Love food, hate waste
Exchange or donate unwanted items
Purchase durable, long lasting goods

REDUCE

Protect and enhance the environment
Support the pathway towards zero waste to landfill
Encourage residents and businesses to do more to recycle and cut down unnecessary waste

RECYCLE

USE

Maximise the use of resources
Recognise the economic value of waste
Contribute to the low carbon economy

Issues and Options Study and Options Assessment

REPORT
APRIL 2010

SUPPLEMENTARY REPORT E

recycle for Merseyside

RESOURCES
MERSEYSIDE
2011-2041

SINCLAIR KNIGHT MERZ
SKM ENVIROS

MWDA
Merseyside Waste Disposal Authority

Joint Municipal Waste Management Strategy Review

ISSUES AND OPTIONS STUDY

- Final Interim
- 1 April 2010

Joint Municipal Waste Management Strategy Review

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- Final Interim
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1. Introduction

The Merseyside and Halton Waste Partnership (MHWP) have commenced a full review of the Joint Municipal Waste Management Strategy (JMWMS) for Merseyside. The original strategy, which was produced in 2005, contained a commitment for the strategy to be reviewed every five years. The strategy underwent an update in 2008 to ensure that the document was consistent with policy and legislation and national guidance on municipal waste management strategies.

The MHWP consists of the district councils of Halton, Knowsley, Liverpool, Sefton, St Helens, Wirral and the Merseyside Waste Disposal Authority. Halton are aligned to the review (as part of the Partnership) but will undertake a separate strategy document review.

1.1. The Current Strategy

The JMWMS for Merseyside 2008 sets out the guiding principles for the delivery of sustainable waste management on Merseyside over the period 2008-2020 and is the agreed view of the MHWP. Halton joined the Partnership in 2006 and has a separate but aligned Halton Municipal Waste Management Strategy (HMWMS)

The JMWMS 2008 is an update of the original 2005 strategy, bringing it in line with changes in legislation, policy and performance but retaining the original aims and objectives. New commitments and recommendations were added in the light of good practice developments. The JMWMS consists of a Headline Strategy, a Waste Prevention Strategy, District Council Action Plans and a number of supporting documents.

Key targets within the current strategy include:

- Recycling and composting 33% by 2010; 38% by 2015 and 44% by 2020 (municipal waste recycling target); and
- Reduce municipal waste growth to 0% by 2020.

The key aims and objectives of the current strategy are as follows;

Strategic Aim	Objective
To improve the sustainability of municipal waste produced on Merseyside using the waste hierarchy	▪ Provide services and facilities which directly contribute to the implementation of the JMWMS; ▪ Optimise waste reduction; ▪ Optimise waste re-use where reduction is not possible; ▪ Optimise waste recycling and composting when re-use is not possible; ▪ Optimise waste recovery where actions higher up the waste hierarchy are not practicable; ▪ Landfill waste only where actions higher up the hierarchy are not possible
To continuously improve the services we provide in terms of efficiency, effectiveness and economy.	▪ MWDA to lead on the development of the JMWMS for Merseyside ▪ To deliver waste services to the required performance levels

1.2. Issues and Options Study

The JMWMS 2008 committed the MHWP to a full review of the strategy from 2009/10 as the original strategy aims and objectives will have been in place for five years. The review will involve consideration of all aspects of the strategy, including key targets and direction and will therefore also require a Strategic Environmental Assessment (SEA).

SKM Enviros were commissioned to undertake an 'Issues and Options' study which forms first steps in the review of the strategy. This study considers the key drivers for the strategy in the current policy and legislative context in order to short list key strategy themes and the mechanisms for delivery. It also considers the strategy review in the context of the on-going PFI procurement process for residual waste treatment infrastructure. As a result, this project specifically focuses on the issues and options associated with the top three levels of the waste hierarchy; namely waste prevention, re-use, recycling and composting whilst also recognising the overall impact of these activities on the amount of residual waste ultimately requiring treatment or disposal.

Other pieces of work also taking place as part of the strategy review include:

- Waste Composition Analysis (March-August 2010);
- Sustainability Appraisal and Strategic Environmental Assessment (March 2010-February 2011);
- District Council Action Plan Reviews;
- Engagement and Consultation.
- Identification of Key Issues for the Strategy

2. Identification of Key Issues for the Strategy

2.1. Approach to Identifying Key Issues

The initial identification of issues has primarily involved a desk based assessment and review of current policy and strategy impacting on the way that waste is managed and is likely to be managed in Merseyside up to 2030. This has been carried out at both a national, regional and local level and has covered strategic economic, planning policy and waste documentation.

Other key proposals and consultations relating to future policy and legislative change that may impact on waste management policy and decision making have also been reviewed. Such documents reviewed include the Waste Framework Directive along with forthcoming consultations on potential landfill bans for specific waste streams, the changing definition of municipal waste, efficiency drivers and the low carbon agenda.

Table 1: Summary of Key Themes

No.	Theme	No.	Theme
1	Resource efficiency	18	Innovation
2	Sustainable consumption and production	19	Energy efficiency
3	Reduction of climate change/carbon impacts	20	Renewable energy generation
4	Low carbon economic activity	21	Reducing transport Impacts
5	Protection of natural resources	22	Reducing the ecological footprint
6	Sustainable communities	23	Importance of partnership working & working together
7	Sustainable waste management	24	Provision of sufficient capacity for waste management activity
8	De-coupling of economic growth and waste growth/impacts	25	Promotion of key waste messages & awareness raising
9	Reduce the carbon impacts of waste management	26	Provision of efficient services
10	The waste hierarchy	27	Promoting behavioural/cultural change
11	Waste prevention	28	Self sufficiency and the proximity principle
12	Waste re-use and remanufacturing	29	Sustainable procurement
13	Zero waste	30	Leading by example
14	High recycling = 60-70%	31	Market development
15	High recycling = 50-55%	32	Healthy, safe and prosperous communities
16	Landfill diversion/ recovery of residual waste	33	Value for money
17	Consideration of all waste streams (MSW, C&I, C&DE)		

The selected policy documents were reviewed for common themes and a long list of thirty three themes was identified for consideration, see Table 1. This long list reflects the range of topics driving policy and strategy at the national, regional and local level. Details of the documents reviewed are provided below along with a cross reference to the themes identified in Table 1.

2.2. National Policy and Legislative Drivers

The documents reviewed at a national level include those relating to waste management specifically and also those that relate to reducing the carbon impacts of activity as this is an area of increasing focus for the economy in general and waste management in particular and it is therefore important to understand the wider carbon policy drivers. The UK is signed up to statutory carbon targets (to reduce greenhouse gas (GHG) emissions by 34% by 2020 (vs 1990) and by 80% by 2050) at a national level (through the Climate Change Act) which is beginning to impact at a national waste policy level.. Consultation strategies for both Wales and Scotland are included as these have been produced more recently than the Waste Strategy for England and are proposing more challenging recycling and composting targets. The revised Waste Framework is a key European driver for future waste management policy and practice in the UK.

A summary of the documents reviewed is provided below along with a more detailed assessment in the following tables:

- Securing the Future, the UK Sustainable Development Strategy, Defra 2005;
- Waste Strategy for England 2007, Defra;
- Low Carbon Industrial Strategy, 2009, Department for Business (BIS), Department for Energy and Climate Change (DECC)
- Low Carbon Transition Plan, National Strategy for Climate and Energy, 2009, DECC;
- Low Carbon Transport Strategy, 2009, Department for Transport
- UK Renewable Energy Strategy, 2009, DECC;
- Towards Zero Waste – One Wales One Planet, A Consultation Strategy for Wales, 2009;
- Consultation on Scotland's Zero Waste Plan, 2009; and
- EU Waste Framework Directive, 2008/98/EC.
- National themes focussed primarily on issues such as resource efficiency, sustainable consumption and production, the reduction of carbon and climate change impacts of daily activities and also the role of waste prevention and zero waste policies as a driver for change.

National Level Policy Drivers

Policy Document	Securing the Future – UK Government Sustainable Development Strategy, Defra 2005 And Sustainable Development Action Plan 2009-2011
Key Policies/ Objectives	The document contains five key principles: ■ Living Within Environmental Limits; ■ Ensuring a Strong Healthy and Just Society; ■ Achieving a Sustainable Economy; ■ Promoting Good Governance; and ■ Using Sound Science Responsibly. Its four Priorities are: ■ Sustainable consumption and production - towards a one plane economy; ■ Climate change and energy; ■ National resource protection and environmental enhancement; and ■ Sustainable communities. Promotion of resource efficiency and sustainable consumption and production (SCP) are key. The reduction of resource use and wastage in product manufacture is very important. The overall objective for waste policy is the protection of human health and the environment by producing less waste and by using it as a resource wherever possible. The government aims to break the link between economic growth and the environmental impact of waste through more sustainable waste management. Sustainable waste management is defined as reduction, re-use, recycling, composting and using waste as a source of energy. The waste hierarchy is a good guide to the relative environmental benefits of waste management options, combined with life-cycle analysis and SCP.
Targets	Reference to the UK emission targets: ■ to reduce carbon dioxide (CO_2) emissions by 60 per cent by about 2050 with real progress by 2020; ■ the Kyoto Protocol target to reduce UK GHG emissions by 12.5 per cent below base year levels over the period 2008-12; and ■ the national goal to reduce CO_2 emissions by 20 per cent below 1990 levels by 2010.
Key Document Themes	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Policy Document	Waste Strategy for England 2007
Key Policies/ Objectives	WS2007 sets out five key objectives: ■ to decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and reuse; ■ to meet and exceed the Landfill Directive diversion targets for BMW in 2010, 2013 and 2020; ■ to increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste; ■ to secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and ■ to get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies. There are a range of other measures proposed, including: ■ setting new national targets for the reduction of commercial and industrial waste being sent to landfill; ■ providing incentives to encourage activities higher up the waste hierarchy including increasing the landfill tax escalator (see Section 3.4.1) and potentially removing the ban on local authorities introducing household financial incentives for waste reduction and recycling; ■ targeting paper, food, glass, aluminium, wood, plastic and textiles as key materials to be diverted from landfill; ■ implementing product policies that increase resource efficiency and the ability to reuse materials and reduce the quantities of waste produced; ■ encouraging a variety of energy-recovery technologies (including anaerobic digestion) resulting in 25% of municipal waste being managed through energy-from-waste facilities by 2020; ■ strengthening the ability of local authorities in two-tier areas to work together and encouraging partnership working between local authorities; ■ promoting cultural change in how we deal with our waste through campaigns aimed at individuals and businesses (e.g. promotion of third sector expertise, providing recycling bins in public places; and ■ Government taking action to reduce its own waste. The challenge of the strategy is 'One Planet Living'- using the planet's resources within the limits of its eco system (current estimates equivalent to 3 planet living in the UK). This can be achieved through reducing use of natural resources, recycling materials and recovering energy from those we do use. The strategy highlights that what we do about waste impacts on: ■ Climate change; ■ Resource efficiency; ■ Sustainable consumption and production; and has a global environmental impact.
Targets	Annual GHG emissions: ■ A net reduction of at least 10 million tonnes of CO_2 equivalent per year by 2020 A reduction in the amount of household waste not reused, recycled or composted to: ■ 15.8Mt in 2010 (29% reduction compared to the 22.2Mt landfilled in 2000); ■ 14.3Mt in 2015 (35% reduction compared to 2000); and

	■ 12.2Mt in 2020 (45% reduction compared to 2000). This is equivalent to a fall of 59% per person (from 450kg per person in 2000 to 225kg in 2020). Higher national targets for recovery, recycling and composting: ■ recycling and composting of household waste – at least 40% by 2010, 45% by 2015 and 50% by 2020; and ■ recovery of municipal waste – 53% by 2010, 67% by 2015 and 75% by 2020. Commercial and industrial waste landfilled: by 2010 an expected 20% reduction from 2004 levels.
Key Document Themes	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 20, 21, 23, 24, 25, 27, 31

Policy Document	Low Carbon Transition Plan (LCTP), National Strategy for Climate and Energy, 2009
Key Policies/ Objectives	The Climate Change Act 2008 is the principal driver for action on climate change. It introduced the legally binding target for GHG reduction which is to cut emissions by 80% by 2050 and a set of five year carbon budgets to 2022 to keep the UK on track to deliver the target. The Act also introduced a carbon budgeting systems which caps GHG emission from a range of sectors over 5 year periods. The waste sector is included. The LCTP sets out the UK transition plan for becoming a low carbon country; cutting emissions, maintaining secure energy supplies, maximising economic opportunities and protecting the most vulnerable. The LCTP also sets out how the five year carbon budgets will be met. The key areas of focus include power and heavy industry, transport, homes and communities, workplaces and jobs, farming, land and waste. All Government Departments have been allocated their own carbon budget and must produce own plan for meeting the budget. A key way in which the UK will achieve its carbon budgets is though a commitment to get 15% of all energy – for electricity, heat and transport – from renewable sources by 2020. This is set out in an associated Renewable Energy Strategy. In the waste sector activity is primarily around reducing the amount of waste sent to landfills and better capture of landfill emissions. There is also support for anaerobic digestion. The overall goals of the Plan are to: ■ Drive decarbonisation, by providing a carbon price, supporting the new technologies and infrastructure we need and helping households and businesses overcome barriers to low carbon choices; ■ Secure energy supplies by ensuring a supportive climate for the substantial new investment needed to bring forward low carbon infrastructure, and maximise the economic production of oil and gas from the North Sea to help secure the continued fossil fuel supplies needed during the transition; ■ Help UK low carbon and energy businesses to grow; ■ Protect consumers, in particular the most vulnerable; ■ Help businesses manage the costs of tackling climate change and help everyone adapt to climate impacts; and

