Final Draft

RESOURCES Merseyside 2011 – 2041

A Place Where Nothing Is Wasted

The Joint Recycling and Waste Management Strategy for Merseyside

recycle
for Merseyside and Halton

RESOURCES Merseyside 2011- 2041

CONTENTS

Executive Summary

RESOURCES Merseyside 2011-2041 provides the headline strategic route map to deliver sustainable waste management on Merseyside, transform the waste agenda and move towards greater resource efficiency.

The Strategy has been developed by Merseyside Waste Disposal Authority (MWDA), Knowsley Metropolitan Borough Council, Liverpool City Council, Sefton Metropolitan Borough Council, St Helens Metropolitan Borough Council and Wirral Metropolitan Borough Council (as districts of the Merseyside and Halton Waste Partnership) in consultation with residents, elected members and other stakeholders.

The strategic focus is to move waste management higher up the Waste Hierarchy by supporting activities on waste prevention, re-use, recycling and composting whilst recognising the impact these actions have on the amount of residual waste requiring treatment or disposal. This programme of work will be cost effective, affordable and deliver value for money whilst optimising environmental benefits.

Merseyside has made significant progress in managing its waste and recycled over 36% of Local Authority Collected Municipal Waste (LACMW) in 2010/11 and sent 223,000 tonnes less waste to landfill than in 2005.

RESOURCES Merseyside will address the challenges and opportunities that face Merseyside in the future. These include the need to:

- **Prevent waste arisings and reduce the amount of waste we produce;**
- **Maximise opportunities to re-use or repair goods;**
- **Recycle more;**
- **Increase treatment and recovery of waste;**
- **Support the pathway towards zero waste to landfill;**
- **Avoid any significant negative environmental impacts to air, water or land;**
- **Engage, incentivise and collaborate with local communities and stakeholders;**
- **Recognise and develop the economic value and benefits of waste and resources;**
- **Take forward opportunities for joint working on waste management;**
- **Contribute to the low carbon economy and reduce the carbon footprint of waste management services;**
- **Deliver effective education and communications to encourage residents and businesses to do more to reduce, reuse and recycle; and**
- **Reduce the ecological footprint of waste management.**

Key Aims, Objectives and Targets for the Strategy include:

Reducing the climate change/carbon impacts of waste management: Demonstrate continuous improvement in the reduction of carbon emissions from the Local Authority Collected Municipal Waste management service on Merseyside and review every 5 years.
Maximise waste prevention: Reduce the total amount of waste arisings produced per household on Merseyside by 8% by 2030 (from 1,300kgs to 1,180kgs).
Maximise landfill diversion/recovery of residual waste: Reduce the amount of Local Authority Collected Municipal Waste landfilled to 10% by 2020 and 2% by 2030.
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.
Achieve high recycling rates: Recycle 50% of household waste by 2020

Delivery Options

A menu of Priority Delivery Options has been identified for the districts to consider 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 - the right frequency of collections for the right materials;

Green Waste Charging: Districts to consider introducing a charged garden waste collection service to residents to enhance their overall approach to collecting recyclables, residual waste and waste prevention activities. This will vary according to local circumstances;

Food Waste collections plus treatment: Consider the introduction of separate collections for food waste; and

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.

Each partner district council will decide the best collection system and waste management schemes for their area to deliver the Strategy in consultation with their local communities. The chosen options will be reflected in the preparation and adoption of a District Council Action Plan to enable flexible local delivery in the short and medium term.

The Waste Partnership will continue to work with residents, communities and business to help them reduce waste, recycle more and address some of the major resource opportunities and challenges facing our society over the next thirty years.

Chapter 1: Introduction

Overview: This section tells you what the Joint Recycling and Waste Management Strategy for Merseyside is and who has produced it. It details the focus and aims of the Strategy and information on the public consultation.

1.1 Who we are?

RESOURCES Merseyside 2011-2041 is the revised Joint Recycling and Waste Management Strategy for Merseyside (JRWMS). It has been developed by the Merseyside authorities[1] consisting of:

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

in consultation with residents, elected members and other stakeholders and interested organisations.

The Merseyside authorities together with Halton Borough Council form the **Merseyside and Halton Waste Partnership (MHWP)**[2] and have the responsibility for managing the Local Authority Collected Municipal Waste (LACMW) across the Liverpool City Region. (See Figure 1 overleaf). All the data[3] and information in this Strategy specifically relates to the Merseyside members of the Partnership except where specified.

The five councils responsible for local authority collection services in their area are known as Waste Collection Authorities (WCAs). Merseyside Waste Disposal

[1] All references made to the Merseyside authorities in this document mean all six partners listed.

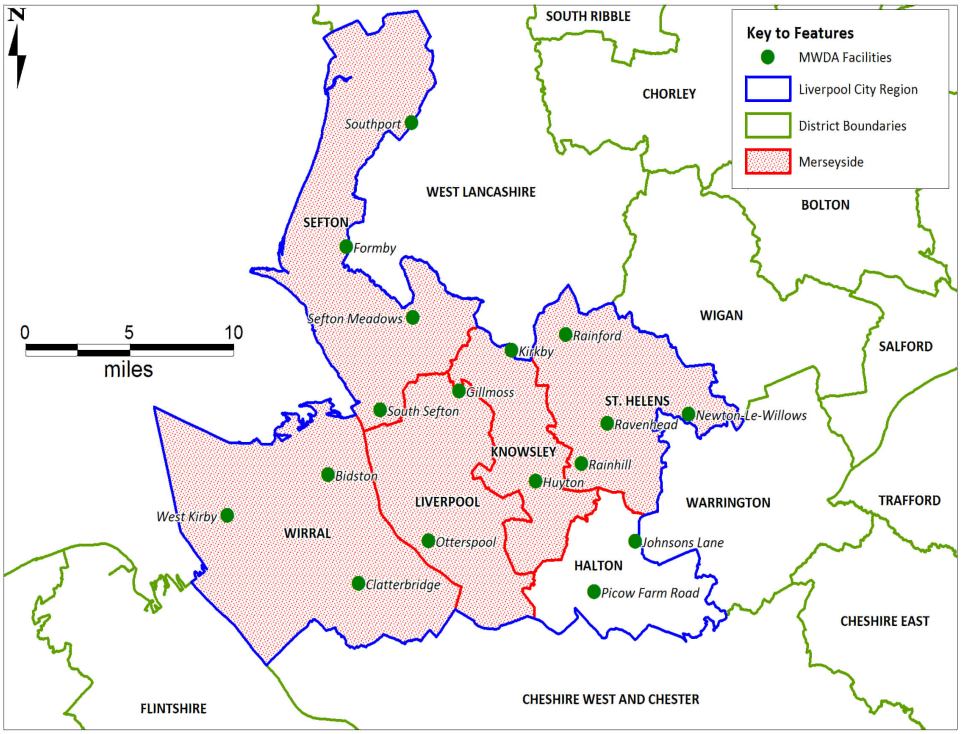
[2] As a separate unitary authority, Halton Borough Council is responsible for the collection, treatment and disposal of municipal waste in its area. Halton joined the Waste Partnership in 2006 and has a separate but aligned Waste Management Strategy.

[3] The most recent verified waste data used in this headline Strategy is 2010/11. Some of the supplementary reports including District Council Action Plans may use slightly different figures due to when they were modelled.

Authority (MWDA) manages the treatment and disposal of LACMW across Merseyside using a range of facilities (see Chapter 2 Figure 5)

The Merseyside authorities have made significant progress to manage their waste and recycled over 36% of the LACMW in 2010/11 and sent 223,000 tonnes less waste to landfill than in 2005. (See Chapter 2 for more waste facts).

