,465	15.8
Recycling	Recycling	538,169	15.2
Recovery	Recovery, exemptions, beneficial use to landfill	1,356,491	38.2
Disposal	Landfill	632,148	17.8
Unknown	'Unknown' and 'unaccounted for' waste	462,929	13.0
Total		**3,550,202**	**100.0**

Source: RPS Planning & Development

9.1.5 Waste prevention, reuse and recycling of construction wastes is encouraged through a number of initiatives including the promotion of voluntary Site Waste Management Plans, EMS and the Halving Waste to Landfill commitment. Working with the industry to develop these into more

comprehensive tools will unlock greater benefits through efficient use of construction materials.

9.2 Designing out Waste

9.2.1 The best opportunities for improving materials resource efficiency in construction projects occur during the design stage. Implementing these opportunities can provide significant reductions in cost, waste and carbon.

9.2.2 Designers have a key role in improving the materials resource efficiency (optimising materials use and/or reducing waste) from construction projects as their design decisions directly influence what gets constructed, and how. Doing this is "Designing out Waste".

9.2.3 There are five key principles that design teams can use during the design process to reduce waste:

- Design for Reuse and Recovery;
- Design for Off-Site Construction;
- Design for Materials' Optimisation;
- Design for Waste Efficient Procurement; and
- Design for Deconstruction and Flexibility

9.2.4 WRAP NI routinely runs workshops for the industry, with a focus on designing out waste, to promote best practice. Support for WRAP NI from the Department of the Environment to run these workshops will continue.

9.2.5 There are other partnerships in Northern Ireland that are encouraging the Northern Ireland construction industry to ensure a more sustainable built environment. CEni, Constructing Excellence Northern Ireland, is part of a UK-wide network of regional centres, embedded within the School of the Built Environment at the University of Ulster at Jordanstown. CEni works with private sector organisations and public sector construction clients to improve performance in the construction industry. CEni provides independent advice, information, mentoring and support on procurement and performance measurement.

9.2.6 CEni was established in 2007 with the support of key stakeholders in the construction industry and funding from the NI Executive administered through Central Procurement Directorate on behalf of the Department of Finance and Personnel. Constructing Excellence is the successor to Rethinking Construction and the Construction Best Practice Programme. Constructing Excellence in Northern Ireland (CEni) is a partnership between key stakeholders in the construction industry, Government Departments and the University of Ulster. CEni has a vision for a sustainable construction industry in NI that demonstrates world class standards and can compete in the global market.

9.3 Environmental Management Systems in the Construction Sector

9.3.1 The 2006 Strategy made a commitment to consult on Site Waste Management Plans (SWMP) legislation. A consultation was published in

November 2010. Concurrently DEFRA was reviewing their SWMP Regulations as part of their "Red Tape Challenge" to reduce burdens on business. As a result of the "Red Tape Challenge", DEFRA made the decision to revoke their SWMP Regulations. In addition the Construction Employers Federation (CEF), with the support of the Northern Ireland Environment Agency (NIEA) and the Institute of Environmental Management and Assessment (IEMA), introduced a new environmental management system, called NVIR-O-CERT[18], in 2012, which requires participating construction businesses to commit to continual environmental improvement.

9.3.2 As a result of the Defra review, and the introduction of the bespoke environmental management system by CEF, the Department of the Environment felt that the introduction of SWMP Regulations at this time is not required and would add additional bureaucracy to the construction and demolition industry at a time of low economic activity. The Department of the Environment therefore made the decision not to proceed with making SWMP Regulations but will periodically review the uptake and effectiveness of voluntary SWMP and other voluntary schemes.

9.3.3 It is also likely that some industry operators will continue to use SWMP on a voluntary basis because of the economic advantages delivered by better resource efficiency and management. The Department of the Environment will continue to support WRAP work on the voluntary use of site waste management plans and the development of associated online tools. These are of assistance for businesses in general but especially for the construction and demolition sector and those businesses signed up to NVIR-O-CERT.

9.3.4 NVIR-O-CERT has been designed to be of benefit to businesses of all sizes but with a particular awareness of the need to cater for smaller businesses. It has been kept practical, focused on performance, with straightforward paperwork and costs kept down. A standardised range of environmental key performance indicators will be introduced for the local construction industry. This will help monitor and reduce waste going to landfill, energy use and water use, improving resource efficiency within the sector. The robustness of the scheme is underpinned by IEMAs well recognised professional qualifications. The auditors approved via NVIR-O-CERT will be certified as having superior knowledge and experience of business-environment issues, giving clients of accredited organisations confidence that when they see the NVIR-O-CERT logo that the company's environmental performance has passed a rigorous assessment.