	Protect the environment by making the most of measures which bring wider environmental benefits and minimising impacts where they are unavoidable.
Targets	The Act has targets to reduce greenhouse gas emissions by 34% by 2020 and by 80% by 2050. UK will keep track through a set of five-year "carbon budgets" to 2022. The first three budgets cover the period to 2022: Reduction in GHG emissions below 1990 levels: ■ 2008-12 – 22% reduction; ■ 2013-17 – 28% reduction; ■ 2018-22 – 34% reduction. Other sector specific targets include – Sourcing 40% of electricity from low carbon sources by 2020, including producing around 30% of our electricity from renewable by 2020, transforming transport by cutting average CO_2 emissions from new cars across the EU by 40% on 2007 levels ■ The plan to 2020 will cut emissions from farming and waste by 6% on 2008 levels. Cut England's yearly waste emissions by the equivalent of one million tonnes of CO_2 by 2020, on top of reductions already predicted. This will reduce UK waste emissions to 13% below today's levels. Energy and Transport targets and policies set out in Renewable Energy Strategy and Low Carbon Transport Strategy.
Key Document Themes	1, 2, 3, 4, 5, 9, 18, 19, 21

Policy Document	Low Carbon Industrial Strategy, 2009 Department for Business, Innovation and Skills and Department for Energy and Climate Change
Key Policies/ Objectives	The core strategy objective is to ensure that business and workers in Britain are equipped to maximise the economic opportunities and minimise the costs of moving to a low carbon economy. The programme of government action is set out in the document. There are three principles for low carbon business: ■ A long term strategic approach which sets a stable framework for business and consumers; ■ A pragmatic approach to the role of markets and government in making a quick transition at the same time as increasing the costs of carbon, encouraging low carbon innovation, remove market barriers to low carbon technologies; and ■ Government is responsible for ensuring that companies and people are equipped to compete. The strategy sets out where the opportunities are greatest and the action that will be taken to address market failures and barriers for British firms. The sectors identified are those with greatest potential for Britain to take a leading role. This strategy is based around four key areas of activity: ■ Energy efficiency to save businesses, consumers and the taxpayer money; ■ Energy infrastructure, focusing on the trinity of low carbon generation sources, renewables, nuclear power and clean coal, supported by a "smart" grid; ■ Making Britain a global leader in the development and production of low carbon

	vehicles; and ■ Making Britain the best place to locate and develop a low carbon business. Since March the government has invested in the areas of energy efficiency (£375 million), energy infrastructure (£90 million), low carbon vehicles (£400 million), making Britain the best place to develop low carbon business (£405 million). This strategy brings all these strands together into one document. Britain's waste management infrastructure will also play a critical role in enabling the shift to a more resource efficient society and economy. The Government has made £2 billion in new funding available over the period 2008-11, to support local authority waste infrastructure.
Targets	Britain's climate change target: reduce GHG emissions by at least 80% below 1990 levels by 2050
Key Document Themes	2, 3, 4, 7, 19

Policy Document	Low Carbon Transport: A Greener Future, Department for Transport, July 2009
Key Policies/ Objectives	This strategy is a key component in the Low Carbon Transition Plan and sets out how the sector targets will be met. All forms of transport will be considered covering cars, vans, road freight, buses, rail, aviation and shipping. Sustainable biofuels is a key part of the strategy. Activity will focus on: ■ Providing low carbon public transport; ■ Promoting the integration of transport modes; ■ Promoting other sustainable modes of transport, e.g. cycling; ■ Supporting Local Transport Plan development; ■ Providing better information to help people make transport choices; ■ Reduce CO_2 from business travel and the distribution of goods. The strategy aims to achieve an additional saving of 17.7 million tonnes of CO_2 in 2020, equating to 85 million tonnes of CO_2 over the third carbon budget period from 2018-2022. Some specific measures include: ■ Supporting a shift to new technologies and fuels; ■ Promoting lower carbon transport choices; ■ Using market-based measures to encourage a shift to lower carbon transport; ■ Investing up to £30 million over the next two years to deliver several hundred low carbon buses; ■ Demonstrating 340 new electric and lower carbon cars; ■ Putting a cap on emissions from all flights arriving at or leaving from European airports by including them in the EU Emissions Trading System from 2012; ■ Providing help worth about £2,000 to £5,000 per vehicle towards reducing the price of ultra-low carbon cars, from 2011, and up to £30 million to support the installation of electric vehicle charging infrastructure in six or so cities across the UK.
Targets	Central government departments and their agencies to procure new cars that average

	130g CO_2/km by 2011. Set a new target later 2010. Targets of 130g CO_2/km from 2012, with full compliance by 2015, and 95g CO_2/km by 2020 have been set. The plan to 2020 will cut emissions from transport by 14% on 2008 levels and secure the oil supplies needed during the transition to a low carbon country. Setting targets for government departments and their agencies to procure new cars for administrative purposes that meet the EU standard for 2015 in 2011. Cutting average carbon dioxide emissions from new cars across the EU to 95g/km by 2020, a 40% reduction from 2007 levels. Committing to source 10% of UK transport energy from sustainable renewable sources by 2020. Investing £140 million in promoting cycling in England in 2008-11, and a new £5 million investment in improving cycle storage at rail stations. Transforming transport by cutting average carbon dioxide emissions from new cars across the EU by 40% on 2007 levels, supporting the largest demonstration project in the world for new electric cars, and sourcing 10% of UK transport energy from sustainable renewable sources by 2020. Launching a competition for the country's first Sustainable Travel City, building on projects in towns which saw reported car trips fall by 9%, walking increase by 14% and cycling increase by 12%. Introducing a target to limit UK aviation emissions to below 2005 levels by 2050.
Key Document Themes	2, 3, 4, 21

Policy Document	UK Renewable Energy Strategy, 2009
Key Policies/ Objectives	The strategy sets out how the use of renewable electricity, heat and transport will be achieved in the UK and also how the legally binding target of ensuring that 15% of energy comes from renewable sources by 2020 will be achieved. The strategy is related to the Low Carbon Transition Plan. Mechanisms to achieve this will include: ■ Expand and extend the Renewables Obligation for large scale renewable generation (current end date 2027, expand to 2037); ■ Amend or replace the Renewable Transport Fuel Obligation to increase the use of biofuels; ■ Introduce new Renewable Heat Incentive and Feed in Tariffs to provide payments for renewable heat and small scale electricity; ■ Increase investment in emerging technologies and pursue new sources of supply; ■ Put in place the mechanisms to provide financial support for renewable electricity and heat worth around £30 billion between now and 2020; ■ Create new opportunities for individuals, communities and business to harness renewable energy. ■ Some specific activities include: ■ Fund up to four demonstrations of capturing and storing emissions from coal power stations; ■ Facilitate the building of new nuclear power stations;

	■ Piloting "pay as you save" ways to help people make their whole house greener – the savings made on energy bills will be used to repay the upfront costs; ■ Introducing clean energy cash-back schemes; ■ Opening a competition for 15 towns, cities and villages to be at the forefront of pioneering green innovation; ■ Helping the most vulnerable by creating mandated social price support, piloting a community-based approach to delivering green homes in low income areas (90,000 homes), increasing level of Warm Front grants; ■ Helping make the UK a centre of green industry by supporting the development and use of clean technologies, including up to £120 million investment in offshore wind and an additional £60 million; ■ Producing a longer term roadmap for the transition to a low carbon UK for the period 2020 to 2050 by spring 2010 and a vision for a smart grid; ■ Secure energy supplies by ensuring a supportive climate for the substantial new investment needed to bring forward low carbon infrastructure, and maximise the economic production of oil and gas from the North Sea; ■ Help businesses manage the costs of tackling climate change and help everyone adapt to climate impacts; ■ Launching a new personal carbon challenge with rewards and incentives for saving energy; ■ More proactive services from the Energy Savings Trust; ■ Consultation on requiring energy performance ratings for rented property to be put on property advertisements; ■ Regional strategies: regions to set targets for renewable energy capacity in line with national targets, or better where possible.
Targets	The key strategy target is to ensure that 15% of energy comes from renewable sources by 2020. This equates to almost a seven fold increase in the share of renewable in a decade, from about 2.25% in 2008. This target will be delivered by a balance of fuels and technologies (e.g. on and offshore wind, hydro, sustainable bioenergy (biomass, biogas, solar and heat pumps), marine sources and small scale technologies)
Key Document Themes	3, 4, 5, 6, 18, 19, 20

Policy Document	Towards Zero Waste – One Wales One Planet, A Consultation Strategy for Wales, April 2009
Key Policies/ Objectives	Long term aim of zero waste by 2050 – by reducing the ecological footprint of Wales to 'one Wales: one planet' levels by 2050. Waste reduction is the key to achieving this. A medium term aim of a high recycling society by 2025, which requires a 70% recycling rate across all sectors by 2025 and supported by closed loop recycling. The strategy defines zero waste as *"A concept based on the understanding that all the materials we use are resources and only become waste as a result of poor management, bad design and out-dated attitudes to sorting and disposal. It is therefore a way of thinking - a path to travel that defines waste as something that is not acceptable. It sets a new paradigm with a target of a 100% resource-efficient economy where material flows are cyclical and everything is reused or recycled harmlessly back into society or nature. 'Waste' as we think of it today will cease to exist because everything will be viewed as a resource."*

	Other key ideas include: ■ Develop 'closed loop recycling' systems (used directly in Welsh manufacturing processes). 'Joined up' recycling infrastructure and market development for recyclates; ■ Develop opportunities for social enterprise; ■ Focus on priority materials - food, paper and card, wood, metals and plastic; ■ Work closely with the UK and EU Governments on ways to ensure producers take more responsibility for products and their product design ■ Make producers more responsible for waste they produce, or cause others to produce; ■ Generating renewable energy from biowastes; ■ Phasing out landfill sites and developing high efficiency energy from waste plants; ■ Municipal waste sector plan will encourage reuse through by supporting and promoting existing schemes and improving collection methods for larger reusable items; ■ Sustainable public sector procurement and working with Green Jobs Strategy; ■ Grants provided to businesses and other organisations need to include sustainable waste management conditions; and ■ Voluntary agreements and targets with industry sectors are important to achieve outcomes. Through proposed sector plans targets will be set to reduce growth in waste streams in line with business as usual trends. Also opportunities to promote zero waste strategies and develop sector specific reuse targets.
Targets	Max level of residual household waste per person per annum: ■ 295 kg by 2013; ■ 258 kg by 2016; ■ 210 kg by 2020; ■ 150 kg by 2025; and Zero waste by 2050 Recycling target rate across all sectors: ■ 40% by 2010; ■ 52% by 2013; ■ 58% by 2016; ■ 64% by 2020; and 0% by 2025 A minimum of 80% of reuse/recycling and composting must come from source separation from now until 2025. Maximum level to landfill: 10% by 2020 and 5% by 2025. Maximum level of energy from waste: 42% by 2016, 36% by 2020 and 305 by 2025. Target for the minimum level of reuse 1% by 2025. Ecological footprint reduction targets measured through waste reduction activities. Focus on the materials with a higher impact will reduce the ecological footprint of waste more quickly. Ecological footprint targets: ■ Option 1 based on an absolute reduction of 1.8% a year; or ■ Option 2 based on 3.2% reduction based on the previous year's waste total. The consultation relates to two different recycling rates for commercial waste. Highest feasible recycling rate of 77% or a 70% recycling rate.
Key Document Themes	1, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 16 ,17, 18, 19, 20, 29, 31

Policy Document	Consultation on Scotland's Zero Waste Plan
Key Policies/ Objectives	The vision for Scotland is based around delivering Zero Waste: ■ Promotes sustainable design; ■ Prevents waste; ■ Has high levels of recycling and composting; ■ Reduces landfill to a minimum; and ■ Has effective and coordinated delivery. Waste Prevention: ■ All businesses are aware of and participate in resource efficiency; ■ Every person is aware of and participates in waste prevention; ■ The amount of waste falls and continues to fall; ■ Government and the public sector lead by example on resource efficiency and waste prevention. Recycling and Composting: ■ High recycling at home at work and in public places; ■ Has more recyclate reprocessed in Scotland; ■ Business and householders recycle a wider range of materials and dramatically recued the amount sent to landfill; ■ Produce high quality recyclate with sustainable end use markets; ■ Business and householders use recylate or products containing recycled content. Other Recovery: ■ Only uses energy from waste after all efforts have been made to prevent waste, re-use material and recycle; ■ Has high efficiency energy from waste facilities (including head recovery where possible); ■ Has facilities taking single stream material where possible, rather than mixed waste. Disposal: ■ Landfill reduced to a minimum. ■ Zero Waste for the Scottish Strategy means "eliminating the unnecessary use of raw material; sustainable design;, resource efficiency and waste prevention; re0using products where possible; and recovering value from products when they reach the end of their lives either through recycling, composting or energy recovery in accordance with the waste hierarchy. Zero waste is about how we can reduce unnecessary consumption and improve recycling rates....and is part of the wider picture of environmental sustainability."
Targets	Recycling of municipal waste targets: • 40% by 2010; • 50% by 2013; • 60% by 2020; and • 70% by 2025. Landfill Directive target: ■ Reduce BMW landfill to 1.32 million tonnes by 2010;

	■ 880 thousand tonnes by 2013; ■ 620 thousand tonnes by 2020. No growth in the amount of municipal waste produced from 2010. No more than 25% of municipal waste going to energy from waste facilities. No more than 5% of waste being landfilled by 2025. Separate collections for at least paper, metals, plastic and glass where environmentally and economically practicable by 2015. Proposed target – reduce waste by 1% each year. Proposed target - reduce the amount of commercial and industrial waste sent to landfill by 150,000 tonnes a year. By 2020 increase by 50% of weight the reuse and recycling of paper, metal, plastic glass from households and possibly other sources similar in nature of materials.
Key Document Themes	1, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 16 ,17, 18

Policy Document	EU Waste Framework Directive (2008/98/EC)
Key Policies/ Objectives	The old Waste Framework Directive set legal requirements across the EU including the need for waste facility permitting and national waste strategies and the need to use the European Waste catalogue to help track wastes. The Waste Framework Directive was revised in 2008 and is far more wide reaching than its predecessor. The amended Directive sets the EU's first waste recycling targets for household and non-hazardous construction and demolition waste. It also enshrines the five-step waste hierarchy into EU law and introduces a definition of by-products that will allow some materials currently defined as waste to become non-wastes. The Directive will require countries to take "necessary measures designed to achieve" a target to recycle 50% of waste from households by 2020. This is in line with the English waste strategy, while Scotland and Wales have recently proposed higher targets for 2020. The wording allows waste "from other origins… similar to waste from households" to count towards the target, suggesting that trade waste could be used to meet the target. By 2015 member states must set up separate collections for at least paper, metals, plastics and glass provided they are technically, environmentally and economically feasible. Member states must also "take measures to encourage" the separate collection of biowaste. The Directive's wording with respect to collections of recyclates implies that co-mingled collections would not be allowed to continue post-2015. Article 11(1) of the Directive states that member states shall establish separate collections for paper, metal, plastic and glass by 2015 "where technically, environmentally and economically practical and appropriate" to "promote high-quality recycling". DEFRA has stated that while the UK intends to encourage separate collections, it will allow co-mingled collections to continue after 2015 "where this is the most effective means of increasing recycling rates in the local circumstance." The UK has since received written confirmation from the European Commission that it has "agreed with the UK's interpretation of these provisions, while making clear that in the final analysis this was a matter for the European Court of Justice."