Figure 1: Liverpool City Region (Administrative Boundaries)



1.2 Focus of the Strategy

RESOURCES Merseyside 2011 is a headline strategy document and route map for partners to deliver sustainable waste management, transform the waste agenda and move towards greater resource efficiency.

The Strategy will support a pathway towards zero waste to landfill, waste prevention, re-use, recycling and composting whilst recognising the impact these activities have on the amount of residual waste requiring treatment or disposal.

Merseyside requires a Joint Strategy to clearly set out how it will improve the management of its Local Authority Collected Municipal Waste whilst addressing some of the major resource opportunities and challenges facing our society over the next thirty years.

The Strategy needs to reflect the view, aspirations and needs of the residents of Merseyside and other stakeholders and improve the quality of policy and decision making by drawing on local knowledge.

The composition of waste is changing which may impact upon existing recycling systems, established markets and the recovery potential of waste streams. The Strategy needs to provide a flexible approach to waste management services which addresses the changes to the waste streams whilst ensuring systems are fit for purpose to deliver high quality materials for resale.

The JRWMS for Merseyside has been developed by the Partnership so that district councils can decide the best collection system and waste management schemes for their area to deliver the Strategy in consultation with their local communities. A menu of Priority Options has been identified for the district councils to consider (Tables 7 and 8) as actions for change:

Figure 2: The Aims of the JRWMS

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 and of economic benefit to Merseyside

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

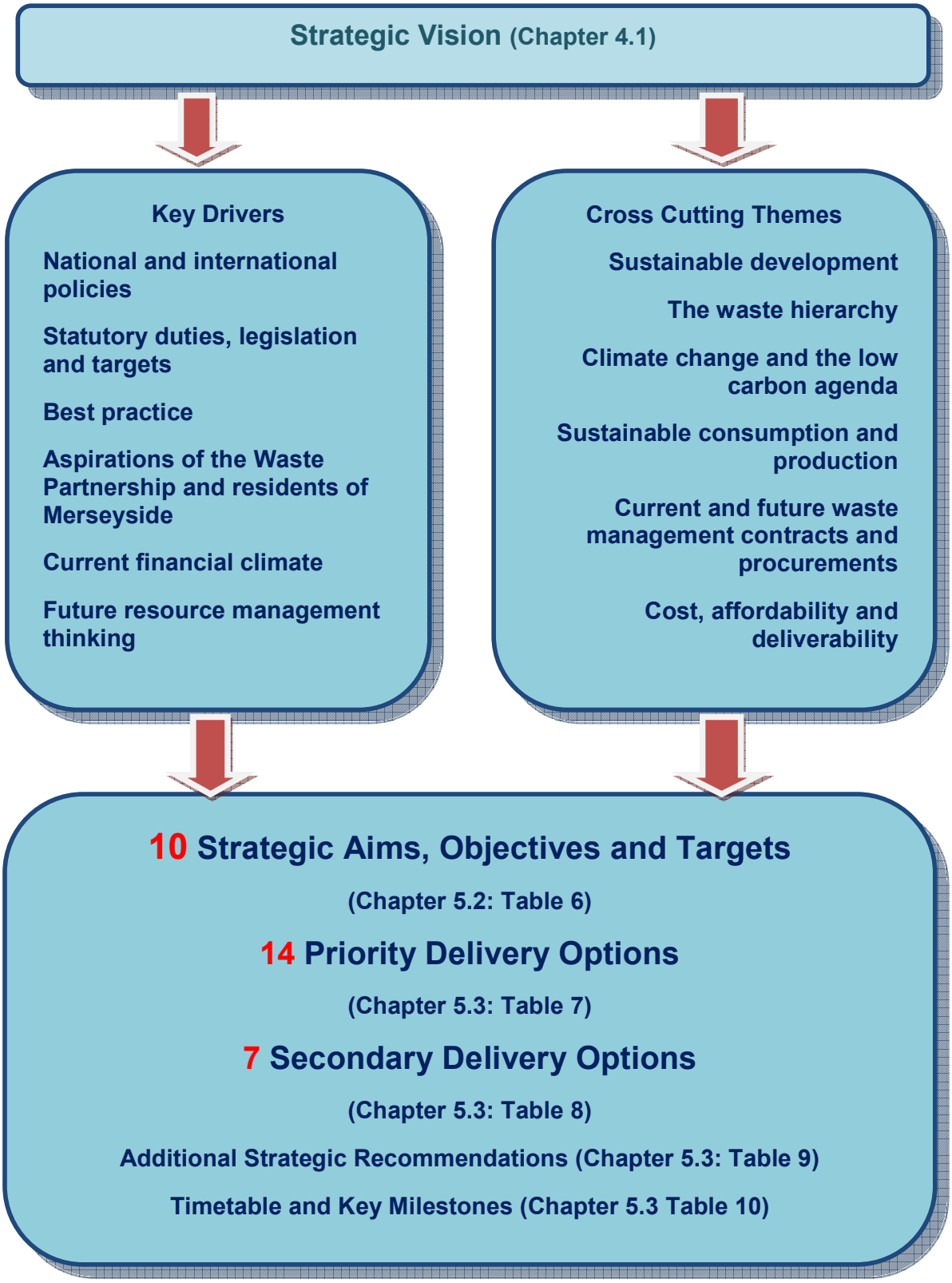
Consuming less

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

Protecting and enhancing our environment

1.3 Structure and Development of the Strategy

RESOURCES Merseyside is structured around:



Merseyside Waste Disposal Authority (MWDA) and the Waste Collection Authorities are required[4] to produce a joint strategy for the management of Local Authority Collected Municipal Waste on Merseyside.

The original Joint Municipal Waste Management Strategy (JMWMS) was published in 2005 and was updated in the JMWMS 2008. This Joint Recycling and Waste Management Strategy replaces the previously published JMWMS.

The review of this Strategy did not cover waste management planning issues, non-municipal waste streams or specific sites allocations. Those topics are a matter for the Waste Development Plan Document (DPD)[5] The DPD will take into account the needs of the JRWMS. This Strategy will pay due regard to the DPD in planning for future waste facilities that may be required.

A range of research projects were undertaken to provide evidence and data to inform the review of the Strategy. They are:-

- Waste Composition Analysis [6] (Supplementary Report A);
- Public Consultation Reports [7] (Supplementary Reports B and C);
- Future Trends in Resource Use and Management Report[8] (Supplementary Report D);
- Issues and Options Study and Options Assessment Report[9] (Supplementary Report E);
- Strategic Environmental Assessment (SEA) Environmental Report[10] (Supplementary Report F);
- District Council Action Plans [11] (Supplementary Reports G to L).
- Waste Prevention Action Plan (Supplementary Report M)

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

[5] The Planning and Compulsory Purchase Act 2004. The DPD is in the latter stages of being developed by the Liverpool City Region Planning Authorities and should be adopted in 2012.

[6] 2010 Entec UK Ltd

[7] Don't Waste Your Say (March 2011) and Draft Strategy Public Consultation (September 2011) MWDA and Enventure Research

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

[9] April 2010 and March 2011 SKM Enviros

[10] October 2011 SKM Enviros

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

1.4 Public consultation process

Two major public consultations were undertaken to inform the Strategy review and improve the quality of policy and decision making (Supplementary Reports B and C).

The **"Don't Waste Your Say"** campaign was a three month consultation undertaken in autumn 2010. The aim was to canvas public opinion on the ten shortlisted strategic objectives and delivery mechanisms identified by the Merseyside and Halton Waste Partnership as priorities for the Strategy. The activities included a doorstep survey of over 3000 residents, roadshows, focus groups and online forums.

