Draft Joint Municipal Waste Management Strategy for Merseyside

RESOURCES Merseyside 2011 - 2041

Delivering the Joint Municipal Waste Management Strategy for Merseyside

recycle
for Merseyside and Halton

Delivering the Joint Municipal Waste Management Strategy for Merseyside

Contents - **Executive Summary**

Chapter 1: Introduction

1.1 What is this document?

RESOURCES Merseyside is the revised Joint Municipal Waste Management Strategy for Merseyside (JMWMS). It replaces the previous Strategy adopted in 2008 and has been developed through consultation with residents, elected members and other stakeholders and interested organisations.

The Strategy sets out how Merseyside will continue to improve the management of its municipal waste over the next thirty years whilst helping to address some of the major resource challenges facing our society.

The JMWMS has been developed by the following authorities:

- **Merseyside Waste Disposal Authority;**
- **Knowsley Metropolitan Borough Council;**
- **Liverpool City Council;**
- **Sefton Metropolitan Borough Council;**
- **St Helens Metropolitan Borough Council;**
- **Wirral Metropolitan Borough Council.**

The five Merseyside district councils are responsible for local authority collection services in their area and are known as Waste Collection Authorities (WCAs). Merseyside Waste Disposal Authority (MWDA) manages the treatment and disposal of local authority collected municipal waste across Merseyside through the use of two Materials Recovery Facilities (MRFs), four Waste Transfer Stations (WTS) and 14 Household Waste Recycling Centres (HWRCs) which are operated by MWDA's contractor Veolia Environmental Services Merseyside Ltd. (See Figure 1 overleaf)

The Merseyside authorities together with Halton Borough Council form the **Merseyside and Halton Waste Partnership (MHWP)** and have the responsibility for managing municipal waste across the Liverpool City Region (LCR).

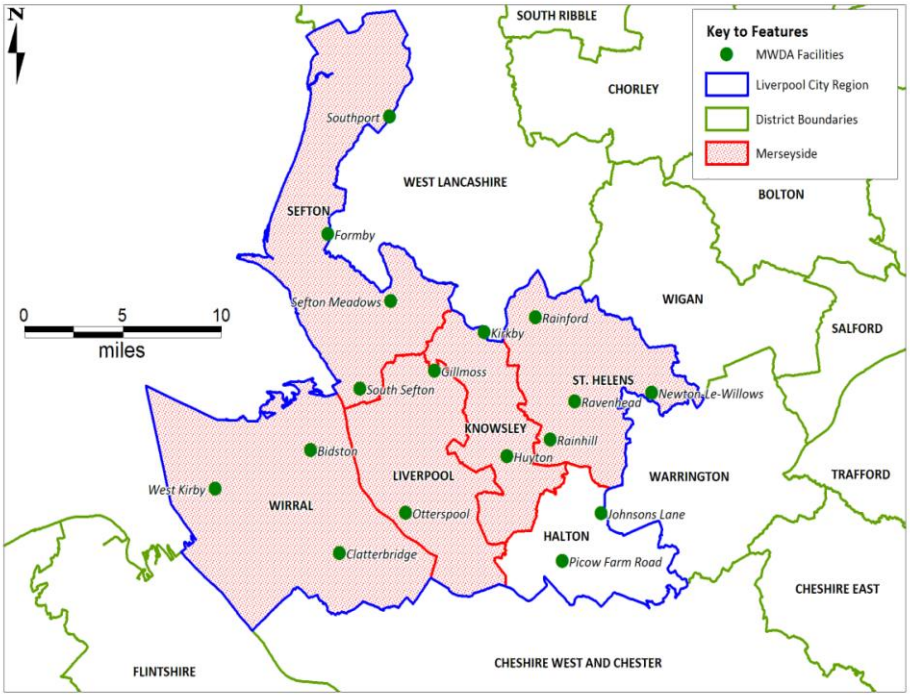
The LCR has established a Cabinet which acts as a structure for collaboration between the five districts of Merseyside and Halton. The City Region is at the forefront of managing its resources wisely to maximise economic, environmental and social benefits for the local and global community.

All the data[1], facts, vision, aims, objectives and targets included in this Strategy relate specifically to the Merseyside members of the Partnership except where specified. As a separate unitary authority, Halton Borough Council is responsible for the collection, treatment and disposal of municipal waste in its area. Halton joined

[1] The most recent verified waste data used in this headline Strategy is 2009/10. Some supplementary reports including District Council Action Plans may use slightly different figures due to when they were modelled.

the Waste Partnership in 2006 and has a separate but aligned Municipal Waste Management Strategy.

Figure 1: Liverpool City Region (Administrative Boundaries)



The JMWMS for Merseyside has been developed on the basis that district councils will decide the best collection system for their area and identified a menu of Priority Options (Table 5) which the Partnership has developed as actions for change: These options include:

- **Joint Working:** Local councils to consider joining forces to deliver services which could include joint collection contracts, shared collections services, joint communications, education and awareness, governance etc.
- **Frequency of Waste Collections:** Local councils to consider the best local system for the collection of refuse and recyclables. This could be a weekly household collection of materials such as recyclables one week and rubbish that cannot be recycled or composted the next week. Knowsley, Sefton and Wirral districts have already implemented changes to the frequency of their household waste collections.
- **Green Waste Charging:** Consider charging residents for the garden waste they generate.
- **Food Waste collections plus treatment**: Consider introducing separate collections for food waste. Knowsley and Sefton have already introduced "opt-in" schemes.
- **No side waste:** Consider a consistent approach across Merseyside regarding collections of any rubbish bags that do not fit inside a householder's refuse bin.

Figure 2: The Aims of the JMWMS

The aim of RESOURCES Merseyside is to deliver sustainable waste management within the context of wider resource management and climate change. It will do this by:

Recognising waste as a valuable resource

Minimising the environmental impact of waste management

Preventing the creation of waste on Merseyside in the first place

Increasing re-use, recycling, composting and energy recovery of waste

Reducing the amount of waste landfilled

Raising awareness and education to promote resource efficiency and make it easier for everyone to contribute to sustainable waste management activities

Consuming less

Producing more with less resource

Tackling climate change by the reduction of carbon emissions from waste management and support for our Low Carbon economy

Protecting and enhancing our environment

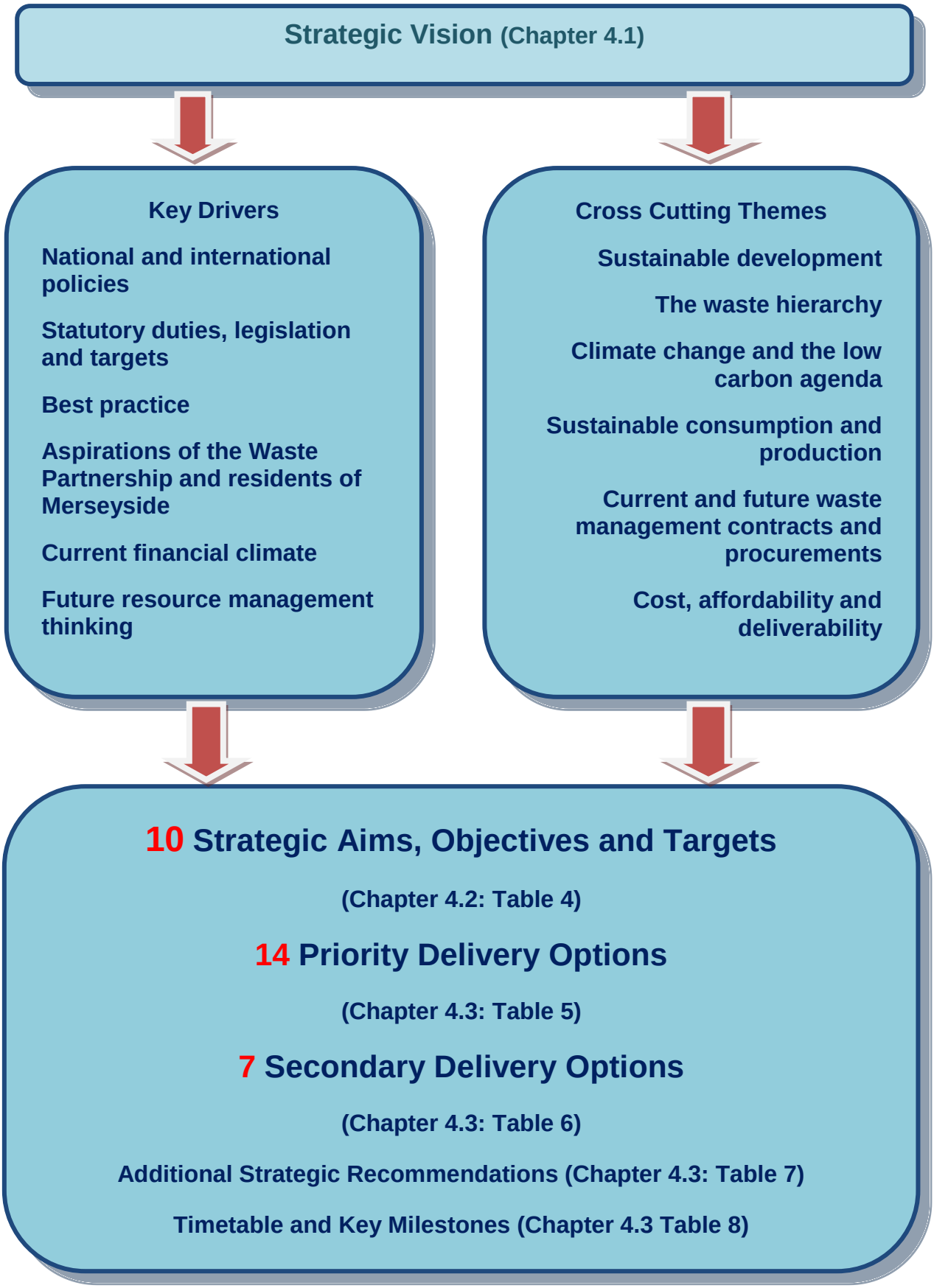
Using and generating renewable energy and fuels

Figure 3: Why we are reviewing the Waste Strategy now

- **Merseyside requires a Joint Strategy to clearly identify how it will manage its municipal waste, natural resources and raw materials efficiently and sustainably in a low carbon economy.**
- **The composition of municipal waste is changing which may impact upon existing recycling systems, established reprocessing markets and the recovery potential of the remaining waste streams.**
- **To develop a Strategy which better reflects the views, aspirations and needs of the residents of Merseyside and other stakeholders and improves the quality of policy and decision making by drawing on local knowledge.**
- **To provide a flexible approach to waste management and collection systems. This would allow for additions and loss of materials from the waste streams whilst ensuring systems are fit for purpose to deliver materials of a high quality for resale.**
- **The Government is reviewing the Waste Strategy for England 2007 and the European Union has revised the Waste Framework Directive with new higher recycling targets that need to be taken into account by the Strategy.**
- **The JMWMS had a commitment for a review to take place in 2010 and every five years as a matter of principle in order to respond to future challenges and ensure that the Strategy remains consistent with the latest environmental and regulatory position and best practice.**
- **There is a current statutory requirement to have a Strategy;**

1.2 Structure of the Strategy

RESOURCES Merseyside is structured around:



1.3 Strategy development process

Merseyside Waste Disposal Authority (MWDA) and the Merseyside Waste Collection Authorities are required by law[2] to produce a joint strategy for the management of Merseyside's municipal waste. The original Strategy for Merseyside was published in 2005 and identified the aims and objectives for waste management up to 2020. MWDA undertook an extensive public consultation during the development of the original Strategy.