	There is also a target for member states to reuse, recycle or recover 70% of non-hazardous construction and demolition waste by 2020. But as with the recycling target, the obligation on member states is "to take necessary measures designed to achieve" the target. No target for commercial and industrial waste was agreed. If these targets are not met by 2020, the Commission can take member states to court for non-compliance. No waste prevention targets were set. Instead, the Directive obliges member states to establish waste prevention programmes within five years of its entry into force. The Commission is required to set "waste prevention and decoupling objectives for 2020" in 2014, but only if these are deemed "appropriate". There is also a requirement for the Commission to draw up eco-design policies by 2014 aimed at promoting recyclable and reusable products and limiting waste. Other measures in the directive include: ■ Incineration: The Directive will "re-brand" incinerators meeting certain efficiency thresholds as methods of recovery rather than disposal. ■ Definition of waste: The Directive will include a definition of "by-products" that will place some materials outside waste controls if certain criteria are met. There is a provision committing the Commission to develop "end-of-waste" criteria for materials such as aggregates, paper, glass, metal, tyres and textiles. ■ Producer responsibility: The concept of extended producer responsibility was also introduced into the Directive for the first time, allowing member states to make manufacturers, importers or retailers of products responsible for the costs of their treatment or disposal. The Waste Framework Directive should be transposed into national legislation by 12th December 2010. Defra commenced a consultation on the revisions to the Directive in September 2009 and consultation responses were published in March 2010.
Targets	Recycle a minimum of 50% of waste from households by 2020 Re-use, recycle or recover 70% of non-hazardous construction and demolition waste by 2020. The obligation for both targets is to take the necessary measures designed to achieve these targets. No targets for commercial and industrial waste recycling or waste prevention were agreed.
Key Document Themes	10, 11, 15, 16, 17,

2.3. Regional Policy and Legislative Drivers

The documents reviewed at a Regional and Merseyside level again include documents relating to waste strategy, community strategies and carbon strategies.

- Joint Municipal Waste Management Strategy for Merseyside, 2008;
- Municipal Waste Management Strategy for Halton, 2008;
- The Updated Regional Waste Strategy for England's Northwest, 4NW, 2010;
- Sustainable Consumption and Production Plan for England's North West 2010-2012;
- North West Climate Change Action Plan 2010;
- The North West of England Plan Regional Spatial Strategy to 2021
- RS2010 Regional Strategy for England's Northwest, Part 1 Consultation;
- Liverpool City Region Multi Area Agreement (MAA) 2009;
- Liverpool City Region Mini-Stern Review 2009;
- Sustainable Community Strategies and Local Area Agreements (LAAs);
- Local Carbon Strategies.

Regional policies tend to reflect more local concerns such as developing innovation, leading by example (as public sector organisations), reducing transport impacts, self sufficiency and proximity and ensuring that local communities are sustainable economically and from a waste management perspective.

The review of local plans such as sustainable community and climate change strategies highlights the increasing work being undertaken that joins up the environmental and climate change impacts of social and economic activities and that reducing the impacts of waste management is closely linked into this.

Table 2: Regional and Merseyside Policy Documents

Policy Document	Joint Municipal Waste Management Strategy for Merseyside (JMWMS), Headline Strategy 2008
Key Aims, Objectives and Policies	Aim: ■ To improve the sustainability of municipal waste produced on Merseyside using the waste hierarch; ■ To continuously improve the services we provide in terms of efficiency, effectiveness and economy. Objective: ■ To provide services and facilities which directly contribute to the implementation of the JMWMS; ■ To optimise waste REDUCTION; ■ To optimise waste RE-USE; where reduction is not possible ■ To optimise waste RECYCLING and COMPOSTING where re-use is not possible; ■ To optimise waste RECOVERY where actions higher up the waste hierarchy are not practicable; ■ To landfill waste only where actions higher up the waste hierarchy are not possible; ■ MWDA to lead in the development of a JMWMS for Merseyside; ■ To deliver waste services to the required performance levels. Work together to: ■ Deliver sustainable waste management; ■ Increase resource efficiency; ■ Reduce the carbon impact of waste management; and ■ Deliver high standard of service. The strategy also contains 29 key recommendations for action in relation to: ■ Working together – as a Partnership, with Stakeholders, including community groups; ■ Produce a Joint Communication Strategy; ■ Develop an Education and Awareness plan to support the Communication Plan; ■ Enforcement will support the delivery of the strategy, e.g. at Household Waste Recycling Centres (HWRCs) and develop an action plan for enforcement; ■ Wider wastes to be addressed and regional self sufficiency considered; ■ Procurement of new waste infrastructure; ■ Improve recycling performance by the separate collection of dry recyclable waste, and biodegradable waste.
Targets	To reduce municipal waste arising in Merseyside through a comprehensive innovative and sustained programme of waste prevention activities.
Key Document Themes	1, 3, 7, 9, 26, 10, 11, 16, 17, 23, 24, 25, 27, 29, 30

Policy Document	JMWMS for Merseyside Waste Prevention Strategy
Key Aims, Objectives and Policies	▪ The MHWP to work together to ensure that waste prevention activities compliment and support delivery of the JMWMS; ▪ Develop partnerships with public, private, and third sector organisations to support the promotion and delivery of waste prevention; ▪ Increase understanding of residents and businesses of the need to prevent the generation of waste; and ▪ Deliver a range of waste prevention activities that will generate behavioural change amongst residents and businesses.
Targets	Limit municipal waste growth to +0.4% per year by 2010, to +0.2% per year by 2015 and to 0% per year by 2020. A wide range of targets and actions are set linked to various waste prevention activity such as composting and junk mail.
Key Document Themes	11, 12, 16, 25, 27

Policy Document	Municipal Waste Management Strategy for Halton, 2008

Key Aims, Objectives and Policies	The main aim of the strategy is for Halton to provide a framework for the management and planning for its waste services and achieve the following objectives:
	▪ Reduce landfill in line with European and UK Legislation;
	▪ Maximise recycling and recovery of waste;
	▪ Increase public awareness on waste issues;
	▪ Strive for best value in all aspects of waste management; and
	▪ Manage waste in a way that takes account of Haltons six strategic priorities:
	  ▪ A Healthy Halton;
	  ▪ Haltons Urban Renewal;
	  ▪ Employment Learning & Skills in Halton;
	  ▪ Children and Young People in Halton;
	  ▪ A Safer Halton;
	  ▪ Corporate Effectiveness and Efficient Service Delivery.
	Key Themes
	Working Together as the Local Strategic Partnership to deliver the Community Strategy and Haltons' Urban Renewal. Relevant issues for waste are:
	▪ Improving environmental assets and how the borough looks;
	▪ Minimising waste /increasing recycling/brining efficiencies in waste disposal; and
	▪ Planning services efficiently.
	To also work with the regional stakeholders, Merseyside Partners, local community groups in Halton.
	Wider Waste – provide help and support to business to improve management of their waste.
	Responsible waste management is important – enforcement activity will focus on illegal

	activity such as fly tipping, littering.
Targets	30% of household waste recycled or composted by 2010 and at least 40% by 2020. To ensure 100% of households have kerbside collections for at least two recyclables by 2010, (It is planned that all households will receive a multi-material kerbside recycling collection, including plastic bottles, cans, glass bottles and jars, and card (in addition to paper) by 2010). Maintain a 60% recycling and composting rate at the HRWCs. Awareness raising campaign delivered to all residents during 2008-2010. Limit municipal waste growth to 1% per year by 2010, to 0.75% per year by 2015 and to 0% per year by 2020. A wide range of targets are set linked to various topics such as composting and junk mail.
Key Document Themes	6, 7, 32, 11, 16, 17, 24, 25, 33

Policy Document	North West Regional Waste Strategy, Draft Updated, Jan 2010
Key Aims, Objectives and Policies	The key aim is: ■ To contribute to sustainable development in the North West by supporting waste management systems that reduce waste generation, lessen the environmental impacts of waste production, improve resource efficiency, stimulate investment and maximise economic opportunities arising from waste management. Objectives relate to ensuring that waste management is developed in line with sustainable development principles, the low carbon agenda and integrated waste management that makes a maximum contribution to reducing environmental impacts at acceptable cost. This is achieved by: ■ Preventing and avoiding the amount of waste produced in the region; ■ Reducing waste disposed to landfill; ■ Maximising reuse of waste products; ■ Increasing the proportion of recycling and composting of waste; ■ Recovering value (in the form of energy) from waste not recycled; ■ Provision of treatment and disposal capacity; ■ Maintaining sufficient landfill capacity for final residues; ■ Providing a clear framework for stakeholders; ■ Delivering waste planning policy in the north west; ■ Optimising opportunities for north west business from sustainable waste management; ■ Ensure that the strategy is clear, transparent and informative; and Ensure sufficient flexibility in the strategy to incorporate change. Key Messages: ■ Sustainable Consumption and Production is central to the strategy and growth for the waste industry in the north west; ■ The North West Sustainable Consumption and Production Plan is central to this ■ There is a need to maximise value from C&I and C&D resources in the region; ■ Markets must be developed to support the use of waste as a resource; ■ Without markets there is a risk of not meeting LATS diverson, this will be achieved

	by working together. Waste will be a fuel source in meeting the regions energy needs; ■ Reducing waste to landfill is the start of market development work. Sector specific regional targets for this will be required; ■ Integration of waste facilities into other types of development is crucial, e.g. provision of storage containers in new residential and commercial developments, use of recyclable and renewable construction materials in developments; ■ High levels of skill are required by the industry to support change; ■ Sustainable Procurement is essential along with education of and communication with communities and stakeholders; ■ Effective local solutions are important as well as engaging with the community sector and effective waste partnerships. The above messages are accompanied by 19 Policy Statements: 1- Regular review of MWMS; 2- Preparation of Development Plan Documents(DPDs); 3- Waste prevention and zero growth target; 4- Encourage Waste Reuse and Remanufacturing 5- Targets for recycling and composting of household waste; 6- Encourage the separate collection and processing of biodegradable waste; 7- Commercial and Industrial waste recycling targets; 8- Targets to recover value from municipal waste; 9- Target to recover value from C&I waste; 10- Maintain regional landfill capacity; 11- Use of recycled C&D material in Construction projects; 12- Market development in secondary materials markets is important; 13- Public Sector exemplar status in sustainable procurement; 14- Facilities for segregation of recyclable materials should be sited following the proximity principle; 15- WDAs should meet their waste needs within their own boundaries and form partnerships with neighbouring authorities where necessary; 16- Future reprocessing and recycling capacity should be developed to meet capacity gaps; 17- The strategy is supportive of integrated waste processing parks; 18- The strategy supports the development of new waste treatment technologies; 19- Promotes the role of 4NW in the delivery of the strategy.
Targets	■ Achieve a year on year target of 0% growth in waste for all waste streams ■ Recycle and or compost 40% of household waste by 2010, 45% by 2015 and 55% by 2020 ■ Recycle 55% of all commercial and industrial waste by 2020 ■ Recover value from 45% of MSW by 2010, 67% by 2015 and 75% by 2020 ■ Recover value (including recycling) from at least 70% of all C&I wastes by 2020
Key Document Themes	1-4, 5,9-13, 15, 16, 17, 19, 20, 23, 24, 28, 29, 30, 31

Policy Document	Sustainable Consumption and Production Plan for the North West 2010-2012
Key Aims, Objectives and Policies	Vision for 2020 – To achieve a more sustainable, resource efficient, low carbon north west by 2020 through continuous economic and social progress that makes best use of resources to meet the needs and aspirations of the north west for a better quality of life. Five Key Outcomes: ■ Transformation of resources use with the region consuming sustainably – focus on food, chemicals, construction and water; ■ The public sector leading the way – transform the use of resources and purchase resource efficient, low carbon products; ■ Business are sustainable and provide resource efficient, low carbon products; ■ Waste, when unavoidably produced is seen as a valuable resource – zero waste sent to landfill and commercial recycling rates improved; ■ North West Low Carbon and Environmental Goods and Services sector capitalising on growth opportunities in SCP Each of the five outcomes discussed have related actions to ensure delivery. Maximising Waste as a Resource: The waste private and public sector should work together towards zero waste to landfill: ■ That improves infrastructure for all the region's waste ■ Promotes best practice in waste prevention; ■ Prioritises waste re-use/treatment options in terms of resource value, resource impact and embodied carbon; ■ Reduces embodied energy and resource loss by recycling more paper, textiles, glass, tyres, plastics, cathode ray tubes, WEEE; ■ Increase recycling rates from public sector and SMEs. Key Actions; ■ Delivery of Zero Waste – that includes low resource, low carbon infrastructure for the NW's waste, promote exemplar practice in cost efficient waste prevention and management, evolve Multi Area Agreements for waste prevention; ■ Increase commercial and industrial waste arising – set targets for C&I recycling, identify collection/infrastructure needs/build capacity, involve public, third sector organisations and private organisations. Indicators of Success: ■ Reduction in tonnes of CO2 emissions per GVA against a 2006 baseline; Reduction in waste produced per unit of GVA against a 2006 baseline.
Targets	Support the RWS to recycle 50% of commercial and industrial waste by 2020 Recover value from 70% of all commercial and industrial waste by 2020 2012 Targets: ■ NWDA Recycling Rate of 80%, green travel plan and sustainable procurement plan; ■ Environment Agency zero waste to landfill, 80% of office waste recycled and a sustainable procurement policy; ■ GONW will have made progress towards a target of 30% reduction in carbon budget by 2020, reduced waste arising by 25%, recycling 75of waste and reducing water use by 25%;