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

The **Draft Strategy Public Consultation** was conducted over 10 weeks in summer 2011 using the Don't Waste Your Say website as a portal for online feedback. Over 1180 residents and stakeholders were directly consulted about the content of the Strategy and the proposed objectives, targets and delivery options. Work was undertaken to raise awareness of the consultation to all residents on Merseyside which included media releases, radio adverts and newspaper advertorials and the provision of summaries and hard copies of the consultation document.

As part of the Strategic Environmental Assessment of the Strategy, a workshop was held for key stakeholders in July 2011.

Key findings from the Public Consultations are highlighted in Figure 3 overleaf.

Figure 3: Key Public Consultation Findings

- A majority of residents and stakeholders who responded supported the direction of the Strategy;
- In general, the public thought that the strategic objectives and delivery options were appropriate and very much interlinked;
- There was widespread public support for a focus on waste prevention, education and recycling services. This included support for more engagement, consultation and information to help residents participate in recycling and waste services;
- A higher level of engagement was considered important in building understanding and support for the Strategy direction and in promoting positive behavioural change;
- Satisfaction with current household waste management services was generally high;
- Recognition was given to the progress made on Merseyside to increase recycling rates and reducing waste to landfill;
- Proposed options for changes in collection frequencies and charging for green waste raised some concerns about the risk of increased fly tipping and vermin and the options would discourage recycling. However the majority of those asked expressed no view on these options;
- There was a mixed response to food waste collections but wider support for action to reduce the amount of wasted food. The experience of schemes in Knowsley and Sefton appear to have had a positive impact on residents in these areas but there was concerns made by others particularly about hygiene issues;
- There was support for more home compositing as an option to manage both green and food waste;
- There were concerns from some residents about whether the amount of council tax they paid would be reflected if there are changes to the waste services they received;
- Residents expressed concerns about the quantity of packaging and an interest in being able to recycle a wider range of materials; and
- On average 78% of Merseyside residents reported that they put as much as they can into their recycling bins and 34% will mend or repair items before they throw them away.

Chapter 2: Current Waste Management on Merseyside

Overview: This section tells you how waste is managed now on Merseyside, and the amounts and types of waste residents recycle or throw away.

2.1 Progress on Merseyside

Merseyside has made significant strides in the last decade to manage its Local Authority Collected Municipal Waste (LACMW) (Figures 4 and 5). Performance has improved across the region (Table 3) and significant investments have been made in new facilities to support increases in recycling and to reduce the amount of waste sent to landfill.

Figure 4: Key Waste Facts for Merseyside[12]

- **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 36.5% in 2010/11.**
- **LACMW arisings have fallen by 11.9% from 842,000 in 2005/6 to 741,886 tonnes in 2010/11.**
- **The growth rate of LACWM has fallen by 2.48% annually and for household waste it is a 3.04% reduction. This compares to 3% annual growth increase assumed in the 2005 Strategy.**
- **Average amount of waste produced by each household per year that is sent to landfill has gone down from 854kg in 2007/8 to 693.53kg in 2010/11.**
- **Merseyside is sending 223,000 tonnes less waste a year to landfill than it was in 2005/06**
- **Total LACMW landfilled was 60.7% in 2010/11.**

[12] WasteDataFlow and Office for National Statistics – Mid Year Population Estimates 2009.

Figure 5: Current Waste Management Services on Merseyside

- All five waste collection authorities (WCAs) operate household refuse and recycling collections and offer bulky household waste collections and free garden waste collections;
- 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 Centres being developed for Kirkby and Huyton;
- MWDA operates a Materials Recovery Facility (MRF) at Bidston, Wirral and at Gillmoss, Liverpool and each has a Recycling Discovery Centre
- MWDA operates four Waste Transfer Stations (WTS) where waste is bulked up for onward transport; and
- MWDA is procuring a contract to design, build and operate an energy from waste facility enabled for combined heat and power to handle an estimated 500,000 tonnes of waste per annum to be diverted from landfill.

2.2 What makes up our waste?

Waste Arisings

In 2010/11, approximately 741,886 tonnes of Local Authority Collected Municipal Waste (LACMW) were produced on Merseyside. See Figures 6 to 8 below.

Figure 6: LACMW 2010/11

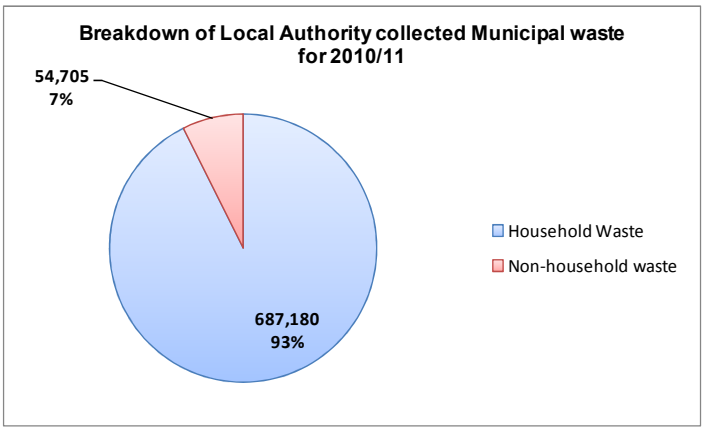


Figure 7: Household Waste 2010/11

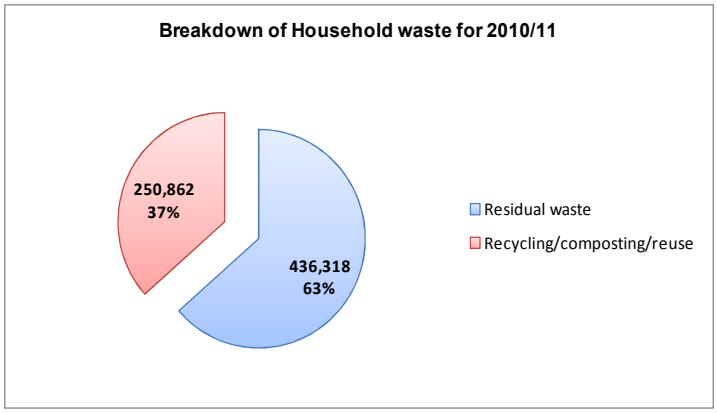
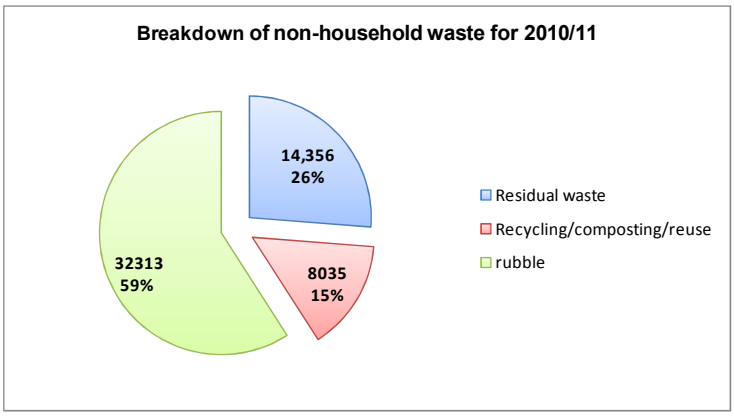