Action 9 – Voluntary Construction Sector Schemes

The Department of the Environment will periodically review the effectiveness of voluntary environmental schemes within the construction sector in determining whether to consider statutory instruments in the future.

[18] http://www.cefni.co.uk/CMS/ShowPageContent.aspx?CODE=ffff

9.4 Voluntary Agreements within the Construction Sector

9.4.1 Halving Waste to Landfill was a voluntary agreement set up in 2008 for the UK construction sector. Signatories were asked to commit to playing their part in halving the amount of construction, demolition and excavation waste going to landfill by 2012. This required them to adopt and implement standards for good practice in reducing waste, recycling more, and increasing the use of recycled and recovered materials. The Agreement attracted over 800 Signatories (including 32 from Northern Ireland) from all parts of the construction supply chain and was successful in influencing over £42bn value of projects. Final data is still being collated but the trajectory figures have indicated that the target has been broadly achieved. WRAP is currently finalising details for a follow on voluntary agreement for the sector which will focus action on the broader issues of resource efficiency.

Action 10 – Voluntary Agreement for the Construction Sector

The Department of the Environment will work with partners and stakeholders to develop a follow-up voluntary agreement to Halving waste to Landfill appropriate for Northern Ireland.

9.5 Sustainable Construction in Procurement

9.5.1 Sustainable construction should be considered as an investment in the future. Through conservation of energy, water and natural resources by re-use, recycling, innovative design and the minimisation of waste and pollution we can meet our needs without compromising the needs of future generations. The promotion of sustainable construction is a major part of the Government's policy on Sustainable Development, which recognises that our economy, environment and social well-being are interdependent. Sustainable construction is the set of processes by which a profitable and competitive industry delivers built assets (buildings, structures, supporting infrastructure and their immediate surroundings).

9.5.2 The Sustainable Construction Group was set up in December 2004 to issue guidance to Project Sponsors and Project Managers in relation to sustainable construction. Central Procurement Directorate (CPD), of the Department of Finance and Personnel, chairs the group and membership includes representation from Centres of Procurement Expertise and Government Construction Clients in Northern Ireland.

9.5.3 The work of the group is guided by the Policy Framework for Construction Procurement and in particular the Government Construction Clients Sustainability Action Plan 2012-2015[1], which sets targets and objectives.

[1] http://www.dfpni.gov.uk/sap-2012-15

9.5.4 The following Sustainable Construction Guidance Notes are available for downloading from CPD. CPD is also assessing further guidance to improvement sustainability within construction procurement:

- Guidance Notes Introduction
- Guidance Note 1: General Roles and Responsibilities
  This outlines the General Roles and Responsibilities of Central Procurement Directorate (CPD), Contracting Authorities, Centres of Procurement Expertise (CoPE) and Project Managers in relation to sustainable construction.
- Guidance Note 2: Targets for Recycling
  The aim of this note is to focus on one of the most important targets for sustainable construction. A minimum of "10% of the material value of the project should derive from recycled or reused content" (Ref. Achieving Excellence Guide 11: Sustainability, Page 22)
- Guidance Note 3: Construction, Demolition and Excavation Waste Materials This note deals with the minimisation and proper disposal of construction, demolition and excavation waste in public procurement contracts. It aims to ensure legal compliance with waste related legislation and also to promote best practice construction. An important part of this guidance concerns the use of Site Waste Management Plans**.**
- Guidance Note 4: Bulk Inert Materials/Aggregates – Re-use and Recycling
  This guide aims to promote the re-use and recycling of bulk inert materials in construction in order to reduce consumption of natural resources, energy, transport costs and waste going to landfill.
- Guidance Note 5: Considerate Constructors' Scheme
  The Considerate Constructors' Scheme embodies the respect for people and their local environment in its code of practice. The use of the Considerate Constructors' Scheme or similar is a mandatory requirement of the Sustainability Action Plan.
- Guidance Note 6: Demolition, Dismantling, Recovery and Reuse
  This note sets out radical new procedures and practices (compared with the previously accepted ways) for Employers, Project Managers and Contractors to follow. It aims to minimise the quantity of waste being sent to landfill sites.
- Guidance Note 7 Sustainable Design in the Built Environment
  This note provides the construction design practitioner with an introduction to sustainable design in the built environment. The requirements contained within this Guidance Note are to be implemented for new projects commenced after 1st June 2011.
- Guidance Note 8: Durable and Sustainable Concrete
  The purpose of this guidance note is to assist Government Construction Clients, Project Managers, and Client Advisors in the specification and use of concrete in Government construction projects.