	■ 4NW to have a green travel policy by 2012.
Key Document Themes	1, 2, 3, 4, 5, 7, 9, 11, 13, 15, 16,17, 30

Policy Document	Climate Change Action Plan for England's Northwest 2010-2012 'Rising to the Challenge'
Key Aims, Objectives and Policies	VISION – A low carbon and well adapted North West by 2020. In the short term, the focus is on reducing GHG emissions by influencing attitude and behaviour change to increase energy efficiency, reduce energy demand and promote low carbon technologies, whilst also putting in place mechanisms to adapt to future climate change. The Action Plan focuses on the ability of regional organisations to enable, encourage and engage individuals, groups, communities, partnerships and businesses in the move towards a low-carbon and well adapted region, recognising that regional organisations must exemplify good practice and catalyse action (key behaviour in bold). A table of actions are allocated to key organisations in the North West, including the EA, NWDA, Envirolink, etc.
Key Document Themes	3, 4, 19, 30

Policy Document	The North West of England Plan Regional Spatial Strategy to 2021
Key Aims, Objectives and Policies	Chapter 9 relates to minerals, waste and energy management Application of waste management principles should follow the waste hierarchy. All development should: ■ Promote the minimisation of waste in site development such as the separation of different waste materials for recycling and reuse; ■ Maximise the use of recycled materials in construction and encourage developers and contractors to specify these materials wherever possible; ■ Provide infrastructure that facilitates and meet the needs of local residents, business and industry for segregated storage, collection and recycling of waste materials; ■ Incorporate sufficient space to separate and store segregated waste streams waste and enable kerbside collection of materials; ■ Adopt best practice techniques to prevent and minimise waste during the design and construction phases of development; and Promote the use of site waste management plans.
Key Document Themes	1, 11, 12, 17, 19, 24, 29

Policy Document	RS2010 Regional Strategy for England's Northwest , Part 1 Consultation (closed 26th February 2010)
Key Aims, Objectives and Policies	The Vision for the strategy is to ensure that - "*The quality of life for the people of the Northwest will be excellent and the region will become more prosperous, more equitable and produce less carbon: by 2030 it will be a better place to live, learn, work, visit, and invest".* The RS2010 is being prepared in two parts; Part 1 - the high level strategic framework Part 2 – Detailed supporting policies A draft Part proposed high level strategic priorities and where working together can maximise opportunities and address challenges. Four key strands for the document are proposed: ■ Capitalise on the opportunities of moving to a low carbon economy and address climate change; ■ Build our sources of international competitive advantage and regional distinctiveness; ■ Release the potential of our people and tackle poverty; ■ Ensure the right housing and infrastructure for sustainable growth.
Key Document Themes	3, 4, 6, 29, 32

Policy Document	Liverpool City Region (LCR) Mini-Stern Review 2009

Key Aims, Objectives and Policies	The review has considered and costed climate change as an economic problem. Key issues arising from the review are as follows;
	■ The economy faces a major challenge to become a low carbon economy.
	■ The cost to business and the public sector of not adjusting could be approximately 1% of the area's GVA. There are 90,000 jobs that could be significantly affected.
	■ Also a potential to exploit 6-7,000 new jobs in energy and environmental technology and the service sector.
	■ Strong leadership is required.
	■ Significant change to the structure and organisation of economic activity is required.
	■ LCR has a CO_2 footprint of 7.6 tonnes per head of population, this is 8.6 for the north west and 8.7 for the UK. Related to lower economic activity and high public transport use.
	■ The 11.2 Million tonnes of CO_2 in 2006; one half produced by business, a fifth by transport and a third by domestic use of power and fuel.
	■ Opportunities relate to;
	  ■ Existing natural assets (tidal and on shore/off shore wind)
	  ■ Renewable energy generation (energy from waste and biomass potential)
	  ■ Environmental technologies and services
	  ■ Local R&D expertise

Key Document Themes	3, 4, 18, 20

Policy Document	Liverpool City Region Multi-Area Agreement (MAA) 2009
Key Aims, Objectives and Policies	A number of key performance indicators are identified relating to the key aims. The vision for the LCR is to establish the region as a thriving international city region by 2030. The aims are to: ■ Maximise potential; ■ Develop our cultural offer; ■ Tackle deprivation; ■ Improve our housing; ■ Improve transport; ■ Maximise connectivity: multi-modal freight and logistics infrastructure including Liverpool Super Port; Become a low carbon economy; including becoming energy self sufficiency and net energy exporter. To become the biggest low carbon goods and services city region.
Key Document Themes	3, 4, 21, 28

Policy Document	Making it Happen in Halton – A Community Strategy for a Sustainable Halton
Key Aims, Objectives and Policies	Halton has six strategic priorities; ■ A Healthy Halton – to create a healthier community and work to promote well being and a positive experience of life with good health, not simply the absence of disease and offer opportunities for people to take responsibility for their health with the necessary support available. ■ Haltons Urban Renewal – to transform the urban fabric and infrastructure, to develop exciting places and spaces and to create a vibrant and accessible borough that makes Halton a place where people are proud to live and see a promising future for themselves and their families; ■ Targets around CO_2 reduction per capita related to NI186 ■ Waste recycling target linked to NI192, 34% by 2010/11 ■ Employment Learning & Skills in Halton - to create an economically prosperous borough that encourages investment, enterprise and business growth, and improves the opportunities for learning and development together with the skills and employment prospects of both residents and workforce so that they are able to feel included socially and financially. ■ Children and Young People in Halton – to build stronger, safer communities which are able to support the development and learning of children and young people so they grow up feeling safe, secure, happy and healthy and are ready to by Halton's present and Halton's future. ■ A Safer Halton - to ensure pleasant, safe and secure neighbourhood environments, with attractive, safe surroundings, good quality local amenities, and the ability of people to enjoy life where they live. ■ Corporate Effectiveness and Efficient Service Delivery. A further six cross cutting themes of reducing social exclusion, the impacts of the economic climate, climate change impacts, sustainable development, equality and

	diversity, and population and housing needs. Five Strategic Partnerships have been set up to design and deliver strategies and action plans to deliver these priorities.
Targets	LAA Targets are; NI 191 – 848kg in 09/10, 811kg in 10/11, 799kg in 11/12, and 787kg in 12/13 NI 192 – 31% in 09/10, 34% in 10/11, 35% in 11/12, and 36% in 12/13 NI 193 – 66% in 09/10, 63% in 10/11, 62% in 11/12, and 61% in 12/13
Key Document Themes	3, 6,11,16, 32

Policy Document	A Vision for Sefton, Community Strategy 2006-2011
Key Aims, Objectives and Policies	Our commitment is in 'Creating the right environment for: ■ Children and Young People - to achieve their full potential, with a specific focus on children in the pre-school stages of their life, those who are looked after and 14-19 year olds. ■ Safer, Stronger Communities - safer communities and building stronger communities by increasing the levels of social capital and local guardianship. ■ Healthier Communities and Older People - everyone to have opportunity to maximise their independence, health and life expectancy. ■ Economic Development - reducing unemployment, increasing skills and improving enterprise. ■ Equality and Diversity - understanding and valuing diversity, increasing participation and ensuring equality of opportunity for all Sefton's communities. ■ Improving our Performance - by sharing ideas, identifying different and improved ways of delivering services, which lead to greater efficiency and improved outcomes. Also important are Neighbourhood renewal; and Sustainable development and the cross cutting themes of community cohesion and e-Sefton.
Targets	LAA Targets are; NI 192 – 34% in 09/10, 36% in 10/11 NI 193 – 60% in 09/10, 55% in 10/11
Key Document Themes	6, 16, 32

Policy Document	Sustainable Community Strategy 2008- 2023 Knowsley The Borough of Choice
Key Aims, Objectives and Policies	The vision is for a sustainable and diverse population. By the year 2023, Knowsley will have: ■ Attractive, sustainable neighbourhoods with a wide choice of housing and excellent community facilities; ■ Vibrant and welcoming town centres; ■ Residents and local communities who are able to make positive lifestyle choices; ■ High quality employment areas which help to drive economic growth in the Liverpool City Region; and ■ Narrowed the gap in deprivation levels, both between different parts of the borough and between Knowsley and elsewhere. The key drivers for achieving this change are: ■ Increasing economic activity at all levels; ■ A diverse and prosperous economy; ■ Unlocking the potential and raising aspiration; ■ Raising attainment and skills; ■ A well connected Knowsley; ■ Safer, more cohesive communities; and ■ Improving the offer and quality of place.
Targets	LAA Targets are; NI 192 – 30% in 09/10, 35% in 10/11
Key Document Themes	6, 32

Policy Document	A Sustainable Community Strategy for Wirral; Wirral 2025 – More Equal More Prosperous
Key Aims, Objectives and Policies	The vision is of a more prosperous and equal Wirral, enabling all communities and people to thrive and achieve their full potential. The Strategy plans to deliver: ■ A strong local economy for Wirral; ■ Safer, stronger communities in all parts of the borough; ■ The best possible health and well-being for all families and individuals; ■ Excellent life chances for children and young people; ■ A high quality living and working environment; and ■ Sustainable, appropriate housing for all. It will also involve planning for and taking action to ensure that the increased prosperity resulting from a strong local economy is accessible to all, and to narrow the gap between Wirral's most affluent and most deprived communities in relation to issues such as health, educational attainment and crime. The Strategic Partnership is also committed to: ■ Living within environmental limits, for example in recognising the importance of

	climate change; ■ A strong, cohesive and fair Wirral, for example by continuing to address the health inequalities that characterise the borough; ■ Developing sustainable solutions to tackling our strategic aims, for example by working with partners and the community to develop the right skills; ■ Support continued growth in Wirral; ■ Involving communities in developing strategies and making decisions at the local level; Ensuring that our services are accessible, working together to develop collaborative approaches to delivering services and ensuring that those who need to use them can do so.
Targets	LAA Targets are; NI 191 – 570kg in 09/10, 555kg in 10/11 and 550kg in 11/12 NI 192 – 35.5% in 09/10, 37% in 10/11 and 39% in 11/12 NI 193 – 58% in 09/10, 57% in 10/11
Key Document Themes	6, 11, 16, 32

Policy Document	St Helens Sustainable Community Plan 2008-2018
Key Aims, Objectives and Policies	The Vision is to make St Helens a modern, distinctive, economically prosperous and vibrant Borough. The Objectives are: ■ *Economic Development and Enterprise* - A diverse, modern economy, offering a wide range of job opportunities and releasing the productivity and economic potential of our most deprived local areas and their residents. ■ *Healthier Communities and Older People* - Improve health and wellbeing particularly in priority groups, reduce health inequalities and increase independence. ■ *Communities and Neighbourhoods* - Stronger, more inclusive communities with better opportunities for disadvantaged groups. A healthy, attractive and rich built and natural environment offering quality choices in transport, homes, leisure and sport facilities and a vibrant cultural life. ■ *Safer Communities* - Reduced crime and fear of crime. ■ *Children and Young People* - For our children and young people to be healthy, enjoy their childhood, achieve as young people and succeed as adults, in a community which values and respects them, and supports them as they seek to achieve their aspirations and deliver the promise of their youth. The commitment in the Sustainable Community Plan is followed through in to the Local Area Agreement.
Targets	LAA Targets are; NI 191 – 670kg in 09/10, 660kg in 10/11 and 657kg in 11/12 NI 192 – 32% in 09/10, 34% in 10/11 and 36% in 11/12 NI 193 – 68% in 09/10, 66% in 10/11 and 64% in 11/12
Key Document Themes	6, 11, 16, 32

Policy Document	Liverpool's Sustainable Community Strategy - Liverpool 2024: A thriving international city
Key Aims, Objectives and Policies	The Community Strategy has five key drivers for change; ■ *Competitiveness* - By 2024, Liverpool will be competitive on the world stage with a sustainable business sector and strong knowledge economy, supported by a workforce drawn from citizens who have lifelong learning ambition and competitive levels of aptitude and skills. ■ *Connectivity* - By 2024, Liverpool will be Connected, by high quality transport and communications links to international, national and regional markets, enabling the flow of goods, people and information. ■ *Distinctive Sense of Place* - By 2024, Liverpool will be Distinctive from our overseas competitors, harnessing the diversity and creativity of our people and of our cultural and physical fabric. ■ *Thriving Neighbourhoods* - By 2024, Liverpool will be thriving, with a dynamic third sector and neighbourhoods that are clean, safe and sustainable and that embrace the global challenge of climate change. ■ *Health and Wellbeing* - By 2024, Liverpool will be healthy, with reduced inequalities, improved wellbeing and opportunities for all to live positive independent lives.
Targets	Targets of relevance to waste management in the strategy include: ■ Aim to send less than 1% of residual waste to landfill by 2024 (it also refers to 10% in the climate change strategy) ■ Maintain Liverpool's position above the national score in respect of an environment for a thriving third sector as measured by the Office of the Third Sector ■ Ensure that Liverpool will be in the top quartile UK cities for its ecological footprint ranking by 2024 ■ Target a minimum 35% reduction in the city's carbon emissions LAA Targets are; ■ NI 192 - 30% in 09/10 and 35% in 10/11 ■ NI 193 - 71.9% in 09/10 and 67.7% in 10/11
Key Document Themes	3, 4, 6, 16, 22, 32