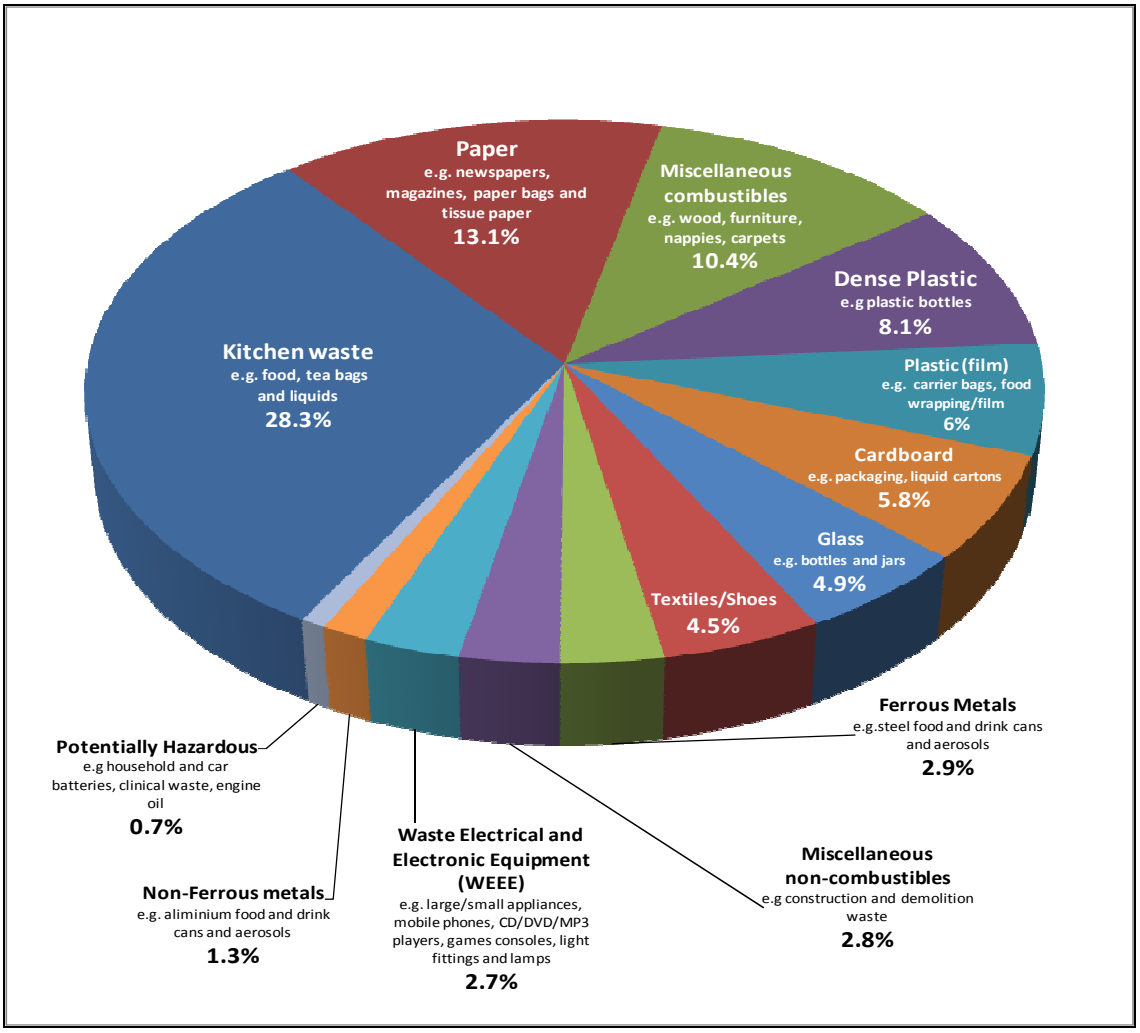
Figure 8: Non-Household Waste 2010/11



2.3 Composition of Waste

There are many services available to residents to re-use and recycle their waste across Merseyside which are being actively used. To get more value from its waste, Merseyside needs to understand what is still being thrown away to go to landfill and why. The chart below shows a snap shot of the key items that Merseyside residents throw into their residual bin.[13]

Figure 6: Composition of materials identified in residual kerbside waste stream (after recycling)



[13] Merseyside Waste Composition Analysis 2010 Supplementary Report A

Figure 7: Love Food Hate Waste Campaign

- Love Food Hate Waste is a national campaign supported by the Waste Resource Action Programme (WRAP) who's role is to help and support individuals an businesses to benefit from reducing waste and using resources more efficiently (www.lovefoodhatewaste.com);
- Reducing food waste is a major issue. UK residents throw away 8.3 million tonnes of food from their homes every year with over 192,000 tonnes on Merseyside;
- Food wastage was of key concern to Merseyside residents in the public consultation with many expressing shock at the amount of food thrown away by the average household each year;
- Wasting food costs the average family with children £680 a year, or £50 a month;
- Food waste has serious environmental implications too. If everyone stopped wasting food that could have been eaten, the CO_2 impact would be the equivalent of taking 1 in 4 cars off the road;
- The Waste Partnership has supported the Love Food Hate Waste campaign on Merseyside since April 2009 with funding from WRAP and Merseyside Waste Disposal Authority;
- To date over 300 events, festivals and roadshows have been attended across Merseyside. 300,000 people will have seen the campaign and more than 27,500 people directly engaged about it; and
- It is estimated using WRAP's Food Waste Calculator that 4,914 tonnes of food waste have been diverted from landfill by Merseyside residents during 2009-11. This equates to preventing 3,685 tonnes of carbon emissions and a financial saving to Merseyside residents and the Waste Partnership of at least £340,000 in avoided food costs, landfill tax, gate fees and transport.

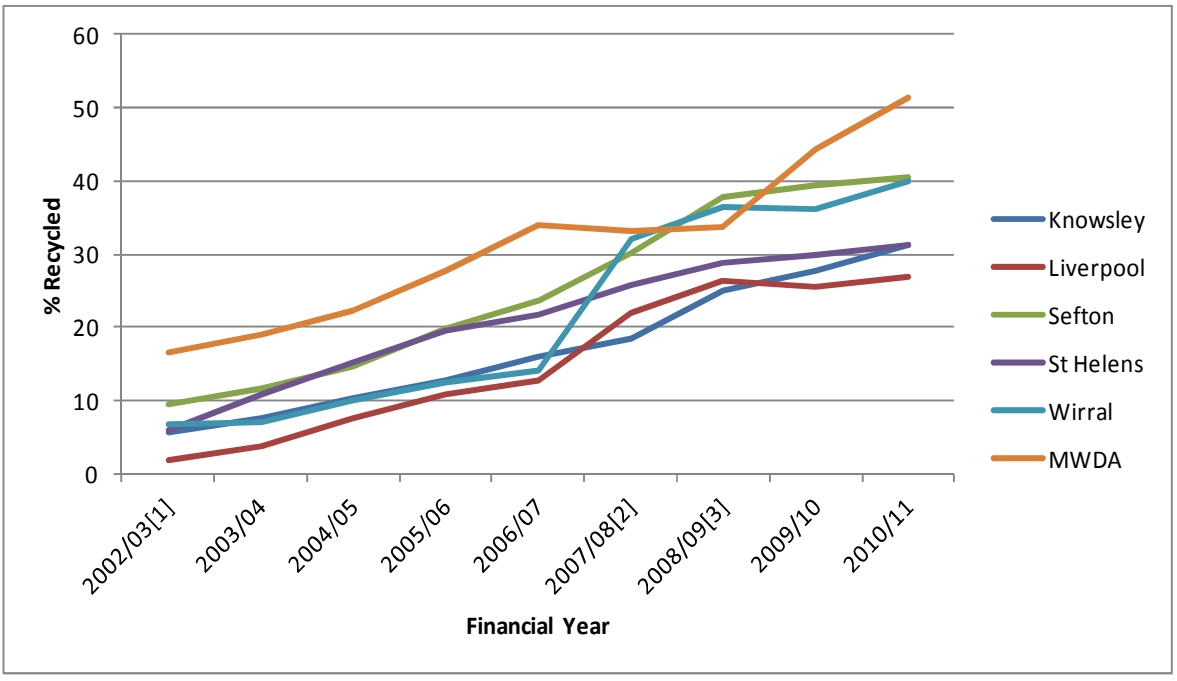
2.4 Recycling and Composting Performance