The JMWMS 2008 was an update of the original 2005 Strategy, to bring it in line with changes in legislation, policy and performance whilst retaining the original aims and objectives.

RESOURCES Merseyside 2011 is set out as a headline strategy document. It does not cover waste management planning, non-municipal waste streams or specific sites allocations. Those topics are a matter for the Waste Development Plan Document (DPD) which is being taken forward through a process of joint working between the Liverpool City Region Planning Authorities.[3] The DPD will take into account the needs of the JMWMS.

The current Strategy review has specifically focused on the issues and options associated with waste prevention, re-use, recycling and composting whilst also recognising the overall impact of these activities on the amount of residual waste ultimately requiring treatment or disposal.

A number of research workstreams were undertaken to provide evidence and background reports to inform the review of the Strategy. These include:

- Waste Composition Analysis [4] (Supplementary Report A);
- "Don't Waste Your Say" Public Consultation Report[5] (Supplementary Report B);
- Future Trends in resource use and management Report[6] (Supplementary Report C);
- Issues and Options Study and Options Assessment Report [7] (Supplementary Report D);

[2] The Waste Emissions Trading Act 2003 (WET Act)

[3] Planning and Compulsory Purchase Act 2004. The DPD is currently in the latter stages of preparation and should be published by 2012 following an Examination in Public

[4] 2010 Entec UK Ltd

[5] March 2011 Enventure Research

[6] Made Today, gone tomorrow?" November 2010 Beasley Associates/Ray Georgeson Resources

[7] April 2010 and March 2011 SKM Enviros

- Strategic Environmental Assessment (SEA) Draft Environmental Report[8] (Supplementary Report E); and
- District Council Action Plans[9] (Supplementary Reports F to J);

Boxes showing the key findings from the Public Consultation are highlighted throughout this Strategy.

Next stages:

- Draft Waste Management Strategy and SEA Environmental Report Public Consultation (27th June to 26th August 2011);
- Final drafting taking account of stakeholder responses (September/October 2011); and
- Final Draft for approval, ratification and publication (November/December 2011)

1.4 Public consultation process

An extensive three month consultation was undertaken with the public of Merseyside in autumn 2010 under a campaign banner "Don't Waste Your Say" (Supplementary Report B) to inform the development of the JMWMS and improve the quality of policy and decision making. The detailed research objectives were to:

- Reflect the view and aspirations of the wider community and ensure the sample was representative;
- Raise awareness and understanding;
- Promote social cohesion;
- Include hard to reach groups;
- Use new e-consultation techniques;
- Align with the review work streams; and
- Disseminate information to the public.

[8] March 2011 SKM Enviros. This report is annexed to the draft JMWMS for public consultation and considers the significant environmental impacts of the Strategy.

[9] Review of DCAPS undertaken by SKM Enviros in 2010/11. DCAPS will be specific to each local council in Merseyside and set out their individual commitments to delivering the overall JMWMS objectives and performance targets within specified timeframes.

Don't Waste Your Say Activities

- **3,022 face to face household interviews (a minimum of 600 in each local council area) and representative in terms of gender, age and ethnicity;**
- **Website: www.dontwasteyoursay.org; Facebook page and Twitter account;**
- **Media briefing to launch the campaign;**
- **Pre and post consultation Newsletters distributed to a range of council venues such as libraries, one stop shops and leisure centres and to organisations such as CVS, Faiths4Change and Merseyside Environmental Trust;**
- **Day long roadshows were held in each district: Derby Road, Huyton; Williamson Square, Liverpool; Church Square, St Helens; Chapel Street, Southport; and Liscard Way, Liscard. The roadshows aimed to raise awareness and encourage participation in the consultation plus a short roadshow survey;**
- **A six week Econsultation: Online Research Forum set up on the website to allow Merseyside residents to take part in various quick polls, short surveys and discussion forums on themes such as food, shopping habits, recovering waste and waste management in the community; and**
- **10 focus groups held with two in each district. The first was representative of the local area whilst the second was tailored towards older residents (55+), younger residents (under 35) or Black and ethnic minority residents.**

The campaign provided a comprehensive level of understanding and sufficient depth of detail and insight into residents' attitudes, needs and opinions. The surveys and some elements of the Econsultation provided a range of quantitative data to compare results across various demographic groups. The focus groups and online discussion forum threads lend a layer of deeper qualitative insight into respondents' views.

A key element of the consultation was to canvas public opinion on the ten shortlisted strategic options and delivery mechanisms identified by the Merseyside and Halton Waste Partnership as priorities to take forward.

Each focus group and members of the Online Research Forum considered and ranked the short list. Their views were taken into account in the overall rankings of the menu of delivery options in Chapter 4 of this Strategy.

The draft Strategy and the related draft Environmental Report is now the subject of the current 9 week public consultation. The consultation findings will be taken into account before a final JMWMS is prepared and submitted for adoption by MWDA and the Merseyside District Councils.

Don't Waste Your Say Findings

In general, the public thought that the strategic objectives and delivery mechanisms being considered were appropriate and very much interlinked.

The ranking of options from the focus groups and online consultation responses when applied to the technical appraisal scores did not significantly alter the ranking order of the delivery options presented in Chapter Four of this Strategy.

Chapter 2: Waste Management on Merseyside

There is a range of existing and new European, national and local policies and legislation that are shaping the way municipal waste is managed and likely to be managed on Merseyside. These topics include resource efficiency, sustainable consumption and production, the reduction of carbon and climate change impacts and the increasing role of waste prevention and pathways to zero waste. These are the main drivers for change influencing this review of the Waste Strategy.

2.1 Key Legislation and Policies

Key policies that the review of the Joint Municipal Waste Management Strategy (JMWMS) will take into account are:

- EU Waste Framework Directive 2008/98/EC which introduces the 50% recycling target;
- The Waste (England and Wales) Regulations 2011;
- Government Review of Waste Policy in England 2011; and
- Climate Change Act 2008

A review of these documents has been undertaken during the preparation of the Issues and Options report and the Strategic Environmental Assessment (see Supplementary Reports D and E).

The Government has introduced a significant number of fiscal changes to address the national deficit including significant reduction in the public sector funding. Affordability, deliverability and value for money have therefore been important factors in the development of the options for this Strategy.

2.2 Progress on Merseyside

Merseyside has made significant strides in the last decade to manage its municipal waste (Figures 4 and 5). Performance has improved across the region (Table 3), significant investments have been made with new facilities being built to support increases in recycling and the amount of municipal waste sent to landfill has fallen significantly. Merseyside is tackling the waste challenge, making better use of its resources, generating less waste and supporting the economy as well as the environment. That’s a great effort for one of the most densely populated urban regions of the UK.

Figure 4: Key Waste Facts for Merseyside[10] [11]

- 1.35 million people live on Merseyside in 629,000 households.
- It costs approximately £100 million to manage household waste every year from collection to disposal.
- Recycling has increased from 5.9% in 2002/3 to 33% in 2009/10 meeting the original 2005 Strategy target.
- Municipal waste arisings have fallen by 8.9% from 842,000 in 2005/6 to 767,000 tonnes in 2009/10.
- Municipal waste growth rate has fallen by 2.3% annually and for household waste it is a 3.1% reduction. This compares to 3% annual growth increase assumed in the 2005 Strategy.
- Average amount of waste produced by each household per year has gone down from 854kg in 2007/8 to 742kg in 2009/10.
- Merseyside is sending 217,000 tonnes less waste a year to landfill than it was in 1999.
- Municipal waste landfilled was 63.7% in 2009/10.

Don't Waste Your Say Findings

76% of Merseyside residents claimed to be doing more to actively care for the environment compared to two years ago driven by high participation rates seen in kerbside recycling collection services across Merseyside.

[10] Office for National Statistics – Mid Year Population Estimates 2009.

[11] Waste dataflow

Figure 5: Current Waste Management Services on Merseyside

- All five waste collection authorities (WCAs) currently operate a household refuse and recycling collection with two districts opting for a managed weekly service;
- All five WCAs currently offer bulky household waste collections and free garden waste collections;
- Two WCAs directly provide an opt in food waste collection service;
- Three WCAs directly provide a trade waste collection service;
- Over 200 bring bank sites are available across Merseyside for a range of recyclable materials;
- 14 Household Waste Recycling Centres (HWRCs) are operated by Merseyside Waste Disposal Authority (MWDA) with replacement HWRCs currently being developed for Kirkby and Huyton;
- MWDA operates a Materials Recovery Facility (MRF) at Bidston, Wirral to sort and recover materials for recycling. A second MRF will open at Gilmoss , Liverpool in 2011 which includes an integrated Visitor and Education Centre;
- MWDA operates four Waste Transfer Stations (WTS) where waste is bulked up for onward transport;
- MWDA is in the process of procuring a contract to design, build and operate an energy from waste facility enabled for combined heat and power to deal with an estimated 500,000 tonnes of waste per annum to be diverted from landfill;
- Four composting facilities are used; and
- Several landfill sites are used for the remaining residual waste.

Don't Waste Your Say Findings

- **High levels of general satisfaction with the current waste management services received on Merseyside but there is still room for improvement;**
- **78% of Merseyside residents "put as much as they can" into their recycling bins**
- **56% of respondents across Merseyside use their Council's bulky waste collection service (65% in Liverpool)**
- **23% of residents across Merseyside have and use a food waste caddy (52% in Sefton**

2.3 What makes up our waste?

Waste Arisings

In 2009/10, approximately 767,000 tonnes of municipal waste were produced within Merseyside. A breakdown of arisings is shown in Table 1 below.

Table 1: Municipal Waste Arisings 2009/10

Municipal Waste Stream (Total Collected)	**2009/10 tonnes**	**% of Total Waste Stream**
a) Household Waste		
Residual Waste	453,579	**59**
Recycling/Composting	251,665	**33**
Reuse	1,518	**0.2**
Sub-total: **Household Waste**	**706,762**	**92**
b) Non-household Waste		
Residual Waste	24,921	**3.3**
Recycling/Composting	905	**0.1**
Reuse	0	**0**
Rubble	34,102	**4**
Sub-total: **Non-Household Waste**	**59,928**	**8**
Total Municipal Waste (a+b):	**766,690**	**100**

2.4 Waste growth

Historically, there has been a clear link between economic growth and wealth, rising population and the amount of waste produced. The 2005 JMWMS assumed a projected growth rate of 3.0% with a target of zero growth by 2020. Waste Strategy for England showed that waste growth has slowed nationally to 0.5%. The updated JMWMS 2008 showed a rate of increase lower than previously observed in Merseyside and new targets were developed to limit municipal solid waste growth to +0.2% by 2015 and 0% by 2020.