Policy Document	City of Liverpool Climate Change Strategic Framework: A Prospectus for Action
Key Aims, Objectives and Policies	The framework was produced by Liverpool First in order to minimise the environmental and climate change impact of activity and is the framework for action in achieving the carbon targets within the Sustainable Communities Strategy (to reduce the city's carbon emissions by 35% by 2024) in line with the Governments target to reduce GHG emissions by 80% by 2050. The Liverpool First Partnership has initially selected NI188 (adapting to climate change) as a priority indicator for the city and Liverpool is one of the first UK cities to agree to developing and implementing a Climate Change Adaptation Framework.
Targets	Proposed Priority Action for the waste sector in this document are: ■ Target net carbon savings from municipal waste management across Merseyside of 100,000 tonnes per annum by 2020; ■ Maximise the installation of renewable resources at waste management sites and facilities; ■ Recycle and compost 44% of household waste on Merseyside by 2020; ■ Reduce household waste to landfill on Merseyside by 90% by 2027; ■ Feedback annually on progress. Responsibility for these actions is with Merseyside Waste Disposal Authority.
Key Document Themes	3,4,9, 11, 12, 20

Policy Document	Towards a Climate Change Strategy and Action Plan for the Knowsley Partnership
Key Aims, Objectives and Policies	A climate change strategy is currently being developed by the Knowsley Partnership and a consultation document was published in December 2009. The proposed Vision is to make Knowsley the borough of choice for low carbon inward investment, working, visiting and living. There are 10 Catalytic Objectives relating to a reduction in CO_2 emissions from efficiency in energy use, waste and water in domestic properties, reduced transport emissions, increased renewable energy generation, reduce emissions from council estates and services, low carbon supply chains.
Targets	NI188 – Adapting to Climate Change is the main indicator with a plan to achieve Level 2 status. Links are made to the NI191 as a measurement of waste reduction.
Key Document Themes	3, 4, 5, 6, 9

Policy Document	Wirral Climate Change Strategy
Key Aims, Objectives and Policies	The strategy is based on four key themes: ■ Awareness (raising); ■ Energy (reduced dependence on fossil fuels); ■ Transport (increase sustainable modes of transport); and ■ Adaptation (identifying impacts of climate change for Wirral).
Targets	The purpose of the strategy is to achieve a 20% reduction in Wirral Council's carbon emissions by 2010.
Key Document Themes	3, 6, 9

Policy Document	St Helen's Climate Change Action Plan, March 2009
Key Aims, Objectives and Policies	The plan is structured around four key themes: Home, Business, Transport and Public and Third Sector. Specific objectives relating to waste management activity include: ■ Providing an efficient waste collection service, encouraging waste minimisation, increasing recycling and diverting waste from landfill. A key action is to implement the JMWMS. ■ Review current operations and minimise CO_2 emissions from operation. Promoting home composting and education on waste through the Eco-schools programme. Ensuring planning applications for large developments include space for community recycling facilities. Target waste reduction, recycling advice at business.
Key Document Themes	3, 4, 6, 9

2.4. Future Legislative and Policy Changes

As the strategy review progresses it will also be important to keep under review a number of proposed changes to legislation and policy at both an EU and national level.

2.4.1. EU Level

At an EU level these particularly include revisions to the Waste Electrical and Electronic Equipment (WEEE) Directive and a proposed Biowaste Directive.

- WEEE Directive - Revisions to the WEEE Directive related to clarifying the regulations and making it easier to enforce and are likely to include more ambitious targets for recycling at both a household and non-household level. Greater priority will be given to re-use and medical devices are included in the scope for the first time. These changes may impact on WEEE collections at HWRCs, bulky waste schemes and

impact on reuse and third sector opportunities as more ambitious targets for WEEE recycling are proposed and set.

- Biowaste - In December 2008, the European Commission published a Green Paper on biowaste management in the EU, and launched a consultation process to assess opinion on whether a specific, stand-alone EU Biowaste Directive is needed. The preliminary results of a Commission impact assessment on biowaste management, identified that significant progress could be made by simply implementing fully existing EU laws on landfill and the waste hierarchy. The impact assessment also notes that compost markets could be improved by introducing EU quality standards for compost, which could in turn improve biowaste recycling.

2.4.2. National Level

Defra's Climate Change Plan 2010
This plan sets out the actions Defra is taking, in the policy areas where it has influence to meet the challenge of climate change. It specifically sets out the actions that Defra is taking to meet its carbon budget as set out in the UK Low Carbon Transition Plan. The document also forms Defra's Carbon Reduction Delivery Plan and explains how the carbon budget is constructed and the indicators that will be used to track progress. Waste forms a 24% of the carbon budget.

The target in the UK Low Carbon Transition Plan is to achieve a reduction of 1MtCO_2e by 2020. Defra's plan for the waste sector is centred on;

- Reducing the amount of biodegradable waste produced
- Diverting more biodegradable waste from landfill
- Capturing and treating more methane from landfill

Indicators

Waste management indicator pyramid – the waste sector is made up of three main emission sources – landfill, wastewater, and incineration, with landfill making up of 90% methane emissions.

The headline indicator is the change in GHG emissions for the waste management sector since 1990/previous year. This is made up of the change in landfill GHG emissions, GHG emissions from incineration and waste water handling.

Landfill GHG emissions are determined by the amount of biodegradable waste materials landfilled (change in volume of biodegradable waste landfilled) and the methane capture rate (change in methane capture rate) achieved by landfill site operators.

The key actions and milestones up to 2020 for Waste are set out in the table below;

2010	Consultation on landfill bans Phase 2 of Courtauld Commitment launched Consultation on higher recycling and recovery targets for packaging waste Clean Energy Cashback Feed-In tariffs introduced Consultation on implementing revised Waste Framework Directive Review of voluntary agreements with paper industry
2011	Food waste reduced by 250,000 tonnes through Love Food Hate Waste campaign Renewable Heat Incentive Introduced
2012	Phase 2 of Courtauld Commitment reduces food waste by 5% and supply chain food and packaging waste by 10% Amount of C&D waste going to landfill is halved
2013	Waste Prevention strategy is published Final programmed increase in landfill tax
2015	Dependant on outcomes of consultation on landfill restrictions, could be introduced as early as 2015
2020	Annual emissions reduced by at least 1MtCO2e on projected 2020 levels

Commercial and Industrial Waste in England, Statement of Aims and Actions 2009, (Defra)

This document sets out Defra's aims and objectives for commercial and industrial waste and a desire to see greater divergence in policy between C&I and household waste. Defra's aims for C&I waste are the same as for household waste and other types of waste;

- Reduce the amount of waste that arises in the first place – by more sustainable design, production, purchasing and use as well as reuse of products and materials in the economy;
- Increase the proportion of the waste that does arise which is productively re-used, recycled or recovered;
- Reduce significantly the amount of waste that is sent to landfill or incinerated without recovering energy;
- Manage any remaining residual waste responsibly;
- Maximise the investment opportunities for business from commercial and industrial waste management.

Achieving this vision will:

- Enable people, business and local authorities to save money;
- Improve resource efficiency in the economy; and
- Reduce greenhouse gas emissions and other environmental impacts

Local authorities, business, Regional Development Agencies and government must work together to make progress so that in five years time local authorities will:

- Ensure (in their role as planning authorities) that there is a suitable network of facilities for the recovery and, where necessary, disposal of all types of waste;
- Consider the commercial and industrial wastes that arise in their areas and whether there are benefits in dealing with them together with similar household wastes. This applies especially to the seven priority materials identified in the England Waste Strategy (paper, food, glass, aluminium, wood, plastic and textiles);
- Ensure that what they do with business waste fits with what they do with household and other wastes;
- Be aware of the potential value of the waste materials they collect and adapt their waste collection systems so as to extract most value from those materials;
- Ensure that there is sufficient recycling collection/bring facilities for SMEs whether that be through providing a direct service or acting in a facilitating role;
- Work with Business Links and resource efficiency organisations to support and encourage businesses scale the waste hierarchy;
- Lead by example and drive demand through sustainable procurement.

By releasing this statement Defra are highlighting the increased focus that commercial and industrial waste streams are likely to have in the future; in terms of waste prevention and resource efficiency, re-use and recycling activity and overall diversion from landfill. The JMWMS review should consider the extent to which the strategy will seek to engage with commercial operators in terms of offering advice, services and to develop a joint approach to waste services provision.

Zero Waste Nation - In October 2009, Defra announced plans to create a zero waste nation, including greater emphasis on organics collection and a wider range of materials collected, to include paper, card, cans, glass, plastic bottles, food and packaging by 2020. At the same time details were also released on:

- Developing a Zero Waste Places Standard to recognise successful waste reduction areas;
- Supporting areas which achieve the Zero Waste Places Standard with extra financial support to develop waste reduction services; and
- Six new Zero Waste Places in Shropshire, Dorchester, Brixham, Newham, Hoxton and Suffolk to help develop ideas to cut waste in the home, workplace and community.

It is anticipated that these measures will see 75% of household waste either recycled or used to generate energy within the next ten years.

The House of Commons EFRA Committee Report, Waste Strategy for England 2007, Third Session 2009-10 raises issues and concerns related to government action on the current waste strategy. The report includes the following proposals and recommendations for action:

- Landfill bans for certain materials achieved by 2015, e.g. food waste;
- National household waste recycling targets of 50% by 2015 and 60% by 2020;
- Mandatory targets for collection of food waste;
- Stronger focus on commercial and industrial (C&I) waste, including the role of local authorities in supporting this;
- National waste prevention targets identified within 2010/11;
- Clearer LA information for householders on what happens to their recycling and on waste collection costs;
- DEFRA analysis of optimal method of food waste treatment;
- Energy from Waste planning applications to demonstrate how heat will be captured and used;
- Government guidance on environmental impacts of EfW to inform planning decisions;
- Landfill tax escalator continued to at least 2020;
- More flexible PFI waste contracts;
- Support and incentives for LAs to fully utilise their powers to tackle fly-tipping and litter.

2.4.3. Consultations

There are currently a number of consultations that are in progress or anticipated to be released during 2010 that will impact on both the waste and climate agenda. These include:

- ***Consultation on meeting EU Landfill Diversion Targets (Defra)*****,** published 18th March 2010 which includes consultation on the definition of municipal waste and the implications for calculation of the landfill diversion targets. Views are sought on the future of Landfill Allowance Trading Scheme (LATS) and the most effective policies that Defra should pursue to address both local authority and private sector MSW, including possible monitoring and reporting requirements. This also includes the re-classification of municipal waste to cover waste from the private sector, but this is not expected to change the statutory responsibilities of LAs.
- ***Future Restrictions on Landfilling of Biodegradable Recyclable Wastes (Defra*****),** published on the 18th March 2010. The consultation includes options for bans on biodegradable and recyclable waste. Options include bans possibly accompanied by requirements to sort materials or tougher sorting/pre-treatment requirements without bans, including producer responsibility requirements for certain wastes. Candidate waste types for the consultation include paper/card, food, textiles, wood, green waste, metals, glass, plastic.

- Review of Schedule 2 of Controlled Waste Regs 1992 (Defra). Expected in 2010.
- Requirement for Municipal Waste Management Strategies (Defra). Expected in 2010.
- Further consultation on the Transposition of the Waste Framework Directive is anticipated in 2010.
- Green Paper on Life-Cycle Thinking Guidelines for Municipal Biodegradable Waste Management (EU). Expected in 2010.
- Changes to Producer Responsibility Scheme for Packaging (Defra/DBIS). Expected in 2010. Expected to include stretching packaging recycling targets from 2011 to support implementation of material specific recycling strategies and incentives for LAs to expand range of material collected and to improve information to residents. Also regulatory changes from 2011 to increase transparency of producer funding system for LAs. (Packaging Strategy. DEFRA. June 2009).
- Consultation on Renewable Heat Incentive, DECC (Open).
- Consultation on Heat & Energy Saving Strategy (closed in May 09).
- Consultation on Strengthening Local Democracy (closed Oct 09) - Contains LA carbon budget proposals.

Key issues for the future resulting for future legislative and policy changes include:

- Greater priority for waste prevention and zero waste;
- Increased requirements to collect waste;
- Landfill bans for certain materials;
- Possible higher national recycling targets;
- Greater priority for C&I waste;
- Greater role for local authorities in tacking climate change; and
- Changes to waste definitions.

3. Identification of Key Strategy Mechanisms for Delivery

3.1. Methodology

Alongside the review of the key policies and strategic level documents that could impact on the revised strategy a desk based review of mechanisms for delivering the key objectives of the strategy was also carried out. This included consideration of recent developments in best practice, studies[1] carried out on the role of the third sector, food waste, and waste prevention and is restricted to methodologies employed at the three stages of the waste hierarchy. The role of targets within the strategy is also considered along with a number of other issues affecting the overall governance of the strategy itself, options for joint working, and communication of its key policies and financial mechanisms for delivery.

MWDA officers had undertaken some initial work to identify issues and options for the strategy which was reviewed as part of this task and incorporated into the long list of mechanisms identified for member and officer workshops.

Several recycling targets were modelled using an internal management tool developed for MWDA by SKM Enviros. This was carried out to illustrate the likely level of performance, participation and materials capture required to meet higher recycling levels than are currently within the strategy. Modelling was carried out to assess the impact of achieving 44%, 55% and 70% recycling targets. The results are discussed in section 3.6.