The individual recycling rates achieved on Merseyside between 2003/4 and 2010/11 are shown in Table 3 and Figure 8 below. These figures show increases in recycling 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	2003/04[14]	2004/05	2005/06	2006/07	2007/08[15]	2008/09[16]	2009/10	2010/11
Knowsley	7.50	10.40	12.80	16.00	18.40	25.05	27.80	31.20
Liverpool	3.80	7.60	10.70	12.70	22.10	26.39	25.50	26.80
Sefton	11.70	14.50	19.70	23.70	30.20	37.66	39.40	40.60
St Helens	10.80	15.30	19.60	21.60	25.90	28.78	29.80	31.30
Wirral	7.00	9.90	12.40	14.20	32.00	36.31	36.20	39.90
MWDA	19.00	22.20	27.72	33.83	33.26	33.66	44.23	51.35

Figure 8: Summary of Recycling Performance 2002/3 to 2010/11



[14] JMWMS 2005

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

[16] NI192 data from 2008/09

2.5 Waste growth

Historically, there has been a clear link between economic growth and wealth, rising population and the amount of waste produced. The 2005 Strategy assumed a projected growth rate of 3.0% and set a target of zero growth by 2020. The Government's Waste Strategy for England 2007 showed that waste growth has slowed nationally to 0.5%. The JMWMS 2008 showed a rate of increase lower than previously observed on Merseyside and new targets were developed to limit municipal 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 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.[17] Household numbers are predicted to rise marginally up to 2021 from 628,000[18] to an estimated 642,000[19].

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 waste streams. 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 also be explored further in Chapter 3 of this Strategy.

2.6 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 working with its contractor to trial a 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.

2.7 Key Legislation and Policies

There is a range of existing and new European, national and local policies and legislation that are shaping the way Local Authority Collected 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 Joint Recycling and Waste Management Strategy (JRWMS).

Key policies that the JRWMS has taken into account are:

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[17] Office of National Statistics 2009

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

[19] Liverpool City Region Housing Strategy 2007

- 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 was undertaken in the preparation of the Issues and Options report and the Strategic Environmental Assessment (Supplementary Reports E and F).

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.

Chapter 3: Facing the Future

Overview: This section looks at waste in the wider context of delivering resource efficiency in a rapidly changing world and economy. It explores the opportunities and challenges facing Merseyside to be a place where nothing goes to waste.

The previous chapter has shown the progress made on Merseyside to increase recycling rates and move waste management away from landfill. However, waste management cannot be undertaken in isolation from wider resource management issues.

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. This is largely as a result of goods being easily accessible from around the world 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, people may return to more consumption driven lifestyles. However, improved recycling and composting rates and reductions in waste arisings should reduce the level of impact from changes in consumer behaviour.

We live in a world that needs to address the impacts of climate change and future use of finite natural resources. The world's population has more than doubled in the last fifty years and is about to reach 7 billion people. There are growing concerns about changes in global supply chains and security of key resources such as food, energy and rare earth metals which are used in many products e.g. 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.

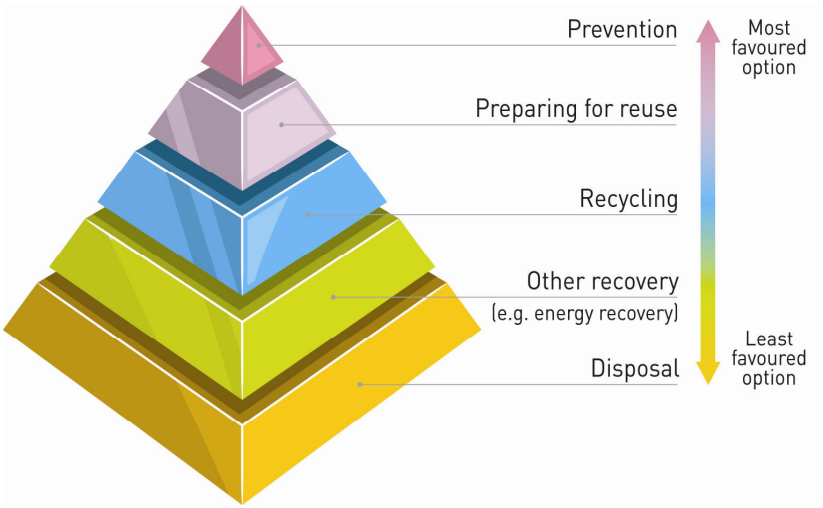
Much of our waste has a value as a resource and can make a positive contribution to wider economic, environmental and social goals such as supporting the low carbon economy and producing renewable energy. The Partnership will manage whatever arrives in the local authority waste stream but to do so must work more effectively with stakeholders along the resource supply chain (e.g. designers, manufacturers, retailers, consumers) to meet the objectives of this Strategy.

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 demands change all the time. Merseyside needs to 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.

3.1 Reduction to Recovery of Waste

The Waste (England and Wales) Regulations 2011 requires greater emphasis on the higher levels of the Waste Hierarchy (Figure 9). 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.

Figure 9: The Waste Hierarchy[20]



3.1.1 Waste Prevention

Waste prevention is at the heart of the Strategy and offers the most effective way to reduce the impact waste management has on the environment and economy.

The waste prevention targets will be used to off-set any growth in waste arisings from the increase in number of households on Merseyside. This will include major residential developments planned for Wirral and Liverpool Waters in the proposed Enterprise Zone.

A Waste Prevention Action Plan (Supplementary Report M) has been developed by the Merseyside and Halton Waste Partnership (MHWP) building on the 2008 Waste Prevention Strategy and the need to progress towards zero waste to landfill.

There is much to do to prevent waste being generated in the home and at the workplace. Public engagement, awareness raising and changing the behaviour of residents and businesses will be vital. Merseyside will also need to respond to the changes in the flow of waste and resources especially as manufacturers, businesses and Governments around the world start to claim resources and restrict some products and materials from entering waste streams.

[20] Pyramid to be inverted prior to publication

Local authorities have responsibilities under the Waste Minimisation Act 1998 to promote waste reduction and legislation enables them to take steps to minimise the generation of household, commercial and industrial waste. Local councils can also use their Trading Standards services to investigate and take appropriate legal action against businesses that use excessive packaging for their products.

Benefits of waste prevention	Challenges of waste prevention
• **Not using natural non renewable resources in the first place** • **Reduction in carbon emissions (CO_2e)[21] [22]** • **Reducing financial costs and taxes to organisations making businesses more competitive and sustainable** • **Reducing the ecological footprint of Merseyside.** [23]	• **Consumption driven lifestyles and business opportunities which impact on the design of products, durability and packaging** • **High levels of food waste** • **Influencing policies that have an impact on household waste arisings e.g. the frequency of household waste collections and charged garden waste collections** • **Increasing public awareness and education on waste prevention to influence positive behavioural change** • **Lower quantities of waste may result in lower quality materials which may make the waste harder or more expensive to recycle or treat.**

[21] CO_2e - carbon dioxide equivalent emissions which is a common unit of measurement for the range of greenhouse gases including carbon dioxide and methane

[22] Across the product chain 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 (as a solid, liquid or gas).

3.1.2 Reuse and Repair

This Strategy seeks to maximise the opportunities for people to re-use or repair the goods they buy as a viable option to throwing valuable resources in the bin.