The number of people living on Merseyside combined with the number of households will also have an impact on the amount of waste produced and requiring management in the future. The population of Merseyside is estimated to have declined slightly from 1.36 million in 2001 to 1.35 million in 2009 mid-year estimates.[12] Household numbers are also predicted to rise marginally up to 2021 from 628,000[13] to an estimated 642,000[14].

It is important to recognise that there may be a number of factors influencing the recent reductions in waste growth from the current economic climate to the changing nature of the waste streams. Equally important, though harder to predict, will be the fluctuation of public behaviours between periods of economic austerity and prosperity during the lifetime of this Strategy. These factors will be explored further in Chapter 3 of this Strategy.

2.5 Waste Composition

There are a wide range of services available to residents to re-use and recycle their waste across Merseyside and many of those services are being actively used. However, to get more value from its waste, Merseyside needs to understand what is still being thrown away to go to landfill and why? Table 2 overleaf shows a snap shot of the key items by weight that Merseyside residents throw into their residual bin. [15]

[12] Office of National Statistics 2009

[13] WasteDataFlow 2008/9 figures derived from national statistics

[14] Liverpool City Region Housing Strategy 2007

[15] Merseyside Waste Composition Analysis Results Table September 2010

Table 2: Composition of materials identified in residual kerbside waste stream (after recycling)

Category	% by weight
Kitchen waste including food, tea bags and liquids	**28.3**
Paper including newspapers, magazines, paper bags and tissue paper	**13.1**
Miscellaneous combustibles including wood, furniture, nappies, carpets	**10.4**
Plastic (dense) including plastic bottles	**8.1**
Plastic (film) including carrier bags, crisp packets, gift wrap and food wrapping/film	**6.0**
Cardboard including packaging and liquid cartons	**5.8**
Glass including glass bottles and jars	**4.9**
Textiles and shoes	**4.5**
Ferrous metals including steel food and beverage cans and aerosols	**2.9**
Miscellaneous non-combustibles including construction and demolition waste	**2.8**
Waste Electrical and Electronic Equipment (WEEE) including large and small appliances, mobile phones, CD/DVD/MP3 players, games consoles, light fittings and lamps.	**2.7**
Non-Ferrous metals including aluminium food and beverage cans and aerosols	**1.3**
Potentially hazardous including household and car batteries, clinical waste, engine oil	**0.7**

Don't Waste Your Say Findings

- **Food wastage was of key concern to Merseyside residents with many expressing shock at the amount of food thrown away by the average household each year.**

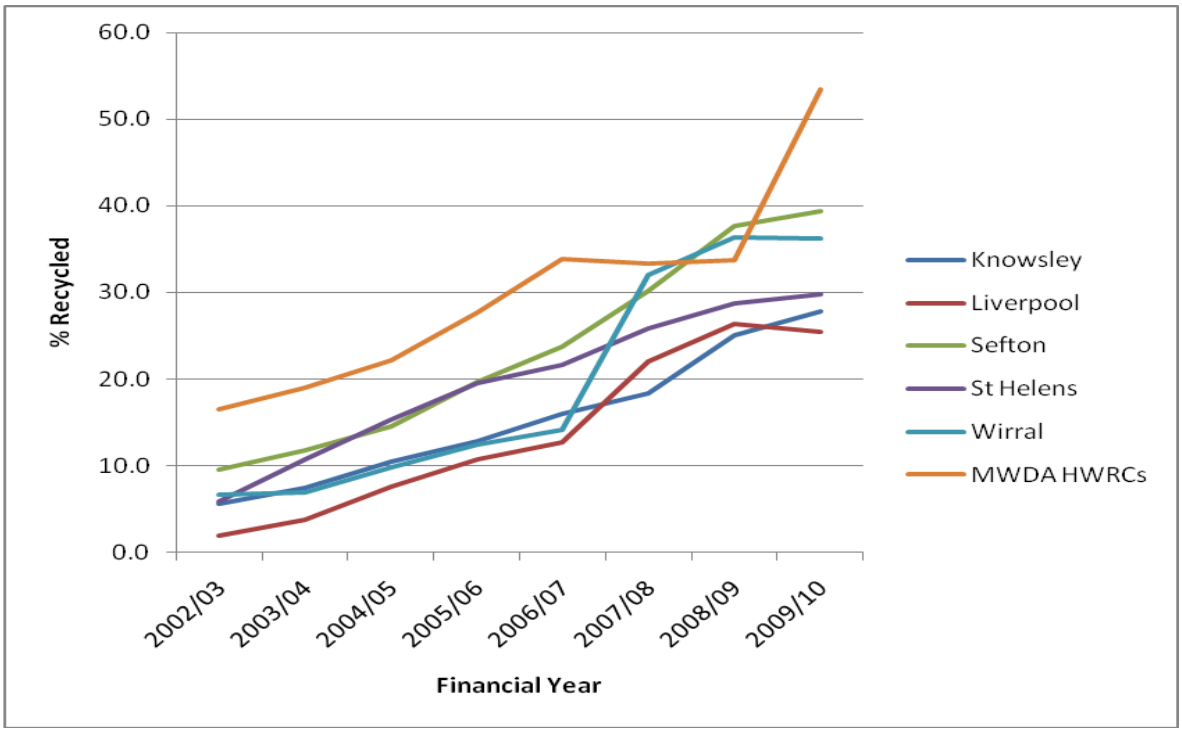
2.6 Recycling and Composting Performance

The individual recycling rates achieved by the Merseyside Waste Collection Authorities between 2002/3 and 2009/10 are shown in Table 3 and Figure 4 below. These figures provide an indication of the increase in recycling levels seen across all five district councils and the 14 Household Waste Recycling Centres managed by Merseyside Waste Disposal Authority.

Table 3: Percentage (%) Recycling Rates for Merseyside

District	2002/03 [16]	2003/04	2004/05	2005/06	2006/07	2007/08 [17]	2008/09 [18]	2009/10
Knowsley	5.60	7.50	10.40	12.80	16.00	18.40	25.05	27.80
Liverpool	1.90	3.80	7.60	10.70	12.70	22.10	26.39	25.50
Sefton	9.50	11.70	14.50	19.70	23.70	30.20	37.66	39.40
St Helens	5.90	10.80	15.30	19.60	21.60	25.90	28.78	29.80
Wirral	6.70	7.00	9.90	12.40	14.20	32.00	36.31	36.20
MWDA	16.50	19.00	22.20	27.72	33.83	33.26	33.66	53.40

Figure 6: Summary of Recycling Performance 2002/3 to 2009/10



[16] JMWMS 2005

[17] BVPI 82a and b up to 2007/08

[18] NI192 data from 2008/09

2.7 Trade Waste

Waste Collection Authorities are required to make arrangements to collect trade waste upon request. At present, Knowsley, Sefton and St Helens provide a chargeable trade waste collection service. St Helens is the only district at present which offers a trade recycling service. Merseyside Waste Disposal Authority is also working with its contractor to trial trade waste service at Bidston HWRC during 2011. There is significant potential to provide increased recycling services and resource management advice and information to the private sector, particularly for small and medium sized enterprises. These opportunities will be explored in Section 3.

Chapter 3: Facing the Future

The previous chapter has shown the progress made on Merseyside to increase recycling rates and move waste management away from landfill. Waste can be seen as a resource in the wrong place that has a value and needs to be managed. The rest of this Strategy document explores the opportunities and challenges for waste management in helping to address broader resource management aspirations for Merseyside.

We cannot predict the future however much we try because of the way people live their lives, how businesses operate and the types of products sold to meet consumer demand changes all the time. However, the Merseyside districts must be in a position to make valid judgements and plan for waste management services whilst being flexible enough to respond to the challenges and changes that Merseyside will face in the future.

It is generally accepted that we live in a disposable society where material goods play a significant role in many peoples' lives. Long periods of economic prosperity in the UK have led to unsustainable buying habits and over consumption where people may buy large numbers of ultimately unused products and food from around the world. This is largely as a result of goods being easily accessible, at low cost or people buying on impulse. The current economic climate is having an impact on consumer habits and some people are moving away from a consumption lifestyle and seeking alternative more traditional values such as growing their own food and making their own clothes. This may be a short term effect and as the economy improves, society may return to more consumption driven lifestyles.

Don't Waste Your Say Findings

On average:

- **70% of residents on Merseyside now use their own bags or "Bags for Life" for shopping instead of single use plastic bags;**
- **34% will mend or repair items before they throw away;**
- **32% of people buy products made from recycled materials;**
- **26% actively seek out and buy products that use less packaging;**
- **24% buy second hand products from charity shops or from social enterprises**

We also live in a world that needs to address the impacts of climate change and future use of finite natural resources. There are growing concerns about changes in global supply chains and security of key resources such as food, plastics, oil, water and rare earth metals which are used in products such as mobile phones, televisions and low energy light bulbs.

Many of these issues will have a direct or indirect impact on the composition, quantity and volume of the local waste streams and the facilities needed to manage the waste householders put in their bins.

Good management of waste and resources can make a positive contribution to wider economic, environmental and social goals such as mitigating climate change and producing renewable energy. These are the drivers for the way this Joint Municipal Waste Management Strategy (JMWMS) has been developed. The Partnership will manage whatever arrives in the municipal waste stream but to do so must work more effectively with stakeholders along the resource supply chain (e.g. designers, manufacturers, retailers, consumers) to meet the objectives of this Strategy. [19]

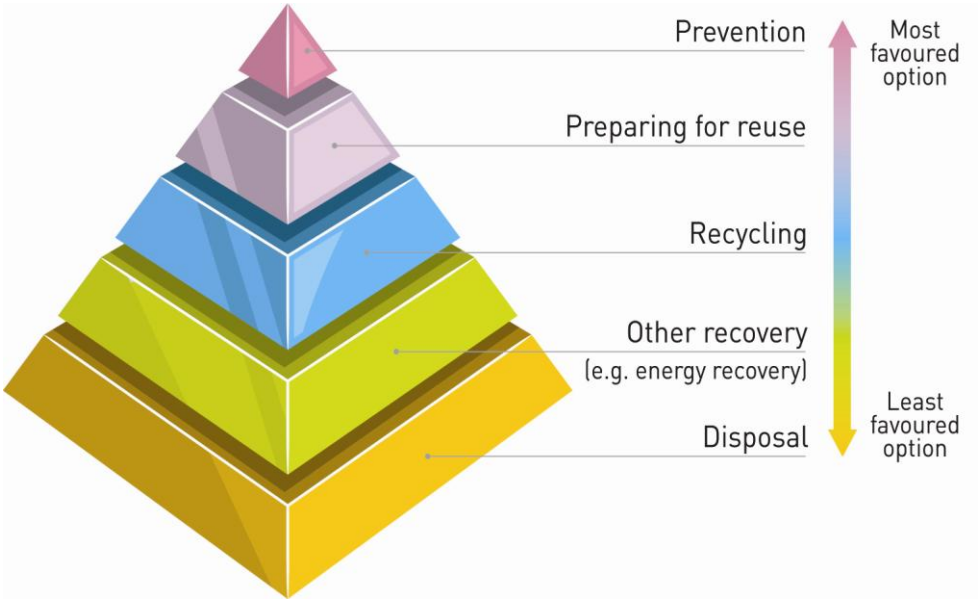
RESOURCES Merseyside looks at waste in the wider context of resource efficiency in this rapidly changing world and economy. This Chapter of the Strategy explores the issues and opportunities, the benefits and key challenges for Merseyside to be the place where nothing goes to waste.