The long list of mechanisms for delivery is set out in the following sections.

3.2. Waste Prevention

Waste prevention mechanisms can be divided up into those relating to enforcement of policies that restrict waste generation or disposal and those considered as softer options relating to promotion and operation of campaigns that target behaviour and attempt to change patterns of household consumption, e.g. changing shopping habits, real nappy campaigns and swap days. Table 2 summarises a long list of mechanisms for delivery relating to waste prevention.

[1] WRAP, Third Sector Investment for Growth Report, UK Household Waste prevention evidence review for Defra, Defra research on understanding Waste Growth at local authority level, WRAP Waste Prevention Toolkit.

Table 2: Waste Prevention

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
1.1	Charging for Green Waste Collection	There is the potential for implementing a charge for green waste collections in Merseyside and therefore further incentivising alternative options such as home composting/digestion.	▪ Joint or Individual approach required ▪ Political/public considerations regarding provision/removal of a service ▪ Management of new system to collect charges ▪ Requires communication	1,2,3,5,6, 8,9
1.2	Removal of Green Waste Collection Scheme	See 1.3 above, Removal of kerbside collection scheme and provision at HWRCs.	▪ Political/public considerations regarding removal of a service	1,2,3,5,6, 8,9
1.3	Enforcement at HWRCs/ Permit Schemes	Additional measures may be applied at HWRCs to prevent non-household waste entering the household waste stream.	▪ Permit scheme trial currently underway but results not known at this stage	1,2,3,5,6, 8,9
1.4	Restriction of Residual Waste Capacity	The potential for reducing overall household waste arisings through incentivising a change in purchasing behaviour through restriction in the capacity available to householders for collection/deposit of residual waste. This could be delivered by limiting capacity of containers for residual waste or moving to alternate week collection (AWC) (reducing frequency of collection).	▪ Cost of new containers ▪ Requires effective communication ▪ Political/public concerns ▪ Potential for increase in waste at HWRCs ▪ Consistency across all MHWP authorities	1,2,3,5,6, 8,9
1.5	Side Waste Policy	Consistent no side waste policy across all authorities and active enforcement	▪ Fly tipping issues ▪ Cost of enforcement ▪ Consistency across all MHWP authorities	1,2,3,5,6, 8,9

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
			▪ Communication to residents	
1.6	Target Food Waste Prevention	Food waste has a disproportionately high environmental impact in many parts of the country because of the environmental effects. In the case of Merseyside the negative impacts of food waste disposal are notable because of the landfill of residual waste and in particular the GHG emissions associated. The long term PFI procurement in Merseyside aims to reduce landfilling of residual waste however there remain environmental burdens from the unnecessary generation of food that becomes waste that could be avoided through better purchasing/cooking habits and through the transport and treatment of the food waste arising. The national 'Love Food Hate Waste' campaign, is centred on food waste prevention. This is an activity that could be continued through local campaigning, generation and distribution of materials to encourage smarter shopping and meal planning, recipes for left-overs etc.	▪ Joint or individual approach to promotion of measures ▪ How to measure scheme success	1,2,3,5,8,9
1.7	Junk Mail Prevention	The Mail Preference Service (MPS) exists to facilitate removal of junk mail from delivery to those residents that register with the service. The profile of this service could be raised across the Partnership area via promotional campaigns, etc. In addition, campaigns/ materials can be developed to encourage prevention of free newspapers/magazines. Other unaddressed mail however will still be delivered unless the householder registers with the Royal Mail to be removed from such services. This could be a targeted element of campaigns/promotions.	▪ Joint or individual approach required ▪ How to measure scheme success	1,2,3,5,8,9
1.8	Home Composting / Digestion	The composting of vegetable peelings/fruit and garden waste at home yields environmental benefits as the materials do not arise as a waste to be collected and transported prior to composting and then the compost transported again for application to land. The benefit of home composting, where an extensive garden waste collection service is present, is that the transport element is removed and a resource of compost is made available to be utilised by the householder. Also there is a need to consider the role of having a green waste collection system at all, does this conflict with the promotion of home composting, should green waste collection systems be removed? Digesters are enclosed units, part buried in the ground, that can also	▪ Potential conflicts with garden waste collection service ▪ Reduced transport requirement for collection and thus carbon impacts ▪ Political/householder issues associated with the removal of garden waste service	1,2,3,5,8,9

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
		process meat and fish and other cooked wastes. This increases the potential diversion from the waste stream, but they are more difficult to install, and may not be appropriate for all property types.		
1.9	Master Composters/ Environmental Champions	Schemes where volunteers are trained to promote home composting practices, or a wider range of environmental themes such as re-use, other waste prevention/recycling practices and the link with key messages such as act local: think global.	■ Set up and management costs ■ Joint or individual approach required ■ How to measure scheme success	1,2,3,5,6, 8,9
1.10	Real Nappies	The support and promotion of using real (cloth, or 'reusable') nappies in preference to disposable nappies will reduce the waste arisings from this source. Typically around 2 - 3% of household waste comprises disposable nappies. There are a variety of measures that could be taken forward to promote the uptake of real nappies, including promotional campaigns, 'nappucino' mornings, incentives and subsidies for real nappy packs and support for nappy laundry services.	■ Joint or Individual approach required ■ Communication required ■ Cost of supporting	1,2,3,5,6, 8,9
1.11	Lobbying Government Business	The MHWP could place a higher priority on lobbying Government and working with local retailers/producers on reducing the amount of waste through measures to reduce packaging and partnerships to develop this area of resource management. Options to link into work of the local trading standards office and pilot study to work with packaging producers in the North West already raised at a Partnership level.	■ Joint or individual approach required ■ Cost of implementation ■ Definition of scope	1,2,3,5,6, 8,9
1.12	Kitchen Waste Disposal Units	The use of kitchen macerators/grinders, also known as waste disposal units could be explored with a view to processing food wastes through the waste water/sewerage system rather than as a solid waste management issue.	■ Cost of implementation ■ Loading on wastewater treatment plants	1,2,3,5,8,9
1.13	In-house Waste Prevention	The MHWP could lead by example, through respective environmental policies, and the implementation of in-house waste prevention initiatives could be explored and delivered. This could include both the Councils and their partners (public and private sector) and be delivered through, for example sustainable procurement, environmentally friendly office practices (e.g. double siding printing, not printing materials unless	■ Joint or Individual approach required ■ Cost of implementation ■ Internal EMS required ■ Legal implications	1,2,3,5,6, 8,9

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
		necessary, etc.).		
1.14	Schools Waste Prevention	As part of wider behavioural and sustainable development education, to emphasise the importance of waste prevention, supported by initiatives facilitated by the MHWP such as schools composting activity etc.	■ Joint or individual approach required ■ Cost of implementation	1,2,3,5,6, 8,9
1.15	Commercial Waste Prevention	To provide support to commercial waste generators on waste prevention and associated issues, to facilitate initiatives and develop partnerships where appropriate.	■ Joint or individual approach required ■ Cost of implementation ■ Definition of scope	1,2,3,5,6, 8,9
1.16	Zero Waste Places Standard	Sign up to the Zero Waste Places Standard operated for Defra through the BREW centre.	■ Joint or individual approach required ■ Time and cost to set up and maintain	1,2,3,5,6, 8,9

3.3. Waste Re-Use

Table 3 summarises a long list of mechanisms for delivery relating to waste re-use. In common with waste prevention mechanisms those relating to re-use can also be divided into those that are concerned with influencing behaviour and those that relate to supporting re-use activity across the Partnership.

Table 3: Waste Re-Use

Number	Name	Description	Considerations	Cross Referenced to Option in Table 6
2.1	Support of Re-use / Refurbishment – via Bulky Waste Collections	A variety of examples of good practice exist in the UK as regards re-use of goods, including: separate collections of re-usable goods from the household by third sector groups; and sorting of council collected bulky waste collections by third sector groups with a view to refurbishment/reuse/ resale of usable items. The MHWP do promote and work in partnership with a range of furniture re-use groups at present. Charging for council bulky waste collections could also provide an incentive for use of community services for furniture reuse via referrals to free alternative services. Support the third sector in deconstruction activity (of both household/C&I waste streams).	▪ Charging for bulky waste collection may see a reduction in use ▪ Potential for fly-tipping ▪ Political issue to introduce charging ▪ Need to ensure a consistent approach across Merseyside authorities ▪ Communication required	1,2,3,4,5,8,9,10
2.2	Support of Re-use / Refurbishment – via HWRCs	A variety of examples of good practice exist in the UK as regards re-use of goods. Reception points at HWRCs for the deposit of reusable electrical goods, paint, reusable wood, furniture, toys, bicycles etc. Re-use auctions and shops have also been delivered at some sites in the UK.	▪ Issues for current HWRC contract	1,2,3,4,5,8,9,10
2.3	Re-use Campaigning	A wide variety of initiatives may be promoted through local campaigning on reuse, examples include: ▪ SWAP Days - Free exchange services for re-usable goods can be facilitated through MHWP or third sector run 'SWAP days' where a venue is provided and the event promoted to allow attendees to bring along goods for free and pick up other items of interest to them. Remaining goods could either be sorted by a third sector organisation or disposed of by the MWDA.	▪ Cost of set up/operation ▪ Detailed rolling timetable required	1,2,3,4,5,8,9

Number	Name	Description	Considerations	Cross Referenced to Option in Table 6
		Merseyside has some experience of such events in the past. ■ Freecycle - a web based group to which members of the public can advertise free items of unwanted goods for collection. It provides a community service and helps avoid unnecessary waste of goods.		
2.4	In-house Waste Re-use	The MHWP could lead by example, through respective environmental policies, and the implementation of in-house waste re-use initiatives could be explored and delivered. This could include both the Councils and their partners (public and private sector) and be delivered through, for example sustainable procurement, environmentally friendly office practices (e.g. removal of single use cups, milk sachets etc. use of glass milk bottles, rechargeable battery units, repair and maintenance contracts for equipment).	■ Cost of set up/operation	1,2,3,4,5,8,9
2.5	Schools Waste Reuse	As part of wider behavioural and sustainable development education, activities to emphasise the importance of waste re-use, supported by initiatives facilitated by the MHWP such as schools swap days, book/CD/game re-use etc.	■ Cost of set up/operation ■ Joint or collective action	1,2,3,4,5,8,9
2.6	Lobbying Government/ Business	The MHWP could place a higher priority on lobbying Government and working with local retailers/ producers on reducing the amount of waste through measures to encourage re-use and partnerships to develop this area of resource management.	■ Need to define network/ responsibility for leading on issues	1,2,3,4,5,8,9
2.7	Re-Use Hub	To explore the development or facilitation of dedicated infrastructure for re-use, for example through partnership working on training, refurbishment, storage/sorting or retail space.	■ Cost of set up/operation	1,2,3,4,5,8,9,10
2.8	Payment of Re-Use/Recycling Credits	Payment of recycling and re-use credits, in particular to ensure that support for the third sector is in place	■ Cost of operation	1,2,3,4,5,8,9

3.4. Recycling and Composting

Table 4 summarises a long list of mechanisms for delivery relating to waste recycling and composting. These mechanisms relate primarily to the range and type of services that can be provided by the Partnership authorities across all waste collection systems. Also of importance are education and communication activity that encourage participation in the schemes that are being provided in order to drive the required increases in recycling levels.

Table 4: Waste Recycling and Composting

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
3.1	Separate Food Waste Collection & Treatment	The options and potential for separate food waste collection from households and potentially trade waste customers/commercial waste sources, to be sent for either specialist composting or anaerobic digestion.	▪ Requires treatment capacity to be available ▪ Involve joint or separate contract procurement ▪ Capital costs of scheme set up and operation ▪ Food waste collection is already being provided by Sefton and Knowsley Councils ▪ Collection Frequency ▪ Current contract has option for IVC capacity at Gilmoss	1,3,4,5,7, 8,9,10
3.2	Co-mingled Food and Garden Waste Collection & Treatment	The options for co-mingling food waste with green waste and composting or digesting the organics at a specialist treatment facility could be considered as part of the evaluation.	▪ Requires treatment capacity to be available ▪ Impact on tonnages collected ▪ Increased cost for the treatment of garden waste	1,3,4,5,7, 8,9,10
3.3	Expanding the Range of Dry Recyclables Collected at the Kerbside	The option of expanding the range of recyclables collected by all Waste Collection Authorities in the MHWP may be explored in addition to the current service (which already comprises the main recyclable material groups). The additional materials considered include:	▪ Ability of the MRF to accept all materials listed within current contract, e.g. plastic film ▪ Capacity in collection system, e.g. container, vehicles	1,3,4,5, 8,9,10

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
		▪ Cardboard; ▪ Colour separated glass; ▪ Other non ferrous metals: aerosols, foil; ▪ Plastic film, other plastics; ▪ Tetrapaks; ▪ Batteries; ▪ Textiles; ▪ Small WEEE. Also consideration of the provision of common services to all households in the MHWP, i.e. the ability to recycle the same range of materials across all authorities	▪ Operational considerations, e.g. round sizes, timing ▪ Communication of changes ▪ Issues of common service provision or individual change ▪ Impact on choice of collection method (co-mingled/kerbside sort) ▪ Market considerations for material outlets	
3.4	Improve HWRC Performance	Options for improving the recycling performance from the HWRCs may be explored. Utilising the infrastructure to capture more recyclate from the non-household waste stream should also be considered.	▪ Contractual and cost implications of higher targets	1,3,4,5, 8,9,10
3.5	Green Waste Charging	The impact of charging for green (or 'garden') waste collections may be considered in terms of the impact on recycling rates in addition to the overall waste arisings impact (see Waste Prevention options).	See 1.11	1,3,4,5, 8,9,10
3.6	Trade Waste Recycling Service	Options to offer collection services to trade customers for recyclable materials such as paper, card, metals, plastic, food waste. This should also include consideration of flexibility in offering the services; approach to collection, charging policies and approaches to encourage take up, provision of facilities. A wider remit is the consideration of the co-location of facilities for handling both MSW and C&I waste streams.	▪ Operational/ commercial considerations regarding how to charge for services ▪ How to collect – include in normal collection rounds ▪ Impact on MRF contract	1,3,4,5, 8,9,10
3.7	Provide Litter Recycling	Also known as 'Recycling on the go', may be considered as part of the JMWMS, for example through strategic location of recycling bins on the street.	▪ Cost of implementation ▪ Outlets required for material	1,3,4,5, 8,9,10
3.8	Recycling of Street Cleansing Waste	Specific measures for composting or recycling of street cleansing wastes including gully emptying can be appraised as part of the JMWMS. Street sweeping recycling is already being provided for Liverpool,	▪ Outlets required for material ▪ Cost of implementation	1,3,4,5, 8,9,10