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 may find it far easier and cheaper to replace or upgrade an item than have it repaired. They also do not always recognise the value of the materials they are throwing away either as a resource or financially. People 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, selling items on Ebay or through advertised take back schemes.

Benefits of reuse and repair	Challenges of reuse and repair
• Reduction in carbon emissions • 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 • Opportunities for training, upskilling and reviving repair and reuse service industries • Potential for an increased role for strong community and social enterprise organisations on Merseyside	• Public awareness of the value of the things they throw away • Increases in producer responsibility could support re-use but this may be undermined where goods are no longer freely available and are retained in the market place for trading through take back services • Changes in the composition and quality of waste streams will impact on the infrastructure for collection, recovery and treatment • Increased opportunities for resale of products may impact upon existing reuse structures in place

3.1.3 Recycling and Composting

This Strategy will aim to meet 50% recycling and composting rates and exceed where it is economically and environmentally beneficial to do so.

It is also important to maximise the environmental benefits of waste management practices and reduce our carbon and ecological footprints whilst getting value for money. We should aim to maximise carbon reduction benefits by capturing 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 Chapter 5[24] and through the delivery of individual District Council Action Plans (DCAPs). Waste modelling has indicated 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.

If tonnage remains the main measure of reporting on 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).

Merseyside districts currently provide a free collection service for garden waste. The tonnages collected for composting have reduced the amount of biodegradable waste sent to landfill and enhanced Merseyside's recycling performance. However, it may be necessary to review the free collection services in the future against other drivers such as the need to support waste prevention, reduce overall household waste arisings, carbon emissions and collection costs.

The introduction and benefits of a subscription based garden waste collection service will vary due to local circumstances such as demographics and the implications of current waste services and policies in a district. Any scheme will need to be well planned, communicated effectively and to take account of residents concerns.

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

[24] Menu of Delivery Options

Benefits of recycling and composting	Challenges of recycling and composting
• Reduction in the use of virgin materials and conservation of natural resources and biodiversity • Reduction in carbon emissions[25] • Turning collected recyclates into new materials and products; and • Providing business opportunities for resource management and secondary raw materials supply/processing	• Systems need to be fit for purpose to deliver high quality materials for resale from continuous improvements to collection systems and vehicles plus further technological improvements at Material Recovery Facilities • Reduce reliance on currently healthy export markets such as China and maintain quality materials for use in more local supply chains • Flexibility in collection/sorting systems to allow for additions (e.g. plastics) and loss of materials (e.g. paper and glass) from the waste stream • Potential tension between the need for carbon reductions and tonnage based recycling targets • Engaging with local communities and the voluntary sector on local services, waste and resource management developments including the potential use of incentives • Support for increased markets, outlets and purchasing of recycled products or goods with high recycled content.

[25] CO_2e emissions across the product chain i.e. using secondary raw materials (recyclates and compost) 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.

3.1.4 Recovery of Value from Waste

Merseyside is committed to the diversion of waste from landfill through 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 in 2012 with the main recovery facility being built outside Merseyside and operational from 2015 and the contract will run until 2041. The procurement will take into account the impacts of the management of waste further up the hierarchy.

Benefits of recovery	Challenges of recovery
• Diversion of biodegradable waste to meet or exceed Merseyside's Landfill Allowances • Recovery of value from at least 75% of waste in line with the Waste Strategy for England 2007 • Economies of scale procuring long term contracts that provide value for money • A source of local, secure low carbon and renewable energy	• 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.

The targets will be to reduce the landfill of Local Authority Collected Municipal Waste to 10% by 2020 and 2% by 2030[26].

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) including MWDA. The Directive has been implemented in England through the Landfill Allowance Trading Scheme (LATS). Each WDA currently has a tonnage allocation issued in the form of permits which may be traded.

The Government has announced that the trading scheme will end in the 2012/13 trading year as Landfill Tax rather than LATS is now seen as the main driver to meet the landfill diversion targets. Landfill tax will rise on an annual basis by £8 per tonne to a minimum level of £80 a tonne from 2014.

Merseyside must reduce the amount of waste it sends to landfill by providing services identified in this Strategy that manage waste higher up the Waste Hierarchy. In doing so, there will be financial and natural resource savings for Merseyside.

The Partnership will need to manage any remaining waste that needs to go to landfill 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	Challenges of landfill
• There will remain a need for landfill during the period of the Strategy for some elements of residual waste • Increase the use of Merseyside's closed landfill sites as a resource with potential to enhance biodiversity, grow crops for bio-fuels or benefit the local community as public space	• 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 • The impact of landfill site operations on local communities

[26] In line with MWDA's Resource Recovery Contract

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) of the Strategy has been conducted and a summary of the key findings can be found in Chapter 4. A detailed Environmental Report has been produced (See Supplementary Report F).

It is important that the Waste Partnership and 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 district councils to introduce environmental policies, management systems and, in some cases, achieving and maintaining standards such as ISO14001 to reduce their environmental impact.

A key objective will be to ensure that the delivery of this Strategy reduces the ecological footprint of LACMW services on Merseyside. This supports the global concept of One Planet Living[27] and means that the district councils should consider the land use and biodiversity impacts of their services as well as carbon emissions.

Benefits of environmental protection	Challenges of environmental protection
• To enable us to live within our environmental limits by using or effectively managing our natural resources such as raw materials and reducing the risk to human health and well-being	• Addressing any significant negative impacts identified through the Strategic Environmental Assessment process (See Chapter 4)

[27] A global initiative developed by WWF and Bioregional which sees a world in which people everywhere can lead happy, healthy lives within their fair share of the Earth's resources.

3.3 Sustainable Development

There should be a balance between environmental protection, economic development and social justice to ensure the delivery of the Strategy is sustainable.

Consideration needs to be given to the impacts on the environment (e.g. climate change, resource use, energy conservation and production), the economy (e.g. levels of consumption and production, employment, procurement, local economic development and regeneration) and social issues (e.g. quality of life, health, education and community engagement and participation). The SEA process has incorporated economic and social sustainability criteria and identified areas where the delivery of the Strategy should contribute positively to wider policy aims and objectives which support sustainable development on Merseyside, in the UK and globally.

Benefits of sustainable development	Challenges of sustainable development
• 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 • Small individual actions that can build up to real change	• Integrating sustainable development principles into the delivery options for the Strategy • 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

The Waste Partnership will seek to develop strong and transparent engagement and collaboration with communities and stakeholders across Merseyside in the delivery of this Strategy.

The Waste Partnership needs to build on its existing relationships with stakeholders, 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.

The Government wants to ensure people are rewarded and recognised for doing the right thing to reduce, reuse and recycle their waste. The Partnership will consider opportunities to establish appropriate and affordable incentive schemes which promote long term behavioural change to support the Strategy objectives.

Benefits of working with stakeholders	Challenges of working with stakeholders
• Learning from each other and sharing best practice and information in the public, private and voluntary sectors to manage resources and reduce waste • To enable waste services and facilities to treat both municipal and commercial waste that are likely to be more cost effective • Potential to collaborate with key stakeholders to design out waste particularly in packaging and remove products with large carbon footprints and high wastage • Potential to enable localised collection, reprocessing and disassembly schemes for high value and high quality materials	• Identifying and securing the efficiency gains from joint working • Understanding the issues and needs of different stakeholders, develop people's skills and ensure accountability, trust and transparency • Developing a collaborative approach to projects and communications • Developing incentive schemes which reward residents to undertake simple practical actions to reduce, re-use or recycle their waste.

3.5 Using Materials Wisely

This Strategy supports greater sustainable consumption and production on Merseyside by maximising the use of resources and recognising the value of waste materials as an economic commodity.