[19] See Supplementary report C: "Made Today, gone tomorrow?" Symposium series on future trends in resource use and management for more information and detail on these issues.

3.1 Reduction to Recovery of Waste

A key principle for sustainable waste management is the Waste Hierarchy (Figure 7). This identifies that the best way to manage waste is not to generate it in the first place (prevention) followed by re-use, recycling and composting then recovering energy from waste. Disposal of waste to landfill is the least preferable option. The Waste Hierarchy is at the heart of this new Strategy. The Waste (England and Wales) Regulations 2011 requires greater emphasis on the higher levels of the Waste Hierarchy.

Figure 7: The Waste Hierarchy



3.1.1 Waste Prevention

Waste prevention sits at the top of the Waste Hierarchy as it offers the most effective way to reduce the impact waste management has on the environment. However, there is much to do to prevent waste being generated in the home and in business and public engagement and changing people's behaviour will be vital. Equally Merseyside will need to respond to the changes in the flow of waste and resources especially as manufacturers, businesses and Governments around the world start to restrict some products and materials from entering the municipal waste stream.

Merseyside introduced a Waste Prevention Strategy in 2008. Waste prevention is now at the heart of the JMWMS and a waste prevention action plan is being developed building on the previous strategic recommendations. Local authorities have responsibilities to promote waste reduction and legislation enables them to take steps to minimise the generation of household, commercial and industrial waste[20].

This Strategy assumes that there will be little household waste growth generated between 2011 and 2041 and will use the waste prevention and reduction objectives

[20] Waste Minimisation Act 1998

to off-set any growth in waste arisings from the increase in number of households on Merseyside through regeneration schemes such as those currently planned for Wirral and Liverpool Waters in the proposed Enterprise Zone.

Benefits of waste prevention are:

- Not using natural non renewable resources in the first place;
- Reduction in carbon dioxide equivalent emissions (CO_2e)[21] across the product chain[22];
- Reducing financial costs and taxes to public and private sector organisations making businesses more competitive and sustainable ; and
- Reducing the ecological footprint[23] of Merseyside.

Challenges of waste prevention are:

- Consumption driven lifestyles and business operations;
- The design of products, durability and packaging;
- High levels of food waste;
- The need to address or influence waste policies that have a significant impact on household waste arisings e.g. the frequency of household refuse and recycling collections and charged garden waste collections in terms of reductions in residual waste;
- The need to increase public awareness and education on waste prevention to promote behavioural change;
- Impact on the size of waste facilities required to handle the amount of waste to be treated; and
- Lower quantities of waste may result in an overall lower quality of available waste materials making the waste harder or more expensive to recycle or treat.

[21] A common unit of measurement for the range of greenhouse gases including carbon dioxide and methane

[22] i.e. through not extracting raw materials, refining/processing/manufacture, packing and selling that product and then the waste management implications of the item after use, in addition to all the transport/storage implications at each stage of the "product chain"

[23] A measure for the amount of land and water area a human population needs to produce the resource it consumes and to absorb its wastes.

Don't Waste Your Say Findings

- **Levels of awareness of waste prevention were low with an average 30% of respondents being aware of the phrase and of those the majority (56%) indicated they had "some" understanding of the term.**
- **This compares to 93% level of awareness of the phrase "climate change" and 60% having "some" understanding of the term.**

3.1.2 Reuse and Repair

Products evolve in response to economic, environmental and consumer demands. This can range from budget clothing which can be thrown away as fashions change to upgradeable technologies like mobile phones and computers. Consumers often find it far easier and cheaper to replace or upgrade an item than have it repaired or reused. They do not always recognise the value of the materials they are throwing away either as a resource or financially. However, people do already use a wide range of schemes that promote re-use from car boot sales and swap days to online exchange schemes like Freecycle/Freegle and selling items on Ebay.

Benefits of reuse and repair are:

- Reduction in CO_2e emissions across the product chain[24];
- Addressing obsolescence in products will potentially delay their entry into the waste stream;
- Greater durability in products will mean consumers do not need to replace items as often and their reuse potential or second hand value will increase;
- Possible revival of small and medium sized enterprises (SMEs) in repair and product re-use services in response to consumer demand;
- Increase in second hand market trading; online selling/swapping or localised specialist collection services;
- Opportunities for training and upskilling people on Merseyside; and
- Potential for an increased role for strong community and social enterprise organisations on Merseyside to undertake re-use or repair activities.

[24] i.e. reused items prevent the need for a new replacement and reduces the impacts through not extracting raw materials, refining/processing/manufacture, packing and selling product and then the waste management implications of the item after use, in addition to all the transport/storage implications at each stage of the "product chain"

Challenges for reuse and repair are:

- Increasing the public awareness and knowledge of the value of products and things they throw away;
- Potential impact upon recycling rates if goods are no longer freely available and are retained in the marketplace for trading;
- Changes in the composition and quality of waste streams will impact upon the infrastructure required for collection, recovery and treatment;
- Increased opportunities for the resale of products may impact upon any existing re-use structures in place; and
- Possible additional financial costs may be attached to new policy measures such as “community buy-in” (the need for strong and transparent engagement that recognises the role of communities in shaping waste and resource infrastructure needs for their area).

3.1.3 Recycling and Composting

Improving recycling and composting rates will continue to be a key element of this Strategy. The European Union (EU) Waste Framework Directive has set a new household waste recycling rate of 50% by 2020. This target is a challenge for Merseyside given the housing type and urban nature of the region. Current collection schemes and achievements by the Waste Partnership are identified in Chapter 2 but there is still some way to go to meet this new target.

It is also important to consider other Strategy objectives including reducing our carbon and ecological footprints whilst getting value for money. These will have a bearing on waste management practices if we aim to maximise carbon reduction benefits from higher levels of re-use and increase capture rates of key materials such as metals and plastics for recycling.

There will be a combination of options that can be pursued to achieve 50% recycling which are set out in the Menu of Delivery Options in Chapter 4 and through the individual District Council Action Plans (DCAPs)[25]. Modelling has shown that the most Merseyside can achieve is a 55% recycling rate and a key element to address will be food waste. If food waste is not collected and treated, then the whole range of delivery options in Table 7 are likely to be required at high performance and participation levels along with higher recycling performance targets from the Household Waste Recycling Centres.

The EU definition of recycling (see Glossary) will be used to help Merseyside achieve its recycling potential.

[25] DCAPs are the local delivery mechanisms for each district council to achieve the aims and objectives of the JMWMS and are part of the suite of documents that form the Strategy (Supplementary Reports F-J)

Benefits of recycling and composting are:

- Reduction in the use of virgin materials;
- Reduction in CO_2e emissions across the product chain[26];
- Turning collected recyclates into new materials and products; and
- Providing business opportunities for resource management and secondary raw materials supply/processing; and
- Providing further waste management opportunities, for example, through food waste collections and processing potentially linked to localised energy recovery.

Challenges of recycling and composting are:

- The need to ensure that systems are fit for purpose to deliver materials of the highest quality for resale from continuous improvements to collection systems and vehicles plus further technological improvements at Material Recovery Facilities;
- The need to reduce reliance on currently healthy export markets such as China and maintain quality materials for use in more local supply chains;
- The need for flexibility of collection/sorting systems to allow for additions (e.g. plastics) and loss of materials (e.g. paper and glass) from the waste stream;
- Increases and decreases of material types entering the waste stream may impact upon existing and future recycling systems, established reprocessing markets and the recovery potential of the remaining waste stream;
- Potential tension between the need for carbon improvements and tonnage based recycling targets;
- If tonnage remains the main measure of success for recycling performance then there may be consequences in achieving recycling targets should there be significant decreases in heavier materials over time such as paper and glass (e.g. greater use of electronic media such as the internet and portable e-books in preference to paper/plastics replacing glass for packaging); and
- How local communities and the voluntary sector will be engaged with local services, waste and resource management developments including the potential use of incentive schemes.

[26] I.e. using secondary raw materials by recycling and composting reduces the need to extract primary raw materials and usually exhibits carbon savings in the refining and processing stage and may also make significant savings in terms of the carbon impacts of the waste management operations that would have otherwise occurred.

Don't Waste Your Say Findings

- **Strong commitment to recycling was shown at all stages of the public consultation with Recycling Performance gaining the strongest level of public support of the ten shortlisted strategic options.**

3.1.4 Recovery

The Merseyside and Halton Partnership remains committed to the diversion of waste from landfill through treatment and recovery to remain compliant with the EU Landfill Directive and avoid increasing disposal costs. Merseyside Waste Disposal Authority (MWDA) is in the latter stages of procuring new infrastructure through its Resource Recovery Contract. Government funding has been approved for this contract through the Private Finance Initiative (PFI) to support the expenditure required. The technology being taken forward will be an Energy from Waste facility which is Combined Heat and Power enabled to maximise the recovery value from the residual waste. The contract is expected to be awarded during 2011 with the main recovery facility being built around 2015 and the contract will run until 2041. The procurement will take into account the impacts of the management of the waste higher up the hierarchy.

Benefits of recovery are:

- Significant diversion of biodegradable waste from landfill to meet and exceed Merseyside's Landfill Allowances (see section 3.1.5);
- Recovery of value from at least 75% of municipal waste in line with the Waste Strategy for England; and
- The economies of scale of purchasing through long term contracts that provide value for money for the Merseyside districts.

Challenges of recovery are:

- Ensuring that the impact of increased recycling and waste reduction activities is planned for when procuring residual waste treatment capacity.

3.1.5 Landfill

This Strategy supports the objective of a pathway towards zero waste to landfill and has set targets which will be in line with the Resource Recovery Contract to reduce the landfilling of municipal waste to 10% by 2020 and 2% by 2030.

At present, the EU Landfill Directive restricts the amount of biodegradable municipal waste (BMW) which can be sent to landfill each year by Waste Disposal Authorities (WDA) such as MWDA. The Directive has been implemented in England through the Landfill Allowance Trading Scheme (LATS). Each WDA currently has a tonnage allocation up to 2020 issued in the form of permits which may be traded. Table 4 below shows the allocation for MWDA from 2011/12 up to 2019/20

Table 4: Landfill Allowances for Merseyside

Year	Permitted Landfill Allowances (tonnes)
2011/12	241647
2012/13	207047
2013/14	198166
2014/15	189284
2015/16	180403
2016/17	171521
2017/18	162640
2018/19	153759
2019/20	144877

MWDA has traded permits with other Waste Disposal Authorities as there are potential penalties of £150 per tonne of biodegradable municipal waste landfilled over the amount permissible under LATS. A further driver is the additional charges applied to waste going to landfill in the form of Landfill Tax which will rise on an annual basis by £8 per tonne to a minimum level of £80 a tonne from 2014. Merseyside needs to reduce the amount of waste it sends to landfill by providing services identified in this chapter that manage waste higher up the Waste Hierarchy. In doing so, there will be financial and natural resource savings for Merseyside.