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
		this is only a proportion of street cleansing waste.		
3.9	Incentivising Recycling through Reduced Container Capacity for Residual Waste	The measures that may be adopted to incentivise recycling through the balance of recycling capacity to residual waste capacity may be considered as part of the appraisal. This could include AWC, restrictions of size of residual bin.	▪ Links to AWC collection ▪ Container cost issues ▪ Public perception issues re service provision	1,3,4,5, 8,9,10
3.10	Alternate Weekly Collection of Residual Waste	This could be provided across all authorities to help incentivise recycling	▪ Would need to be supported by weekly recyclable collections ▪ Currently not provided by all authorities ▪ Public opinion ▪ Importance of good communications ▪ Increased tonnage at HWRCs	1,3,4,5, 8,9,10
3.11	Financial Incentives/Rewards for Recycling at the Kerbside and HWRCs	Use of initiatives that incentivise recycling through a reward scheme for residents that recycle effectively, e.g. by provision of vouchers, may be considered as part of the appraisal. Financial Penalties - Currently not able to consider pay as you throw as an option in the UK.	▪ Cost of setting up and managing the system ▪ Varying success of reward schemes from Defra trials ▪ Halton trial of chipped bins – information needed	1,3,4,5, 8,9,10
3.12	Weekly Collection Frequency for Recyclables Collection for All Authorities	Providing weekly collection of recyclables is likely to have a positive impact on recycling yields.	▪ Operational consideration regarding round sizes, container capacity ▪ Cost implications ▪ Requires communication to residents ▪ Implications for refuse collection frequency	1,3,4,5, 8,9,10
3.13	Ensure 100% Coverage of Recycling Collection Schemes	Increased bring bank provision for multi-occupancy properties and ensuring that all properties are able to receive the collection schemes, either included on existing scheme or provided with alternatives.	▪ Cost implications ▪ Operational considerations ▪ Consistency across all districts	1,3,4,5, 8,9,10

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
3.14	Restrict Use of HWRCs for Non-recyclable Waste	Promote HWRCs as centres for primarily reusable/recyclable material, e.g. provide some sites that accept material for reuse, recycling and composting only and reduce the number of sites offering services for non-recyclable waste disposal. Provide some HWRCs for trade waste only, recycling facilities included.	■ Cost of setting up and managing the system ■ Any issue for HWRC contract? ■ Political concerns ■ Communication effort required ■ Fly tipping ■ Requires good recycling outlets	1,3,4,5, 8,9,10
3.17	In-house Waste Recycling and Composting	The MHWP could lead by example, through the implementation of in-house waste recycling and composting initiatives. This could include both the Councils and their partners (public and private sector) and be delivered through, for example sustainable procurement, environmentally friendly office practices (e.g. recycling of office wastes, catering waste).	■ Cost of set up/operation	1,3,4,5, 8,9,10

3.5. Other Strategic Considerations

Table 5 summarises a long list of other issues that should be considered as part of the strategic delivery of the strategy. These surround issues of governance, joint working arrangements, finance, procurement and provision of services and approaches to communication

Table 5: Other Strategic Considerations

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
4.1	Joint Working & Governance	There are a number of options that could be considered under this heading: ■ Full Joint Waste Authority (Merseyside WCA & WDA functions); ■ Combined Merseyside & Halton JWA; ■ Joint authority for collection only; ■ Joint Disposal Function with Halton. This could also deliver efficiency savings in terms of the management and operation of waste services. Other options relate to forming a Joint Waste Committee or a Joint Waste Board.	■ Cost implications ■ Political resistance ■ Levy considerations ■ Legal considerations	1,2,3,4,5,6,7,8,9,10
4.2	Joint Contract Procurement for Collection Services	Again there are a number of contractual options here: ■ Single or joint collection contracts at a Partnership level (including or excluding Halton), across the whole partnership or between two or more partner authorities ■ Joint procurement of specific collection contracts e.g. refuse collection, recycling, street cleansing, kitchen waste, etc. WRAP study to look at feasibility of joint kitchen waste collection currently being undertaken Joint procurement to also include consideration of the optimisation of collection rounds/depots/ other facilities to offer most cost effective service and also reduce the carbon impact of collection operations.	■ Sefton/St Helens currently discussing options for joint procurement of collection contracts. ■ Timescales for implementation based on current collection contract end dates ■ Political resistance ■ Cost implications ■ Levy implications	1,2,3,4,5,6,7,8,9,10

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
4.3	Collection Efficiency and Efficient Service Provision	Either as part of the consideration of a joint approach to procurement or as a separate exercise the MHWP to consider the optimisation of collection rounds/depots/other facilities to offer a cost effective service and reduce the environmental impacts from transport related to waste collection. Options for sharing of collection infrastructure to be considered at a partnership level as well as option through the formal procurement process. Consider options for linking into modal transport infrastructure being developed in the Liverpool City Region, e.g. multi-modal approach.	▪ Political resistance ▪ Cost implications ▪ Levy implications ▪ Time and cost to investigate	1,2,3,4,5,6,7,8,9,10
4.4	Provision of Common Services for Refuse Collection, Recycling and Composting Collection	Consider provision of common systems across Merseyside to help improve participation and scheme performance, could also lead to efficiencies of delivery. For example, all authorities provide fortnightly refuse, weekly food, weekly recyclables collection. Combined with common policies on green waste, bulky waste, side waste. Consistent container types and sizes and provision of extra bins.	▪ Political concerns ▪ Cost & operational Implications of Change ▪ Communication required	1,2,3,4,5,6,7,8,9,10
4.5	Communication	Linked to 3.15 and underpins all activity. The need for an effective communication campaign. Use of door-stepping and other communication methods to ensure understanding of how to use scheme, motivate residents to take part and continue to reinforce key messages. Sharing of best practice and communication resources across the Partnership.	▪ A common theme underpinning the whole range of options ▪ Key messages and detailed strategy required ▪ Cost and resource implications ▪ Individual authority and Joint communication campaign required to ensure consistent delivery	1,2,3,6,7,8,9
4.6	Procurement Policies and the Supply Chain	Consider the use of procurement policies to influence behavioural change in terms of specifying the use of recycled materials, low carbon construction materials (to BREAM standards in new build), low carbon transport activities (driver	▪ Time and cost to implement ▪ Operational/contractual implications ▪ Consider results from the	1,2,3,4,5,6,7,8,9,10

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
		training, energy efficient vehicles, electric vehicles low carbon fuels) as part of contracts procured for waste services, covering all aspects such as: ■ Waste & Recycling Collection; ■ HWRCs; ■ Treatment/Disposal facilities; ■ Consultancy Support; ■ Containers.	HWRC Low Carbon Study	
4.7	Specifying End Markets	Encourage and promote the use of local markets, also consider closed loop recycling markets as part of the procurement of waste contracts. Consider options for working together to share common end markets and obtain best market prices.	■ Impact on WMRC contract ■ Cost implications	1,2,3,4,5,6,7,8,9,10
4.8	Leading by Example	To include in-house action around waste prevention, recycling and composting as referenced in 1.8, 2.4 and 3.17. In-house environmental management system Also energy efficiency, transport policies that specify vehicle types, low carbon fuels, driver training requirements	■ Individual or joint ■ Time and cost to implement and maintain	1,2,3,6,7,8,9
4.9	Calculate Carbon Footprint of MHWP Waste Management	Calculate the carbon footprint of waste management activities across the MHWP and actively promote its reduction.	■ Need to define system boundaries ■ Time and cost of completion	1,2,3,6,7,8,9
4.10	Make Carbon Commitments by Signing up to Available Programmes	Sign up to Carbon Trust Local Authority Carbon Management Programme - National programme which aims to cut CO_2emissions and reduce energy bills. Sign up to 10:10 – a commitment to reduce carbon by 10% in 2010 (although may now be a bit late) and research similar options/programmes	■ Time and cost of completion ■ Joint or individual commitment	1,2,3,6,7,8,9
4.11	Levy Arrangements	Consider the role of the Levy in funding waste management service provision in line with any proposed changes to common or joint services. Also consider the ability to reflect target commitments into levy payments.	■ Time and cost associated with change ■ Political implications	1,2,3,6,7,8,9

Number	Name	Description	Considerations	Cross Reference to Option in Table 6
4.12	Community Infrastructure Levy	Consider the role of the community infrastructure levy to fund the provision of waste management services in the MHWP area.	■ Time and cost of implementation ■ Joint or Individual funds	1,2,3,6,7,8,9

3.6. Waste Flow Modelling

A waste flow modelling exercise was undertaken using the waste planning tool developed for MWDA by SKM Enviros. The model considers all kerbside collection systems including HWRCs.

The model contains a number of collection scenarios that have been agreed with the Senior Officer Working Group (SOWG) Review Steering Group and performance levels as summarised below:

1) Optimised co-mingled collection, with alternate weekly collection (AWC) of residual waste, green waste collection but without kitchen waste collection;

2) as per 1) but including kitchen waste collection;

3) Base case comingled collection (based on actual performance in Wirral in 2007/8) with green waste collection;

4) as per 3) with kitchen waste collection;

5) Kerbside sort (based on Sefton's actual performance in 2007/8, with weekly recyclable collection and fortnightly residual collection) with garden waste collection;

6) As per 5) with kitchen waste collection.

There are also five options for modelling different HWRC contract performance as set out in the Waste Management and Recycling Contract (WMRC) contract as follows;

- *Option A:* is the baseline modelled on observed performance at Merseyside HWRCs (4% domestic waste recycling).
- *Option B:* represents the WMRC contract target performance levels for both recycling and diversion. (53% domestic waste recycling, 64% diversion)
- *Option C:* represents the first threshold for recycling target being achieved, whilst meeting (but not exceeding) the diversion target. (62% domestic waste recycling, 64% diversion). Note that rubble diversion is proportionately reduced.
- *Option D:* represents the second threshold for recycling target being achieved, whilst meeting (but not exceeding) the diversion target. (65% domestic waste recycling, 64% diversion) Note that rubble diversion is again proportionately reduced.
- *Option E:* has the same recycling rate as option D (75% domestic waste recycling) but the tonnage of rubble is not reduced, rather it is maintained at 12% in addition to the second target threshold for recycling resulting in a higher overall diversion rate being achieved (79% diversion).

The modelling was carried out in order to understand the various material capture rates that would be required and thus the performance levels achieved by different recycling systems to be able to meet the range of targets proposed. Modelling was undertaken to

achieve 55% and 70% recycling. Reaching a 55% recycling target would involve the following performance levels:

- Optimised co-mingled collection schemes, AWC for all authorities, kitchen waste collection, with Sefton using on a kerbside sort scheme;
- Recycling of street sweepings, commercial waste and flytipping; and
- WMRC Performance above 2nd threshold performance levels

Reaching a 70% diversion of MSW involves the following performance levels:

- Optimised co-mingled collection schemes;
- AWC for all authorities, kitchen waste and adding in new materials such as plastic film, textiles;
- High diversion for recycling of street sweeping, commercial waste, flytipping;
- WMRC Performance at 75% domestic diversion;
- Very high participation and capture rates and
- Consistently high performance across all authorities.

3.7. Conclusion

The long list of issues and mechanisms for delivery were taken forward for discussion at two workshops held with officers and members during early March. The outcome of both workshops is presented in Section 4.

4. Short Listing of Strategy Options and Mechanisms for Delivery

Two consultation workshops were held in March to present the initial findings of the desk based review and to gather opinion from officers and members on the key options that will form the policy focus of the revised strategy and related mechanisms for delivery. The officer workshop was held on the 2nd March and the member workshop on the 9th March.

4.1. Officer Workshop

The format for the officer workshop was a mixture of round table and group discussions. Papers produced for the officer workshop are set out in Appendix B. The key purpose of the workshop was to review the long list of themes identified in Table 1, Section 2 and agree a list of delivery mechanisms to take forward to the member workshop the following week.

The workshop was divided in sessions; the first session considered the long list of issues identified in Section 2 and began the process of prioritising the issues so that they could be developed into a short list of options for the strategy. The mechanisms for delivery of the strategy based around the waste hierarchy were also considered in separate sessions along with a cross cutting discussion of target setting; appropriate levels, definition and measurement.

4.1.1. Identifying the Short List of Options

The analysis in Section 2 began with identifying themes derived from the review of policy influences (see Table 1). It was acknowledged that all have some relevance to Merseyside but that there was a need to produce a short list that gives a focus for the direction of the revised JMWMS.

From the discussion on the day it was also proposed that two additional issues should be included in the long list – Deliverability and Affordability – taking the long list of issues to thirty five in total.

A key task carried out by officers was the review and ranking of these thirty five themes. Officers were asked to rank each of the themes as either a high, medium or low priority for the strategy using coloured labels; red indicating a high priority, yellow a medium priority and green a low priority, with each issue receiving only one ‘score’ per person.

As the initial list highlighted is long and contains a certain degree of overlap officers also made recommendations regarding possible grouping of themes which were also taken into consideration in the final analysis. Following the workshop the ranking results were collated in a spreadsheet and weighted based on a high priority score being scored as a 3, a medium as a 2 and a low as a 1. The total weighted results for the long list of issues are presented in Figure 1 below and for comparison the options that yielded the most high priority scores are also presented in Figure 2.