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 needs to be done to capture these resources from waste products and the EU is considering these issues in its Roadmap for a Resource Efficient Europe. The roadmap sets a vision for 2050 and goals for 2020 with the aim to develop wealth and well-being while reducing the levels and impact of resource use and waste.

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.

Every year over ten million tonnes of packaging is used in the UK.[28] 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.

There is a growing trend for material substitution across a range of products. The Internet and electronic media such as the rise of e-books is resulting in a rapid falling trend in the consumption of newsprint whilst downloads in music now account for 12.5% of total music sales. This trend 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 Small to Medium Enterprises (SMEs).

Changes in resource use will have an impact down the product chain on the range and volume of materials in waste streams collected by the districts. 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.

[28] DEFRA News Website 26 October 2010

Benefits of using materials wisely	Challenges of using materials wisely
• Reduction in use of virgin raw materials and reduced 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 • Value of certain materials such as precious metals may increase significantly making their recovery from the waste stream and their reprocessing a priority	• Collection and treatment of municipal waste needs to be adaptable to the changes in waste streams • 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

3.6 Responsibility for Waste

The benefits and opportunities for future working arrangements on waste management across Merseyside will be explored through this Strategy.

Education, awareness campaigns, incentive and appropriate enforcement will all be tools available for use to help achieve the Strategy targets and ensure that local policies are adhered to and adopted e.g. to manage changes in collection schemes, reduce contamination of recyclates, fly tipping and litter. MWDA has introduced stricter controls at all its Household Waste Recycling Centres through a Permit scheme to prevent and reduce the illegal deposit of non-household waste at its sites.

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 increased joint working since the original Merseyside Waste Partnership signed a voluntary Memorandum of Understanding in 2005. The operational aspects of joint working are being 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 Waste Partnership more effectively.

In response to the current financial climate and reductions in Government funding, all 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 including options for Joint Waste Authorities, Joint Committees or Waste Boards which can bring together collection and/or disposal functions. A review of the Levy mechanism that funds the waste treatment and disposal functions of MWDA is also considered an important area to be explored.

Benefits of being responsible for waste	Challenges of being responsible for waste
• 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 • 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	• 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

Delivery of the Strategy will contribute to the low carbon economy on Merseyside and the impact on climate change through the reduction in carbon emissions of waste management services

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.[29]

This Strategy will help towards meeting 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 and paper 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. Greater carbon savings can be made by avoiding the emissions that arise from manufacturers using virgin materials or energy generation using coal or gas.

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.

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 overleaf gives an example of the carbon metric as a decision making tool against the 2009/10 LACMW arisings on Merseyside. This shows the materials that can be most beneficial for the environment on a tonnage basis and on a carbon basis if collected.

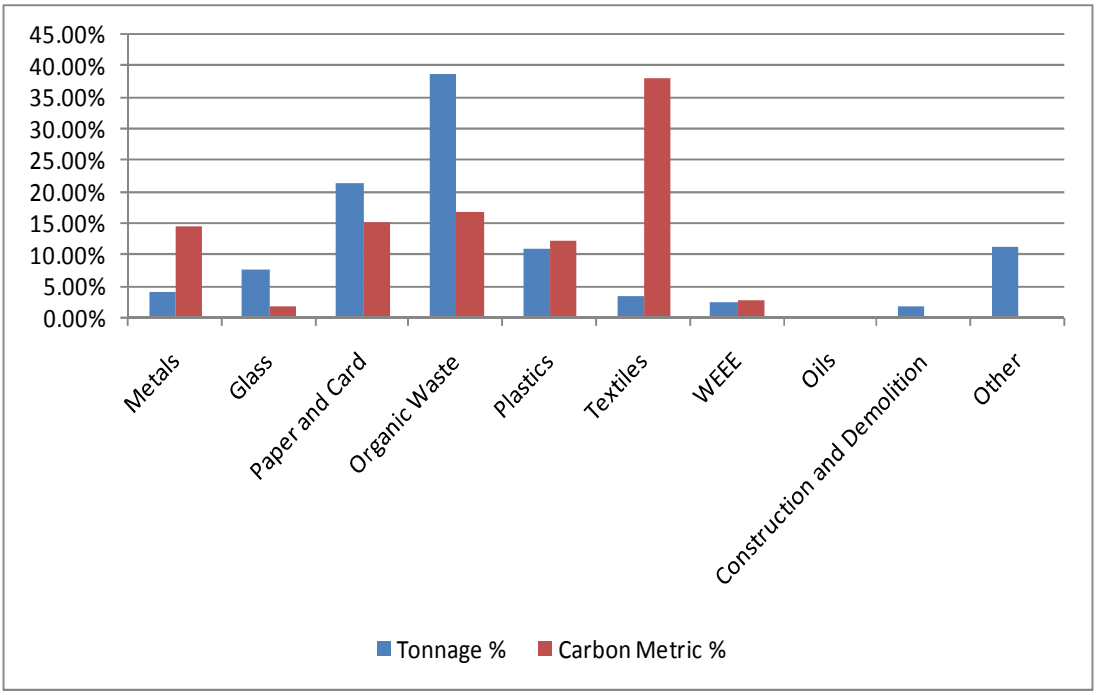
[29] DEFRA Climate Change Action Plan 2010

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

[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

Table 5: Carbon Metric support for decision making



The Strategy will establish the potential to prioritise and capture materials such as textiles, food waste and materials which offer greater carbon benefits as well as supporting a 50% recycling rate.

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

Waste management and its infrastructure can also use and generate renewable energy and fuels to support the UK energy policies. 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. Increased use of renewables also provides security of energy supply and the potential to avoid or reduce levels of fuel poverty. The MWDA Resource Recovery Contract procurement for its Energy Recovery facility supports energy generation with Combined Heat and Power. The SEA also supports the use of high efficiency energy recovery.

MWDA has recently introduced the recycling of cooking oil at its HWRCs which will be refined into a bio fuel. The fuel will be used to supply renewable electricity to the National Grid. The increased use of bio fuels has the potential to positively address a number of issues including air quality, health impacts and support the Low Carbon economy in the Liverpool City Region.

This Strategy will aim to support opportunities to generate and use renewable energy across the Waste Partnership's 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	Challenges of carbon and energy
• **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 install renewable resources at waste management sites and facilities** • **Opportunities for the production of bio-fuels and use of low carbon/low emissions vehicles for waste management services.** • **Closed landfill sites could provide bio-fuels e.g. rotational coppicing.**	• **To establish an appropriate carbon measurement to enable the targeting of specific materials and products**

[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).

3.8 Education and Awareness

This Strategy will promote co-ordinated and effective education activities and communications to encourage residents and businesses to do more to increase recycling and cut down on unnecessary waste

Residents are taking positive action to recycle their waste and Merseyside has met its 2010 recycling target of 33%.

There is a need to engage and encourage people to change their consumption habits through promotion of smarter purchasing, waste prevention, reduction and reuse as well as recycling. This can be achieved through effective education activities to help residents and businesses in simple practical ways that raise understanding and encourage individual responsibility over the long term. This will also help to raise the currently low public awareness of initiatives such as waste prevention.

More information needs to be provided to residents about the results of their efforts. By letting people know what happens to products when they are recycled and the financial and personal benefits of recycling as well as the environmental benefits may encourage greater recycling.

Engagement with the public and education in our schools, colleges and Universities will play a key role. The two Recycling Discovery Centres at the Bidston and Gillmoss facilities offer an all year round programme of visits for schools and community groups to learn about recycling, waste management and their environment.