There will always be some residual waste that needs to go to landfill. The Partnership will need to manage this remaining waste and ensure that through the Waste Development Plan Document there is sufficient capacity to take that residual waste. MWDA also owns seven former landfill sites across Merseyside. It will continue to manage and maintain these closed sites to support the objectives of this Strategy.

Benefits of landfill are:

- There will remain a need for landfill during the period of the Strategy for some elements of residual waste;
- Closed landfill sites may ultimately be mined to recover resources should it becomes economically and environmentally viable to do so;
- Closed landfill sites could be used as a land resource to enhance biodiversity, grow crops for bio-fuels or benefit the local community as public space/allotments.

Challenges of landfill are:

- Landfill remains at the bottom of the Waste Hierarchy as the least environmentally beneficial method of disposing of waste;
- Generation of greenhouse gases particularly methane; and
- The impact of landfill site operations on local communities.

3.2 Environmental Protection

The implementation of this Strategy needs to avoid any significant negative environmental impacts to air, water or land. A Strategic Environmental Assessment (SEA) has been undertaken and an Environmental Report produced (Supplementary Report E)

It is important that the members of the Waste Partnership, other public and private sector organisations help to protect and enhance the environment of Merseyside and reduce any negative impacts from the products they produce or services they provide. Significant progress has been made by the individual councils and MWDA to introduce environmental policies, management systems and achieving and maintaining standards such as ISO140001 to reduce their environmental impact.

A key objective will be to ensure that the delivery of this Strategy reduces the ecological footprint of municipal waste management services on Merseyside which supports the national concept of One Planet Living[27]. This means that the district councils will also consider the land use and biodiversity impacts of its services as well as carbon emissions. A baseline footprint will be established (hectares of land per person to deliver waste services) and monitored to ensure Merseyside demonstrates continued improvements.

Benefits of environmental protection are:

- To enable us to live within our environmental limits by using or effectively managing our natural resources (such as raw materials, land, air and water) and reducing the risk to human well-being;

Challenges of environmental protection are:

- Addressing any significant negative impacts identified through the Strategic Environmental Assessment process.

[27] A world in which people everywhere can lead happy, healthy lives within their fair share of the Earth's resources

3.3 Sustainable Development

Environmental protection is one of the three pillars of sustainability: the others being economic development and society. These three elements must be addressed in balance to ensure the Strategy objectives and delivery options which support sustainable development. This includes addressing the impacts on the environment (e.g. climate change, resource use, energy conservation and production), the economy (e.g. consumption, production, employment, procurement, local economic development and regeneration) and social issues (e.g. quality of life, health, education, community engagement and participation). The SEA process has incorporated economic and social sustainability criteria. Potential synergies have been identified which will help the delivery of the Strategy contribute positively to wider policy aims and objectives which support sustainable development on Merseyside, in the UK and globally.

Benefits of sustainable development are:

- Finding better ways of doing things for the present and the future;
- Ensuring a balanced approach to development by considering the economic, social and environmental impacts which leads to better decision making on issues that affect everyone;
- Avoiding development driven by one particular need through full consideration of wider or future impacts that meet the diverse needs of communities; and
- Small individual actions that can build up to real change.

Challenges of sustainable development are:

- Integrating sustainable development principles into the delivery options for the Strategy; and
- The need to engage with residents and businesses on complex issues by providing simple messages and appropriate reporting back to the community and stakeholders.

3.4 Opportunities to Work with Stakeholders

It will be important to build on the Waste Partnership's existing relationships with the waste industry, business, voluntary, community and academic sectors in the delivery of waste and resource management services. The Partnership will look to support local opportunities and develop strong and transparent engagement with communities and stakeholders across Merseyside in the development and delivery of this Strategy.

It will also be vital to foster new relationships and consider potential business opportunities with manufacturers, producers, retailers and consumers to support investment in and delivery of waste and resource management objectives.

Benefits of working with stakeholders are:

- Increased material scarcity may result in more localised collection, reprocessing and disassembly schemes for high value and high quality materials;
- Potential for collaboration to design out waste in product development from raw materials use through to post consumer waste such as packaging;
- Potential for products with large carbon footprints and high wastage to be removed from the resource chain and not enter the municipal waste stream;
- Providing information and guidance on resource management, waste prevention and recycling to the commercial sector will help local businesses and community schemes reduce their waste and be more sustainable, efficient and competitive;
- To enable waste services and facilities that will treat both municipal and commercial waste together and are likely to be more cost effective; and
- Learning from each other and sharing best practice.

Challenges of working with stakeholders are:

- Identifying and securing the efficiency gains from joint working;
- Understanding the issues and needs of different stakeholders and developing people's skills
- Developing a collaborative approach to projects and communications;
- Resources – bringing together the people, finance and time; and
- Ensuring accountability, trust and transparency.

Don't Waste Your Say Findings

- **There is a strong desire to see the commercial sector, specifically manufacturers and retailers, take a more prominent role and work more closely with the Partnership and community sector on waste.**
- **However, the majority of residents felt that business ventures profiting from household waste should demonstrate strong ties and commitment to the local community e.g. through local job creation and reinvestment of profits.**

3.5 Using Materials Wisely

The way materials are used in manufacturing, packaging and reprocessing is rapidly changing due to global economics and changes in consumption habits. Scarcity of materials, particularly rare earth metals, may have a significant impact in the tightening of global markets and increased value of such materials. More may need to be done to capture these resources from waste products and the EU is already looking at this issue. As a result of increased scarcity and demand for raw materials, businesses may seek to maximise the recovery of these materials through buy-back schemes for re-use or develop more local reprocessing facilities.

Substitution of the types of materials used for products is also happening for a number of reasons, be they environmental, economic, technological developments or changes in consumption patterns. The Internet and electronic media such as the rise of e-books is resulting in a rapid downward trend in the consumption of newsprint whilst downloads in music now account for 12.5% of total music sales. Equally, the trend for material substitution is finding its way into the supermarket where food packaging traditionally made of glass or metal for cans is being replaced by plastics.

It is important for the Waste Partnership and other public and private sector organisations to be more sustainable in the procurement of their materials, goods and services. This needs to develop further and be supported through the supply chain and procurement programmes where practicable and economic to do so particularly with SMEs.

The JMWMS will support the Sustainable Consumption and Production Action Plan for England's Northwest[28] by making the most efficient use of resources on Merseyside, maximise the value from those resources, implementing sustainable waste management and reducing our ecological footprint.

Changes in resource use will have an impact down the product chain on the range and volume of materials entering the municipal waste streams. The Partnership needs to be aware of these factors when making decisions on waste management to ensure a flexible approach for future collection schemes and infrastructure requirements.

Benefits of using materials wisely are:

- Reduction in use of virgin raw materials;
- Reducing reliance on scarce materials;
- Encouraging sustainable consumption and production to make businesses more competitive, reducing their environmental impact and adding value gained from resources;
- Making municipal waste a commodity of economic benefit to Merseyside; and

[28] Northwest Sustainable Consumption & Production Action Plan 2010

- Value of certain materials such as precious metals may increase significantly making their recovery from the waste stream and their reprocessing a priority;

Challenges of using materials wisely are:

- A greater proportion of materials and products will by-pass the traditional household kerbside collection routes as manufacturers and retailers increasingly seek to recover valuable resources; and

- Collection and treatment of municipal waste needs to be adaptable to the changes in waste streams.

Don't Waste Your Say Findings

- **Residents believe that the commercial sector and industry need to take a greater role in effecting change in waste minimisation and prevention activity particularly on ways to minimise food waste and avoid excessive product packaging.**

3.6 Responsibility for Waste

The management of household waste services on Merseyside and the production of this Strategy is the responsibility of each of the five district Councils and MWDA. Under the present governance arrangements, the ratification of the Strategy and the choice of delivery options will be a matter for the elected members of each partner district.

It will be important to consider the appropriate future governance arrangements to deliver robust waste management on Merseyside through partnership in the short, medium and long term. There has been a gradual move towards more formal joint working since the original Merseyside Waste Partnership signed a voluntary Memorandum of Understanding (MoU) in 2005. The operational aspects of joint working are considered in a legal document called an Inter Authority Agreement (IAA). An IAA between all of the Merseyside districts and MWDA is nearing completion during 2011 which will support the ability to deliver the responsibilities of the Partnership more effectively on behalf of residents.

In response to the current financial climate and reductions in Government funding, each of the Partner districts has been reviewing their services and identifying efficiency savings. Joint working and developing governance arrangements for waste management need to be explored further in particular options around Joint Waste Authorities, Joint Committees or Waste Boards which bring together the collection and disposal functions. A review of the Levy mechanism that funds the waste treatment and disposal functions of MWDA is also considered an area of importance to be explored.

The responsibility for municipal and wider waste management does not rest solely on the shoulders of local government. It is important that residents recognise and understand the value of waste and change their behaviour to reduce the amount of waste they produce, reuse and recycle where possible. Equally, the public and private sector also need to manage their resources and waste more efficiently and sustainably.

Every year over ten million tonnes of packaging are used in the UK.[29] Over half of this packaging goes into households where it ultimately accounts for about 20% of waste arisings. Producer responsibility obligations require businesses to reuse, recover and recycle waste that come from products they produce such as waste electronic and electrical equipment (WEEE), packaging and batteries.

It is important to positively encourage and support residents and businesses to manage their wastes through education, awareness campaigns and introducing incentive schemes. However there will be times when enforcement will be a necessary tool to achieving the Strategy targets and to ensure that local policies are adhered to and adopted e.g. to manage changes in collection schemes, reduce contamination of recyclates, flytipping and littering. MWDA, for example, introduced stricter controls at Household Waste Recycling Centres in 2009 through a Permit scheme to prevent and reduce the illegal deposit of non-household waste at the sites.

[29] DEFRA News Website 26 October 2010

Benefits from being responsible for waste are:

- Signing up to an Inter Authority Agreement and a review of the Waste Disposal Authority Levy mechanism led by elected members will help to enable the Partnership to effectively deliver the objectives of the Strategy through improved cost effective performance;
- Examining the opportunities to develop governance arrangements will help ensure that the decision making powers for the Partnership and individual districts are appropriate to deliver cost-effective waste management on Merseyside in the medium and long term; and
- Opportunities for elected representatives to lobby Government and the EU and work with local retailers, producers and local communities to enable the delivery of this Strategy;

Challenges of being responsible for waste are:

- Addressing the positive benefits of delivering the Strategy through partnership alongside locally important issues, community and business concerns and short term changes in priorities.

3.7 Carbon and Energy

The waste management sector in the UK accounted for 3.6% of the UK's total estimated emissions of greenhouse gases in 2008 or 22.7 million tonnes of carbon dioxide equivalents (CO_2e) of which 89% arises from landfill, 9% from waste water handling and 2% from incineration.

Municipal waste management services can contribute to the reduction of carbon emissions on Merseyside, reduce the impact on climate change and help towards the targets set in the UK Climate Change Act 2008. The majority of the district councils and MWDA have signed up to the Nottingham Declaration[30] and a number of councils have produced Climate Change Strategies and developed mitigation and adaptation plans.