9.5.5 The Sustainable Construction Group is currently finalising draft guidance relating to resource efficiency and waste prevention on:

- Re-Use of Existing Built Assets-
- Construction Site Impacts-

- Design for minimum waste

9.5.6 The Department, through WRAP NI, as part of the WRAP Construction Programme delivery in Northern Ireland, has co-funded, with CPD, a number of training sessions on sustainable construction, site waste management plans and designing out waste."

9.5.7 In response to the commitment in the UK construction strategy and associated developments in Northern Ireland public sector construction policy, CPD is setting up a Building Information Modelling (BIM) task group, with members drawn from the NI Centres of Procurement Expertise, to develop and issue procurement guidance related to the integration of BIM into the design, procurement and construction of public sector infrastructure and buildings. The group will explore the potential for BIM to address resource efficiency issues more effectively than is currently possible.

10 RE-USE ACTIVITY

10.1 Overview

10.1.1 Re-use has an important role in the prevention of waste. Re-use extends the life of materials providing tangible benefits for the economy as well as the environment. Re-use can be conducted by a wide range of organisations, from businesses exchanging surplus materials through to individuals making donations to charitable organisations.

10.1.2 Even within our homes there is a great wealth of materials that could be re-used that would reduce the pressure on raw materials and contribute to the broader economy. The WRAP 'Valuing our Clothes' report[19] in 2012 estimated that the average UK household owns around £4,000 worth of clothes and around 30% of clothing in wardrobes has not been worn for at least a year. The cost of this unused clothing is around £30 billion and by extending the average life of clothes by just three months of active use would lead to a 5-10% reduction in each of the carbon, water and waste footprints. However, even with the increase in clothes' banks and publicity by charities for clothes' donations, an estimated £140 million worth (around 350,000 tonnes) of used clothing goes to landfill in the UK every year.

10.1.3 The revised WFD defines "re-use" 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 Directive defines "preparing for re-use" as meaning checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. "Preparing for re-use" is a waste operation.

10.1.4 The WFD requires member states to take measures to promote the re-use of products. By reusing items we extend their lifespan and reduce the

[19] http://www.wrap.org.uk/content/valuing-our-clothes

demand for new materials. In Northern Ireland we are working towards increasing the supply and demand for quality reusable items through improving collection, promotion and public procurement.

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

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

10.1.7 Examples of re-use are not limited to government or to bulky items. The "Pass It On" project shows how organisations can run re-use projects that support other organisational aims. "Pass It On" began initially as a project from Belfast City Council to emphasise the importance of re-using unwanted books and re-thinking the impact of waste. Crescent Arts Centre Outreach established a working partnership with the Council to develop and manage a number of venues hosting "Pass it On" as part of the Belfast Book Festival to bring reading to the masses. Since then, Crescent Arts Centre Outreach has taken the project in order to increase the number of participating venues as part of the Crescent Arts Centre Outreach annual programme.

10.2 Reuse and Repair

10.2.1 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 island of Ireland 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. The waste prevention forum planned in 2014 will have a particular focus on establishing a repair and reuse network across Northern Ireland.

10.2.2 A WRAP report, Reuse of Bulky Waste in Northern Ireland: Opportunities for Growth , in 2010 into bulky waste re-use showed that there were significant opportunities to increase re-use activities. The report estimated the amount of bulky household waste arising in Northern Ireland at approximately 80,000 tonnes per year. Further estimations suggested that about 23,000 tonnes of this would realistically be reusable. In 2007/08 Furniture Reuse Organisations (FROs) diverted just over 1,000 tonnes of bulky items to reuse. Based on likely market demand for material, and increased local authority activity in cooperation with FROs, it was suggested that a further 3,100 tonnes could be diverted for re-use.