Education and awareness activities 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	Challenges of education and awareness
• Increasing people's understanding to make practical changes in their action and habits when purchasing products and food • Reducing the amount of waste arising from households • Increased participation in waste management schemes with more and better quality materials put out for recycling • Helping businesses to be more economically competitive by using resources wisely and reducing waste	• 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 leave the household

3.9 Services, Savings and Support

The Strategy supports joint and partnership working to deliver greater benefits and savings for Merseyside in delivering waste management services.

The Merseyside and Halton Waste Partnership is at present an informal but active group of the six districts and MWDA that co-ordinates 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	Challenges in services
• Successful improved performance and service delivery through working together as local councils • Identify potential financial savings from efficiencies in service delivery and joint procurement • Building trust, shared mission and clear commitments and communications	• Reflecting local needs and differences in collections, contracts, payment systems and resources • Being able to measure success and efficiency gains from joint working • Developing joint working opportunities for wider wastes and resource management • Accessing support and resources at European and national level to secure the delivery of the Partnership objectives

Chapter 4: Results of the Strategic Environmental Assessment (SEA)

KEY FINDINGS

- **The JRWMS Strategic Objectives and delivery options are generally positive and demonstrate a sustainable approach to waste management.**
- **Diverting waste from landfill will reduce carbon emissions and the impact of climate change.**
- **Transport of waste may increase when delivering the carbon benefits of diverting waste from landfill. The benefits of moving waste activities up the Waste Hierarchy generally outweigh the impact of any increase in transport emissions.**
- **Waste prevention avoids carbon impacts across the whole product life cycle and is preferable to all other options. It helps reduce the ecological footprint of waste and contributes to the protection and enhancement of biodiversity.**
- **Carbon impact could be reduced by focussing on materials or goods with high carbon content and by recovering energy from food waste through anaerobic digestion.**
- **Some of the delivery options may have negative effects particularly where fly tipping, litter or transportation could increase if the options are not well planned or implemented.**
- **There could be a mixed impact in encouraging sustainable economic growth. There is potential for fewer employees needed in local authority waste management services should there be fewer waste facilities and/or vehicles required. This could be mitigated by increased opportunities in the third sector, promotion of environmental technologies and increased use of local markets and outlets for recyclables/re-use.**
- **Residual waste treatment and disposal options have the potential for negative impacts particularly from transportation if not designed and operated appropriately.**
- **Energy from Waste (EfW) and Mechanical Biological Treatment (MBT) options have similar environmental impacts although EfW scores better than MBT with higher level of CO_2 equivalent savings.**
- **The Environmental Report (Supplementary Report F) proposes environmental monitoring criteria (Table 28).**

Chapter 5: Delivering the Strategy

5.1 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.

5.2 Strategic Aims, Objectives and Targets

Ten strategic aims and objectives have been developed to support the Vision to deliver the Joint Recycling and Waste Management Strategy (JRWMS) and address the many challenges and opportunities for **RESOURCES Merseyside.** The aims and objectives are 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 G to L).

Table 6: Strategic Aims, Objectives and Targets[34]

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 Local Authority Collected Municipal Waste (LACMW) 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 arisings 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 to total waste arisings per household in 2009/10.**

[34] Table 6 is not presented in any order of priority.

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 LACMW 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.**

5.3. Menu of Delivery Options

The following menus enable each district council to identify and priorities the options that can best be delivered in their local area and add benefit to meeting the strategy aims, objectives and targets.

It is recognised that, for the JRWMS 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.

The options chosen by each Council and MWDA will be reflected in the production and adoption of their District Council Action Plan (DCAP) 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 sector.

The SEA highlighted the need for sensitive consideration of the application of the options where there may be unwanted consequential impacts such as fly tipping, local environmental nuisance and economic burden. These impacts were also identified as concerns by some respondents to the public consultation.

Table 7: Menu of Ranked Priority Delivery Options

Rank	Delivery Option	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, 2, 4, 5, 6, 8 and 9
2	**Frequency of Household Waste Collections**	Local Councils to consider the best local system for the collection of refuse and recyclables - the right frequency of collections for the right materials in the right area. 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
4	**Green Waste Charging**	Districts to consider introducing a charged garden waste collection service to residents to incentivise waste prevention and home composting. This will vary according to local circumstances. Supports Objectives: 1, 2, 3, 5, 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 currently have 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 residual waste 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

A Menu of a further 7 Secondary Delivery Options is at Table 8 below. These identify other options which did not rank as highly 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.

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**

[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.

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**

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

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, engage local retailers, businesses and manufacturers and residents to support activities to reduce waste, encourage resource efficiency and partnership working on Merseyside Supports Objectives: 1, 2, 4, 5, 6, 7, 8, and 9
C	**Incentive schemes**	Districts to look at opportunities to establish incentive schemes for residents or stakeholders to deliver the Strategy objectives. Supports Objectives: 1, 2,3, 4, 5, 6, 8, and 9
D	**Develop the economic potential and benefits of waste and resource management**	The Partnership will seek to support activities which help and advise Merseyside businesses to be more sustainable and competitive by minimising their resource use and managing their wider wastes effectively in a low carbon economy. Supports Objectives: 1, 2, 3, 4, 5, 6 and 9

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 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).

The Waste Partnership will continue to work with residents, communities and business to help them reduce waste, recycle more and use resources more sustainably over the lifetime of this Strategy.

Chapter 6: Monitoring and Review of the Strategy

The Joint Recycling and Waste Management Strategy is supported by the District Council Action Plans (DCAPs) which set out the actions to facilitate the delivery of the JRWMS objectives and targets by each district council and Merseyside Waste Disposal Authority. 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;
- Council magazines and media releases; and
- SEA Environmental Report Monitoring criteria (Table 28 Supplementary Report F)

As a matter of principle, a full review of the Strategy will be undertaken by the Waste Partnership 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.

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.

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” and 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.

Commingled Collection: a kerbside collection scheme where two or more recyclables/ waste streams are collected together in a mixed form and taken to a sorting facility to separate the materials for onward sale for reprocessing.

Community Sector/Third 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 compost that may be beneficially applied to land.

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

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.

EU Directive: legislation produced by the European Union which must be transposed and implemented by Member States through their own national legislation.

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.

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

In Vessel Composting (IVC): a term covering a wide range of aerobic compositing systems all of which feature enclosed composting processes. Typically IVC allows greater control of the process and can produce compost more rapidly.

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

Liverpool City Region: 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: 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.

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

Merseyside and Halton Waste Partnership (MHWP): a group of waste collection and disposal authorities working together to develop and implement Local Authority Collected Waste in the Liverpool City Region.

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

Private Finance Initiative (PFI): 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: where producers, e.g. manufacturers and retailers, take greater responsibility for their products at the end of their useful life. 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: where a waste usefully replaces other materials which would have otherwise been used for a particular function. Recovery includes re-use, recycling and energy recovery.

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

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

Reuse: 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 any activities of an organisation will have an impact.

Strategic Environmental Assessment (SEA): 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): reducing environmental impacts, while maintaining or improving economic outputs and standards of living by using resources more efficiently.

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

Sustainable Waste Management: 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.

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

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

Unitary Authority: a type of local authority responsible for all local government duties in its area including waste collection and disposal.

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

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

Waste Arisings: the amount of waste generated by an area over a given timescale.

Waste Collection Authority (WCA): a 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): a 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): a wide range of small and large items and their components including hairdryers, games consoles, lawn mowers and TVs.

Waste Framework Directive (WFD): 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 in a priority order for waste management. Ideally waste should be prevented with disposal representing the last option.

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 include measures taken before a material or product become waste that reduces the quantity, harmfulness and environmental/human health impacts of waste.

Waste Streams: waste generated from different sources.

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

Current Definitions used 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 is waste from households, as well as other wastes, which because of its nature or composition is similar to waste from households.

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.