There are significant benefits from diverting biodegradable waste such as food, garden waste, paper and card from landfill as this reduces the production of methane, a greenhouse gas that has twenty three times greater impact on climate change than CO_2 emissions. As waste management on Merseyside moves up the Waste Hierarchy, more can be achieved and greater carbon savings can be made by avoiding the emissions that arise from manufacturers using virgin materials or energy generation using coal or gas.

[30] By signing the Nottingham Declaration on Climate Change, authorities make a commitment to tackle climate issues.

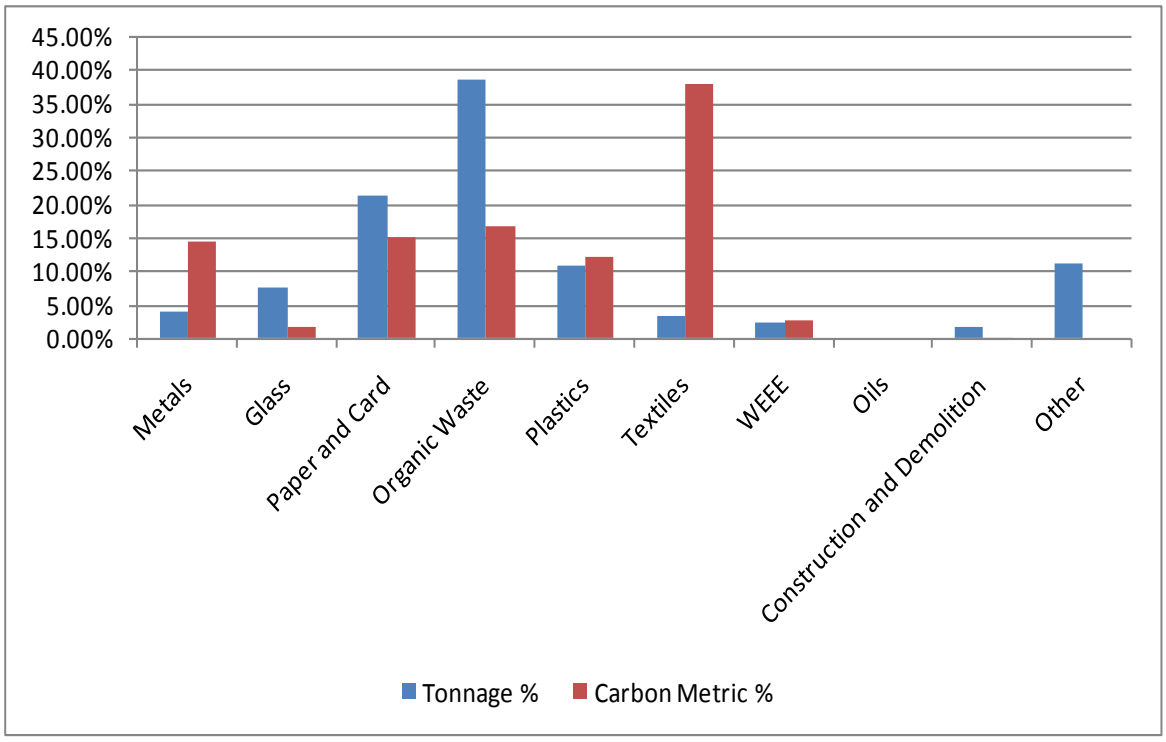
The options in this Strategy have been appraised using the Environment Agency's Waste and Resources Assessment Tool for the Environment (WRATE)[31]. The Strategic Environmental Assessment (SEA) has also assessed the Strategy against the impacts of climate change.

A carbon footprint of the waste management services will be established which will be reviewed every five years to ensure that the CO_2e impact of the Strategy has reduced.

The Scottish Government has recently introduced a carbon metric for waste to identify and prioritise the materials with the highest environmental benefit for recycling, leading to better environment outcomes and a more efficient economy.[32]

Table 5 below gives an example of the carbon metric as a decision making tool and mapping it against the municipal waste arisings on Merseyside for 2009/10. This shows the materials that can be most beneficial for the environment on a tonnage basis and on a carbon basis. The JMWMS will seek to establish how such a metric could be utilised on Merseyside and the potential prioritisation and capture of materials with a higher carbon metric weighting that would contribute to reaching the 50% recycling target.

Table 5: Carbon Metric support for decision making



[31] WRATE calculates a lifecycle assessment of the resources used and the operation of a whole range of waste management processes, looking at their environmental cost and benefits.

[32] Scotland's zero waste plan: carbon metric guidance March 2011

Waste management and its infrastructure must take account of the opportunities to use and generate renewable energy and fuels to support the energy policies for the UK. Where renewable energy can be efficiently captured from wastes, this is seen as an environmentally sustainable approach to reduce emissions which would otherwise have climate change impacts and also provide security of energy supply. The MWDA Resource Recovery Contract procurement for its Energy Recovery facility supports energy generation with Combined Heat and Power. The Strategic Environmental Assessment (SEA) of this Strategy also supports the use of high efficiency energy recovery.

There are opportunities to generate and use renewable energy across the waste management facilities on Merseyside. Renewable energy incentives such as Renewables Obligation Certificates (ROCs), Renewable Heat Incentives and Feed-in Tariffs (FITS) are also available for energy generated from certain waste operations[33].

Benefits of carbon and energy are:

- Opportunities for net carbon savings from municipal waste management to support the Low Carbon economy;
- The proposed Energy Recovery facility will enable additional income to be derived from renewable energy incentives;
- Opportunities to maximise the installation of renewable resources at waste management sites and facilities; and
- Closed landfill sites could provide bio-fuels e.g. rotational coppicing.

Challenges of carbon and energy are:

- To establish an appropriate carbon measurement to enable the targeting of specific materials and products;

3.8 Education and Awareness

Residents are taking positive action to recycle their waste and Merseyside has met its 2010 recycling target of 33%. However, with higher targets ahead and the need to divert more waste from landfill, it is important that residents, consumers and producers understand and respond to the value of waste as a resource.

There is a need to promote changing consumption habits through smarter purchasing, prevention, reduction and reuse as well as recycling to cut down on unnecessary waste. This will be achieved by supporting co-ordinated high profile and effective education activities and campaigns which help and support residents and

[33] Renewable Obligations Certificates are issued for each megawatt hour (MWh) of eligible renewable output generated (OFGEM). Feed-in Tariffs are payments to householders and communities who generate their own electricity from renewable or low carbon sources. Renewable Heat Incentives are paid for the use of renewable heat per megawatt hour (heat).

businesses in simple practical ways to do more. This will also raise the currently low public awareness of initiatives such as waste prevention.

Engagement with the public and education in our schools, colleges and Universities will continue to play a key role. Alongside the current Recycling Discovery Centre at the Bidston MRF, a new Visitor and Education Centre will open at the Gilmoss MRF in Liverpool during 2011 with an on-going programme of visits for residents, communities and schools. The Gilmoss Recycling Discovery Centre will show the recovery process of the materials householders with co-mingled kerbside collections put out for recycling. Other waste and resource management topics will be explained through the visit programme.

Education and awareness should illustrate the connections between wider environmental themes such as resource use, climate change and energy supply and must play a fundamental part towards increased participation in managing resources and waste. It will also be important to monitor the success of engagement and education programmes to ensure they are providing value for money in delivering the Strategy aims and objectives.

Benefits of education and awareness are:

- Increasing people's understanding to make practical changes in their actions and habits when purchasing products and food;
- Reducing the amount of waste arisings from households;
- Increased participation by residents in waste management schemes with greater yields of materials and reduced contamination of materials put out for recycling; and
- Assisting businesses to be more economically competitive, use resources wisely and reduce waste arisings.

Challenges of education and awareness are:

- To engage residents and businesses on complex issues by providing common and simple messages on waste and resource management;
- Regular communication with residents to keep them informed about why they are being asked to participate in waste management schemes and what happens to waste/resources when they leaves the household.

Don't Waste Your Say Findings

- **Adopting measures to change peoples' thinking and behaviour was considered the second most important priority for the Partnership. Residents felt this was vital to expand their knowledge and participation in other waste management schemes as well as recycling.**

- **A call for proof of evidence was made across all demographic groups about what happens to products when they are recycled and the financial and personal benefits of recycling as well as environmental. Many residents said this information would encourage them to recycle more knowing the results of their efforts.**

- **A focus is needed on the practical benefits for individuals and the community to participate in recycling and other waste management schemes. Residents thought that raising understanding and encouraging individual responsibility would have a longer term impact and benefit than offering incentives to participate in schemes.**

- **Residents have a limited awareness of the concept of waste having a value at the point of disposal. Raising awareness of the financial and environmental value of items and various component parts of products thrown away would encourage greater recycling and re-use specifically of electrical/electronic goods as well as plastics, textiles and wood.**

3.9 Services, Savings and Support

The Merseyside and Halton Waste Partnership is an informal but active group of the six districts and MWDA to co-ordinate the delivery of the household waste management services within the Liverpool City Region. Significant progress has been made to date (see Section 2) but there are potentially greater practical benefits from joint and partnership working, alignment of services and systems and shared resources in delivering this Strategy.

Examination of these opportunities may help address the current financial climate and provide opportunities to make efficiencies and savings as well as addressing the challenges of delivering future sustainable and affordable waste and resource management.

Benefits in services are:

- Successful improved performance and service delivery through working together as local councils;
- Identify potential financial savings from efficiencies in service delivery and joint procurement; and
- Building trust, shared mission and clear commitments and communications;

Challenges for services are:

- Accessing support and resources at European and national level to secure delivery of Partnership objectives;
- Reflecting local needs and differences in collections, contracts, payment systems and resources;
- Uncertainty and lack of understanding of benefits of joint working;
- Being able to measure success and efficiency gains from joint working;
- Potential need for training and skills development to effectively take forward joint working and changes to service delivery; and
- How to develop the joint working opportunities on wider wastes and resource management.

Chapter 4: Delivering the Strategy

4.1 Strategy Vision

The Merseyside and Halton Waste Partnership will work together to deliver the Strategy and provide a sustainable waste and resource management service that is cost effective, delivers value for money and is affordable whilst also optimising environmental benefits.

4.2 Strategic Aims, Objectives and Targets

Ten strategic aims and objectives have been developed to support the Vision to deliver the Joint Municipal Waste Management Strategy (JMWMS) and address the many challenges for **RESOURCES Merseyside** set out in Chapter 3. The aims and objectives listed below in Table 6 and should be read in conjunction with the Menus of Delivery Options in Table 7 and 8 and the individual District Council Actions Plans (DCAPs) that underpin them (Supplementary Reports F to J in development).

Table 6: Strategic Aims, Objectives and Targets

No.	Aim	Strategic Objectives and Targets
1	**Reducing the climate change/carbon impacts of waste management**	Demonstrate continuous improvement in the reduction of carbon emissions from the municipal waste management service on Merseyside. All waste management choices should seek to optimise carbon reduction wherever practicable. Commitment to review every 5 years that the CO_2 impact of the Strategy has reduced. Baseline: CO_2 impact is 33,384 tonnes of CO_2 in 2011.
2	**Maximise waste prevention**	Reduce the total amount of waste produced per household on Merseyside by 8% by 2030 to: 1,227 kg per household by 2020 and 1,180 kg per household by 2030. Baseline: 1,300 kg per household in 2009/10.
3	**Maximise landfill diversion/recovery of residual waste**	Where waste is not re-used, recycled or composted, ensure that value can be recovered from it e.g. alternative products, heat, power. Reduce the amount of municipal waste landfilled to 10% by 2020 and 2% by 2030.