10.2.3 In Northern Ireland, the Third Sector has led the way in the promotion and delivery of re-use and preparing for re-use projects. Northern Ireland has a vibrant community reuse sector that not only contributes to the diversion of

waste from landfill but provides employment and skills training for the unemployed and boosts the local economy, often in socially deprived areas. They also provide quality re-used goods at affordable prices to less affluent sections of the community.

10.2.4 Through the Rethink Waste Fund a number of projects have benefited from grants, such as re-use and refurbishment projects for Voluntary Service Lisburn and the East Belfast Mission "Restore" network. However the main re-use and preparing for re-use activities are still largely confined to the east of Northern Ireland. Currently the Third Sector can only apply for grants for revenue funding from the Rethink Waste Funds. This has limited organisations' capacity to expand. It is essential that successful organisations with proven and sustainable business models are provided with the investment to grow and diversify into other materials for re-use. Additionally, grants are currently limited to in-year expenditure. The Department of the Environment will review the current Rethink Waste Fund and seek to provide access to capital funding and to offer grants over 1-3 years to the Third Sector.

Action 11 – Reuse and Repair Network

The Department of the Environment will work with partners to develop a re-use and repair network throughout Northern Ireland, supporting re-use and preparing for re-use infrastructure.

Action 12 – Support to the Third Sector

The Department of the Environment will review the Rethink Waste Fund to provide appropriate support to the Third Sector to enable business growth and capacity to be expanded.

10.3 Re-use Market Development

10.3.1 Between now and 2020, WRAP[20] estimates that electronic waste in the UK will total more than 12 million tonnes. A quarter of this will comprise IT equipment, consumer electronics and display screens. This 12 million tonnes will included precious metals, which at the time of writing, have a total estimated market value of £7bn. Nearly 25% of waste electrical and electronic equipment (WEEE) that's taken to household waste recycling centres could be re-used, worth around £200m gross per year.

10.3.2 Re-use not only diverts waste from landfill but also contributes to significant carbon savings when compared with recycling. For the re-use market to grow there has to be social acceptance and confidence in the quality of the goods being sold. Assuring quality of goods will assist in providing this confidence to the public, particularly for electrical and electronic goods.

[20] WRAP Switched onto Value report - http://www.wrap.org.uk/content/switched-value

Additionally, the marketing of re-use goods would be assisted if the assurance schemes had a wider use, acceptability and profile.

10.3.3 The Department of the Environment will work with partners across the UK and beyond to influence supply chains, and promote the extension of product lifetime for electronics and reduce wastage of electronic products that are still in working order. Locally the Department of the Environment will seek to work with and support stakeholders to increase the re-use of electronic and electrical equipment, and will assist the development of new business models with partners for re-use schemes and promote standards such as PAS141[21].

Action 13 – Re-use Quality Assurance

The Department of the Environment will:

- Engage with partners to influence supply chains
- Develop new business models to assist re-use businesses.
- Promote re-use assurance standards

11 MEASURING PROGRESS

11.1 There are currently no EU targets for waste prevention and no targets have been proposed by the revised Waste Management Strategy. However, the European Commission is proposing to present a report on waste prevention by the end of 2014. It will propose measures, if appropriate, including waste prevention and decoupling objectives, to be achieved by 2020.

11.2 As previously stated, the aim of the Waste Prevention Programme is to maintain the downward trend in waste arisings in Northern Ireland, and in particular to decouple economic growth from the environmental impacts associated with waste generation.

11.3 To ensure that activities within the Waste Prevention Programme are on course to comply with the aims and objectives the following indicators will be monitored[22] by the Department of the Environment:

- Initially, the **amount of household waste arisings**. When more reliable data becomes available through other initiatives in the revised Waste Management Strategy, the amount of Commercial & Industrial Waste and Construction & Demolition Waste arisings will also be monitored.

- Initially, the **amount of household waste arisings per unit household expenditure** to assess trends relating to decoupling economic growth and waste arisings. Commercial & Industrial Waste and Construction & Demolition Waste arisings per unit GVA will be monitored once reliable data becomes available.

[21] PAS 141 is a process management specification for the re-use of used and waste electrical and electronic equipment (UEEE and WEEE) - http://www.wrap.org.uk/content/pas-141-re-use-standard

[22] WasteDataFlow data will be used for monitoring of the indicators relating to household waste.