4	**Maximise sustainable economic activity associated with waste management**	Encourage sustainable economic activity associated with waste management. This can be achieved through the adoption of sustainable procurement policies and working with supply chain organisations to improve the management of resources and recyclables.
5	**Reduce the ecological footprint of waste management activities**	Demonstrate continuous improvement in reducing the ecological footprint of municipal waste management services on Merseyside Baseline: 0.038 hectares per person in 2011.
6	**Promote behavioural/cultural change that delivers the Strategy objectives**	The Partnership will work to raise awareness of waste and resource management issues, to lead by example and encourage residents to get involved and make it easier to take part in waste prevention and re-use activities.
7	**Promote the use of renewable energy**	All waste management decisions/infrastructure decisions to take account of the opportunities for using/generating renewable energy and fuels.
8	**Achieve high recycling rates**	Meet statutory recycling targets and exceed where there are opportunities to deliver environmental and economic benefits. • Recycle 50% of household waste by 2020.
9	**Promote resource efficiency**	Reduce the amount of scarce resources entering the waste management system, recognising the value of materials that are produced as waste and supporting opportunities for greater producer responsibility.
10	**Provide sufficient capacity for waste management activity**	Provide a flexible waste management service that gives residents a range of options to reduce, re-use, recycle and compost the waste they produce and provide sufficient capacity to deal with any waste remaining.

4.3. Menu of Delivery Options

It is recognised that, for the JMWMS to be delivered, then each of the five Waste Collection Authorities and Merseyside Waste Disposal Authority (MWDA) will need to identify and prioritise as individual districts the delivery options that they feel will best achieve the overall strategic objectives based on their current performance and available resources for their local area.

Listed below is a Menu of 14 Ranked Priority Delivery Options (Table 7). The Delivery Options have been assessed and prioritised in performance from a technical, cost and value for money perspective and selected because they add some benefits to meeting the strategic aims, objectives and targets (Table 6).

A Menu of 7 Secondary Delivery Options is set out in Table 8. These identify other options which did not rank as highly as the priority menu in the assessment process but do contribute to the delivery of a number of Strategic Objectives. Inclusion of any of these options in a DCAP should be in addition to and not be at the expense of any of the Priority Delivery Options.

The DCAP for each partner council will play a key role and should enable flexible local delivery of the Strategy for short and medium term actions. This is an important consideration in the current financial climate and the challenges being faced across the public and private sectors.

There are a number of additional strategic recommendations identified in Table 9 which will be for the Waste Partnership to agree and take forward.

Table 10 lists the timetable and key milestones to be considered in the delivery of the Strategy and the DCAP between 2011 up to and including national carbon reduction targets currently set for 2050.

Table 7: Menu of Ranked Priority Delivery Options

Rank	Delivery Option[34]	Description
1	**Joint Working**	Local Councils to consider joining forces to deliver services which could include: joint collection contracts, shared collections services, joint communications, education and awareness, and governance etc. Supports Objectives: 1, 4 and 5
2	**Frequency of Household Waste Collections**	Local Councils to consider the best local system for the collection of refuse and recyclables. This could be a weekly household collection of materials such as recyclables one week and rubbish that cannot be recycled or composted the next week. Sefton and Wirral districts have already implemented changes to the frequency of their household waste collections. Supports Objectives: 1, 2 , 3, 5, 6, 8 and 10
3	**Collection Round/Route Optimisation**	Local Councils to review collection rounds for refuse and recycling to ensure that optimum round configuration is in place and best use of vehicles is being made. Supports Objectives: 1, 6, 7, 8 and 10

[34] SEA - For options 2, 4, 9, 15, 18 and 20 there is a need for sensitive consideration of the application of these options where there may be unwanted consequential impacts such as fly tipping, local environmental nuisance and economic burden.

4	**Green Waste Charging**	Consider charging residents for the green waste they generate. Supports Objectives: 1, 2, 3, 5, 8 and 10
5	**Recycling Campaigns**	Active campaigns to support existing or new recycling collections schemes encourage participation or reduce contamination of materials. Supports Objectives: 4, 6, 8 and 9
6	**Re-use/Refurbishment Support**	In kind/financial support to schemes to deliver and increase re-use and refurbishment activity (which could involve retailers, manufacturers and third sector). Supports Objectives: 1, 2, 3, 4, 5, 6, 8, 9 and 10
7	**Food Waste collections plus treatment (Anaerobic Digestion or In-Vessel composting)**	Consider introducing separate collections for food waste. Knowsley and Sefton have already introduced "opt-in" schemes. Treatment of food waste by either Anaerobic Digestion (AD) or by In-Vessel Composting (IVC). The Options Assessment ranked AD higher than IVC. Supports Objectives: 1, 3, 4, 6, 7, 8, 9, 10
8	**Bulky Waste Re-use**	Implement schemes to increase the amount of bulky waste re-use either through support to third sector schemes or active segregation of bulky collections. Supports Objectives: 1, 2, 3, 4, 5, 8, 9, 10
9	**No side waste – common policy**	Consider a consistent approach across Merseyside regarding collections of any rubbish bags that do not fit inside a householder's refuse bin. Supports Objectives: 1, 2, 3, 5, and 8
10	**Sustainable procurement policies (in house)**	Introduction of procurement policies that will influence behavioural change for all waste management related services e.g. in terms of specifying the use of recycled materials, low carbon construction materials (to good practice standards in new build and refurbishment) and low carbon transport activities. Supports Objectives: 1, 4, 7 and 9
11	**Trade Waste Recycling**	Districts to look at the opportunity to introduce or extend trade waste recycling schemes and collections. MWDA to consider the use of HWRCs and MRFs for commercial waste recycling. Supports Objectives: 1, 3, 5, 6, 8 and 10

12	**Re-use campaigns**	Re-use focussed campaigns to promote re-use activity and local support services. Supports Objectives: 1, 6, 8 and 9
13	**In house Waste Prevention and recycling**	Districts to lead by example through the implementation of in-house waste reduction, re-use and recycling schemes. Supports Objectives: 1, 2, 5, 6, 7, 8 and 9
14	**Waste Prevention campaigns**[35]	Active campaigns to promote waste prevention activities and local initiatives. Supports Objectives: 1, 2, 3, 6, 8 and 9

[35] The Options Assessment report acknowledges that, in isolation, waste prevention campaigns are not ranked highly in the value for money assessment. However, such campaigns are an integral part of other waste prevention options and behavioural change elements and recommends they should be a priority delivery activity.

Table 8: Menu of Ranked Secondary Delivery Options

Rank	Delivery Option	Description
15	**Reduced residual bin size/maximum recyclable**	Reduced bin size for residual waste introduced to incentivise recycling behaviour, also need to ensure sufficient capacity available for recyclable materials. Supports Objectives: 1, 2, 3, 5 and 8
16	**Street sweepings recycling**	The introduction of a composting or recycling service for street sweepings. Supports Objectives: 1, 3, 5, 6, 8 and 10
17	**All Waste Collection Authorities to collect the same materials for recycling**	All districts to collect the same materials in the recycling collection schemes, focused on the dry recycling collection scheme. **Supports Objectives: 1, 3, 5, 6, 8 and 10**
18	**HWRC Recycling/Re-use Sites Only**	The option for MWDA to promote HWRCs as centres for primarily reusable and recyclable material e.g. provide some sites that accept material for re-use, recycling and composting only. The option to reduce the number of sites offering services for non-recyclable waste disposal. Supports Objectives: 1, 3, 5, 6 8 and 10
19	**Depot, facility sharing, modal transport**	Consider options for sharing of facilities and alternative transport infrastructure involved in service delivery. Supports Objectives: 4, 5, 6, 9 and 10
20	**Bulky Waste Charging**	Consider charging residents for Council bulky waste collections (as an incentive to increase use of community based re-use services). Supports Objectives: 2, 3, 5 and 8
21	**Common recycling systems for all Waste Collection Authorities**	All districts switch to the same recycling collection system e.g. a co-mingled collection scheme feeding into the MWDA Waste Management Recycling Contract/all districts collect the same materials whether co-mingled or kerbside sort scheme. Supports Objectives: 1, 3, 5, 6, 8 and 10

Table 9: Additional Strategic Recommendations

	Recommendation	Description
A	**Review of the Levy payment mechanism**	Establish a working group of Elected members from each District to lead a review of the current payment mechanism to fund the Waste Disposal Authority to ensure that a new payment mechanism is fair and positively benefits Districts adopting options to deliver the Strategy objectives. Supports Objectives: 2, 3, 8, 9 and 10
B	**Lobby Government, retailers and others**	Elected members to actively lobby Government, work with local retailers, businesses and manufacturers and residents to reduce waste, encourage re-use, resource efficiency and develop partnerships to ensure the delivery of the Strategy. Supports Objectives: 1, 2, 4, 5, 6, 7, 8, and 9

Table 10: Timetable and Key Milestones

Timescales	Action
March 2013 **December 2013**	Reduce the amount of Biodegradable Municipal Waste going to landfill by 50% of 1995 levels (European Landfill Directive) National Waste Prevention Plan to be published by Government
2015	Commencement of Resource Recovery Contract
2020	Delivery of 50% household waste recycling target (Waste Framework Directive) Reduce the landfilling of Municipal Solid Waste to 10% (Resource Recovery Contract target) Reduce the amount of Biodegradable Municipal Waste going to landfill by 65% of 1995 levels (European Landfill Directive) 34% carbon reduction target based on 2008 levels (Climate Change Act)
2027-2029	Decision on extension for Waste Management Recycling Contract
2030	Reduce the landfilling of Municipal Solid Waste to 2% (Resource Recovery Contract target) Reduce total waste arisings from households by 8% based on 2011 levels.
2038-2040	Decision on extension for Resource Recovery Contract
2050	80% carbon reduction target based on 2008 levels (Climate Change Act).

Each of the District Council Action Plans will provide more detailed actions to be carried out by the Waste Collection Authorities in the short to medium term.

Chapter 5: Monitoring and Review of the Strategy

The Joint Municipal Waste Management Strategy is supported by a series of District Council Action Plans (DCAPs) which are designed to set out the actions to facilitate the delivery of the JMWMS objectives and targets by each partner council. Progress on performance and delivery will be reported to residents and stakeholders through a variety of mechanisms:

- Government monitoring through WasteDataFlow;
- Locally agreed annual indicators;
- Annual Performance Reports from the Partnership;
- Annual Corporate Social Responsibility and Environmental Reports;
- Annual monitoring of DCAPs;
- Council and partner websites; and
- Council magazines and media releases

As a matter of principle, the district partners on Merseyside will undertake a full review of the Strategy every five years or where a substantial change in legislation, policy or other circumstances merits a review outside that timescale. This will ensure it remains fit for purpose and a strategic focus for the delivery of waste and resource management on Merseyside.

Consultation and Next Steps

This document forms the draft Joint Municipal Waste Management Strategy for Merseyside for public consultation. It is supported by the Draft Environmental Report. These documents and the related background reports can be found on the Merseyside Waste Disposal Authority website www.merseysidewda.gov.uk or you can request an electronic copy by emailing: consultresources@merseysidewda.gov.uk

If you would like paper copies please call Tel: 0151 255 1444 or write to us at: Merseyside Waste Disposal Authority, 6th Floor, North House, 17, North John Street, Liverpool, L2 5QY

The closing date for comments is: Friday, 26th August 2011.

Any questions regarding the consultation or the Joint Municipal Waste Management Strategy for Merseyside, please contact Stuart Donaldson, Waste Strategy Manager, Merseyside Waste Disposal Authority Tel: 0151 255 2570 or email Stuart.Donaldson@merseysidewda.gov.uk

The draft Strategy will also be made available at: www.dontwasteyoursay.org/strategy-summary-stakeholders and all Merseyside district council websites.

Glossary of Terms and Acronyms

Anaerobic Digestion (AD) - degrading organic waste in a sealed vessel in the absence of oxygen to derive a combustible biogas and leave a solid and/or liquid digestate, which, under certain limitations, may be applied to land.

Biodegradable Municipal Waste (BMW) – municipal waste that is capable of undergoing anaerobic or aerobic decomposition, such as garden waste, kitchen waste, paper and cardboard.

Bio – Waste – is biodegradable garden and food waste from households, parks and businesses, e.g. Restaurants.

Bring Site – a localised collection point for recyclables, e.g. glass, paper and cans.

Combined Heat and Power (CHP) – a highly fuel efficient technology which produces electricity and heat from a single facility.

Carbon Dioxide (CO_2**)** – the most common "greenhouse gas" – a contributor to climate change. The impact of other greenhouse gases such as methane are usually normalised as Carbon Dioxide equivalents (CO_2 e), in order to provide a common unit of measurement.

Closed landfill sites - A landfill site that has reached the end of its useful life and taken all the waste it is permitted to hold. The site operator then has a responsibility to restore the site in a way that is deemed suitable to the local planning authority.

Commercial Waste – waste arising from premises which are used wholly or mainly for trade, business, sport, recreation or entertainment, excluding industrial waste.

Community Sector – includes charities, social businesses and other not for profit organisations and voluntary groups based in the local community.

Composting – an aerobic, biological process in which organic wastes such as garden and kitchen waste are degraded to form a compost that may be beneficially applied to land.

Corporate Social Responsibility (CSR) – is about how businesses and other organisations manage their processes and actions to produce an overall positive impact on society.

DCLG – Department for Communities and Local Government

DECC – Department for Energy and Climate Change

DEFRA – Department for the Environment, Food and Rural Affairs

Disposal – the lowest level of the waste hierarchy, typically involving landfill or incineration with low levels of energy recovery.

Ecological Footprint – a measure of how much land and water area a human population requires to produce the resource it consumes and to absorb its wastes.

Energy from Waste (EfW) – a term including a variety of technologies, although most energy recovery is through incineration with electricity generation taking place via the heat generated by the combustion (using a steam circuit).

Environmental Management System (EMS) – a system that includes organisational structures, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining an organisation's environmental policy.

European Union (EU) – a group of 27 European nations, known as Member States, who work together on a wide range of political, economic, social and environmental issues. The UK is a member of the EU.

EU Directive – legislation produced by the EU which must be implemented by Member States through their own national legislation, e.g. through UK Acts of Parliament.

Feed-In Tariffs – Energy suppliers have to make regular payments to householders and communities who generate their own electricity from renewable or low carbon sources e.g. solar electricity panels (PV) or wind turbines.

Green or garden waste – vegetation and plant matter from household gardens, local authority parks and gardens and commercial landscaped gardens.

Home composting – compost made at home mainly from kitchen and garden waste using a traditional compost heap, compost bin or wormery.

Household Waste – waste produced in the home that is typically collected by council weekly or fortnightly waste collection services. It also includes waste taken to HWRCs, bring sites, litter and some other types of waste.

Household Waste Recycling Centre (HWRC) – a site at which householders can deposit household waste free of charge for reuse, recycling, composting or disposal.

Incineration – is the controlled burning of waste, either to reduce its volume or its toxicity. Energy recover from incineration can be made by utilising the calorific value of paper, plastics etc to produce heat or power. Current flue-gas emission standards are very high.

Industrial waste – waste from any factory and from any premises occupied by an industry (excluding mines and quarries)

Joint Municipal Waste Management Strategy (JMWMS) – the document setting out the vision, aims, objectives, policies, targets and actions for the management of municipal waste arising in the area of more than one local authority. This Strategy covers the administrative area of Merseyside.

Kerbside collection – any regular collection of recyclables from premises, including collections from commercial or industrial premises as well as from households. It excludes collection services delivered on demand.

Landfill – a waste disposal site where solid waste is buried in a way that minimises pollution of the surrounding area and may allow land to be reclaimed, e.g. disused quarries. Modern landfill sites are designed to a high standard are often known as sanitary landfills.

Landfill Allowance Trading Scheme (LATS) – a mechanism developed by Government to reduce the amount of biodegradable municipal waste going to landfill. LATS imposes a reducing amount of landfill permits to Local Authorities up to 2020. These permits are tradable and there are penalties for failing to satisfy obligations.

Liverpool City Region – is an area of NW England centred on Liverpool covering the 5 local authorities of Merseyside (Knowsley, Liverpool, St Helens, Sefton and Wirral) plus Halton.

Local Authority Collected Municipal Waste (LACMW) – household waste and similar wastes collected by local authorities.

Local Authority Collected Waste (LACW) – all waste collected by the local authorities, including non-municipal waste.

Low Carbon Economy – is an economy which has a minimum output of greenhouse gases from its manufacturing, agriculture, transport and power generation etc and around the people, buildings, machines and devices which use those energies and materials efficiently and by the prevention, recycling and recovery of its waste.

Merseyside and Halton Waste Partnership (MHWP) – a group of waste collection and disposal authorities working together to develop and implement municipal waste management strategy in the Liverpool City Region. Members include Halton Council, Knowsley Council, Liverpool City Council, Merseyside Waste Disposal Authority, St Helens Council, Sefton Council and Wirral Council.

Materials Recovery Facility (MRF) – is a facility that receives, separates and prepares recyclable materials for marketing to reprocessors and manufacturers.

Municipal Waste – household waste and waste from other sources which is similar in nature and composition. See definitions.

Preparing for Re-use – includes checking, cleaning or repairing operations that allow items that have become waste to be re-used.

Prevention – see 'Waste Prevention'

Private Finance Initiative (PFI) – is a Government supported way for public sector organisations, including local authorities, to agree contracts with the private sector to construct facilities and provide services over a long period of time.

Producer Responsibility – the duty of producers, e.g. manufacturers and retailers, to be responsible for their products when they become waste. This may involve taking them back from consumers when they have become waste or funding their reuse or recycling.

Rare Earth Metals (REM) – seventeen natural elements which are used as component parts in a range of products from televisions, hybrid cars, batteries, solar panels and lasers but 97% of the world's supply of these metals is in China.

Recovery – is where a waste usefully replaces other materials which would have otherwise been used for a particular function. Recovery includes waste re-use, recycling and energy recovery.

Recycling – is where waste materials are re-processed into products or materials for their original or other purposes. See definitions.

Renewable Obligation Certificates (ROCS) – Issued to an accredited generator for eligible renewable electricity generated within the UK and supplied to customers within the UK by a licensed electricity supplier.

Resources – Materials or substances that have a value or use to humanity including the natural resources that sustain life on the planet.

Reuse – is where products or components that are not waste are used again for the same purpose as originally intended.

Sustainability Appraisal (SA) – considers the economic, environmental and social effects of a plan or strategy to allow decisions to be made that support sustainable development.

Stakeholders – those on whom an organisation(s) activities have an impact.

Strategic Environmental Assessment (SEA) – is a system to assess the potential significant environmental impacts of policies, plans, programmes and strategies and to identify suitable measures to prevent, reduce and monitor those impacts.

Sustainable Consumption and Production (SCP) – is about reducing our environmental impacts, while maintaining or improving economic outputs and standards of living by using resources more efficiently.

Sustainable Development (SD) – is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Waste Management – involves reducing the amount of waste that is generated, whilst making the best use of the waste that is produced in a way that minimises risks to human health and the environment.

Small and Medium Enterprises (SME) – a business with up to 500 employees.

Treatment – includes the activities involved in recovering or disposing of waste.

Unitary Authority – is a type of local authority that is responsible for all local government responsibilities in its area including waste collection and disposal.

Waste – is any substance or object which the holder discards or intends to discard.

Waste and Resources Assessment Tool for the Environment (WRATE) – is a software package developed by the Environment Agency that compares the environmental impacts of different waste management systems.

Waste Arisings – is the amount of waste generated by an area over a given timescale, typically a year.

Waste Collection Authority (WCA) – is the local authority responsible for collecting household and some other wastes in the area covered by that authority. Typically a WCA is your local council.

Waste Disposal Authority (WDA) – is the local authority responsible for managing the waste collected by WCAs and for providing HWRCs. Typically a WDA covers a larger area than a WCA, with the exception of unitary authorities (see above).

Waste Electrical and Electronic Equipment (WEEE) consists of a wide range of waste electrical items and their components ranging from hairdryers to hover mowers.

Waste Framework Directive (WFD) is European legislation setting the general principles and objectives for waste management across the EU. The first WFD was produced in 1975 and has been revised several times up to the latest version published in 2008.

Waste Hierarchy – this ranks the broad options for dealing with waste and provides a priority order for waste management. Ideally waste should be prevented with disposal representing the last option. The hierarchy runs through prevention, preparing for re-use, recycling, other recovery, e.g. energy recovery; to disposal.

Waste Management – includes the activities and operations that make up the waste hierarchy together with the aftercare of waste disposal sites, e.g. landfills.

Waste Prevention – Actions or choices that prevent the generation of waste and includes measures taken before a material or product becomes waste that reduces the quantity, harmfulness and environmental/human health impacts of waste.

Waste Transfer Station (WTS) – a facility where waste is taken before transfer to recycling, recovery or disposal facilities.

Current Definitions in the context of this Strategy

Recycling – Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations (EU definition)

Municipal Waste – includes household waste and any other wastes collected by waste collection authorities (or their agents) such as municipal parks and gardens waste, beach cleansing waste, commercial or industrial waste and waste resulting from the clearance of fly-tipped materials. Collected municipal waste is defined in the Landfill Allowance Trading Scheme (England) Regulations 2004 as "all waste which comes into the possession or under the control of (a) a waste disposal authority, or (b) a waste collection authority within the area of a waste disposal authority.[36]

Waste – is the wide ranging term encompassing most unwanted materials and is defined by the Environmental Protection Act 1990. Waste includes any scrap material, effluent or unwanted surplus substance or article which requires to be disposed of because it is broken, worn out, contaminated or otherwise spoiled. Explosives and radioactive wastes are excluded.

[36] The final ratified Strategy will be updated to take account of the definition of terms for Local Authority collected waste (DEFRA February 2011).