Figure 1: All Weighted Scores

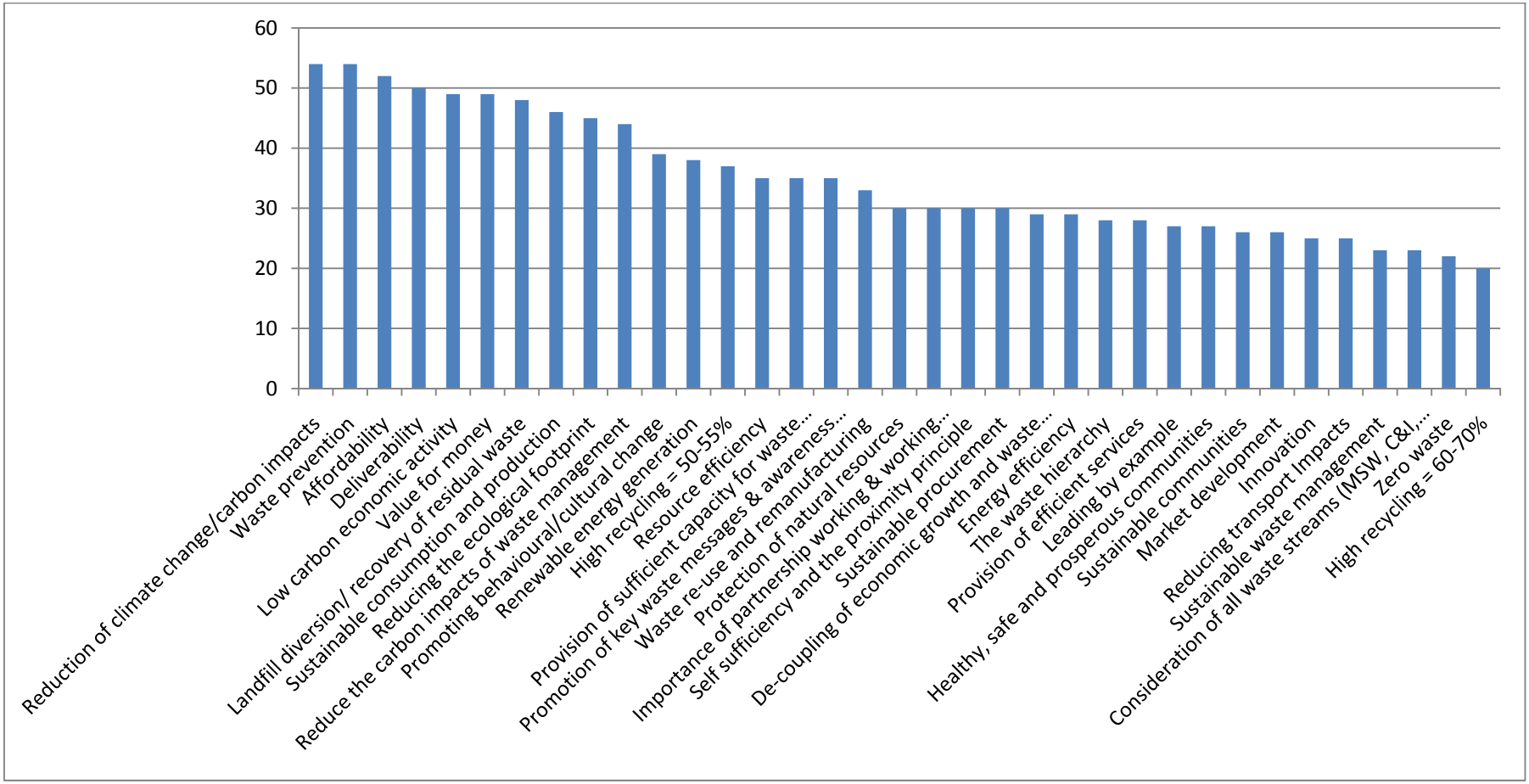
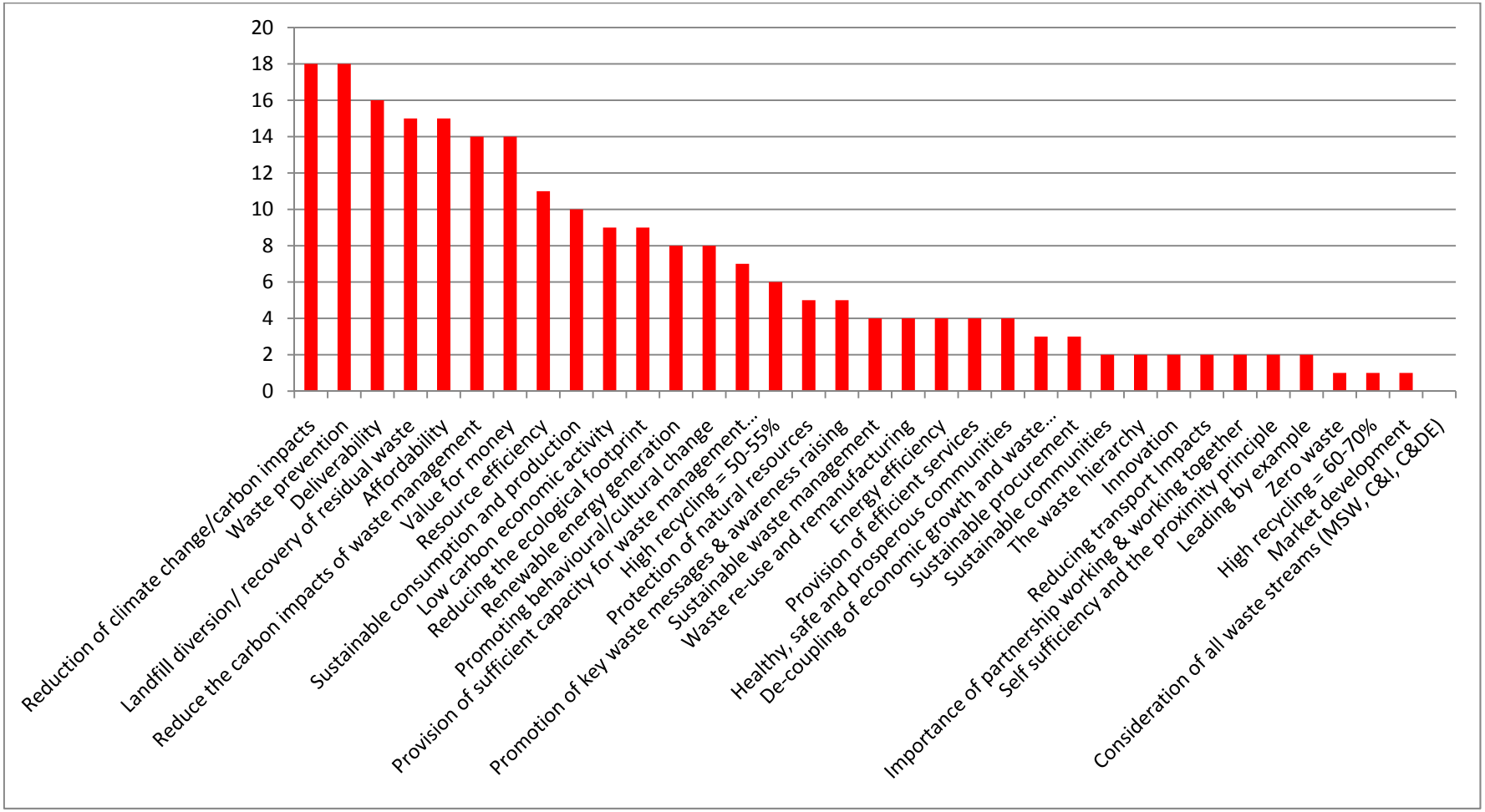


Figure 2: All High Priority Scores



It is interesting to note that the top ten weighted scores correspond well with the top ten high priority scores. The full list of scores is set out in Appendix A.

In order to derive a short list the recommendations made by officers for combining of issues was taken into account along with a comparison of those issues appearing in the top ten in both sets of results presented in Figures 1 and 2 above. The key action was to combine 'reduction of climate change/carbon impacts (3)' and 'reduce the climate change impacts of waste management (9)' and to combine 'low carbon economic activity (4)' and 'sustainable consumption and production (2)'.

A further conclusion from the analysis was that three of the issues identified were more appropriate as evaluation criteria for the strategy development process and not as part of the short list of options. These were Affordability, Deliverability and Value for Money. These will be important for the development of the revised strategy but were excluded from the final short list produced. It is recommended that these themes are taken forward as cross cutting themes that are addressed in the evaluation of each short listed option.

Officers also recommended that the wording of the short list of options should be revised to ensure that they are more outcome focussed. A final short list of options was produced by including the recommendations described above and selecting the top ten options and the results are set out in Table 6.

Table 6: Short List of Options

No.	Option
1	Reduce the climate change/carbon impacts of waste management
2	Maximise prevention of waste
3	Maximise landfill diversion/ recovery of residual waste
4	Maximise sustainable economic activity associated with waste management
5	Reduce the ecological footprint of waste management activities
6	Promote behavioural/cultural change that delivers the strategy objectives
7	Promote the use of renewable energy
8	Achieve high recycling = 50-55%
9	Promote resource efficiency
10	Provide sufficient capacity for waste management activity

4.1.2. Mechanisms for Delivery

Some refinement of the proposed list of mechanisms for delivery of the strategy was made based on the feedback from discussion groups. There were notable additions to those for waste prevention and reuse around working closely with the third sector and commercial and industrial organisations.

Key conclusions from the discussion of mechanisms for delivery related to:

- The need to quantify the relative carbon benefits of the mechanisms being proposed so that mechanisms can be compared more easily and appropriate targets can be proposed;
- The need to consider the criteria of affordability, value for money, deliverability as cross cutting themes to be addressed against the short list of options produced.
- Further work will be needed to evaluate the appropriate levels at which to set targets and the proposed delivery mechanisms taking into account the cross cutting themes as part of the evaluation;
- The benefits of a common approach across the Partnership to the choice/delivery of all mechanisms should be considered.

4.1.3. Discussion of Targets

Target setting is difficult in a long term strategy, however the officers identified a range of targets and issues related to targets that they felt were important. Priority should be given to waste prevention targets, e.g. expressed either as a kg/household or % reduction in arisings target. A zero waste target was not favoured by officers at this stage. A number of authorities are already tracking waste growth through the National Indicator 191 and so consideration of a joint approach to this could be made.

In terms of recycling targets going as far as a 70% recycling target was not favoured as this was considered difficult to achieve in an urban environment. It was highlighted that tonnage based targets may not support carbon reduction activity as this tends to promote activity focussed on collecting the heavy materials and not those with the greatest carbon benefit. Equally material specific targets will be difficult to set in a long term strategy as material composition is not static and will change over time in response to production and consumption behaviours. It was proposed that statutory targets may be the most appropriate – aiming at the 50-55% level.

Carbon targets should be considered as part of the strategy review process, and these could relate to a carbon footprint reduction, ecological footprint reduction or a reduction in CO_2 emissions generated by waste management activity. In order to be able to set such targets a common method of calculation and assessment will be required.

It was also noted that the strategy targets will be headline targets and that specific local targets may also need to be developed.

4.2. Member Workshop

The format for the member workshop was a round table discussion of the short list of strategy options as set out in Table 6 and the mechanisms for delivery. Papers produced for the member workshop are set out in Appendix C. The key purpose of the workshop was to consider and finalise the short list of options and the mechanisms for delivery that will be taken forward for further analysis in the next stages of the strategy review and ultimately for public consultation. Key issues raised by the members who attended the workshop are set out in the following sections.

4.2.1. Short List of Options

The members were in agreement that the short list of options should be taken forward for consultation. The key issue will relate to how to move from these options to delivery mechanisms whilst ensuring that services are provided efficiently, without excessive cost and that are considered to be value for money. Other areas of agreement included:

- Additional work to assess the carbon impacts of the strategy will be required.
- It will be important to be able to review the cost benefit of different delivery options as the strategy progresses.
- Value for Money, Deliverability and Affordability should be retained as cross cutting themes to be addressed against the short list of options proposed
- A minimum target of 50% recycling should be achievable by 2030 (the lifetime of the strategy document).

4.2.2. Mechanisms for Delivery

The views of members who attended the workshop on the different mechanisms for delivery are summarised below.

Waste Prevention

Mechanisms relating to the removal of services, e.g. kerbside/HWRC green waste is not politically acceptable and neither is charging for green waste. It is important to encourage a 'recycling' behaviour in residents as participation in recycling may also have a knock on effect relating to waste prevention or other positive waste management or environmental practices. Charging for green waste and the removal of green waste should therefore be removed from the list of delivery mechanisms.

It would be useful to gauge residents views on how to engage with non-participants and what would be required to change behaviour rather than just asking about specific policies (e.g. side waste, charging, etc). It would also be useful to understand views on enforcement tolerance levels. How questions are phrased will be very important in terms of the outcome of the consultation.

Mechanisms relating to collection frequency and container capacity and the range of 'softer' approaches proposed should be retained. A possible question could relate to

asking about how much expenditure is acceptable in relation to these 'softer' waste prevention approaches.

Methods of consultation with the 'hard to reach' groups will be an important consideration in the consultation exercise.

Re-Use

It was agreed that all of the proposed re-use mechanisms for delivery should be retained and a number are already being employed, e.g. SWAP days by some Partnership authorities.

Recycling and Composting

It was requested that co-mingled food and garden waste collections should not be considered as a delivery mechanism. Financial incentives should also be excluded from the revised short list. Mechanisms relating to providing HWRCs that are for (only) recycling or re-use should be on the basis of additional facilities and not replace existing HWRC facilities as this could be seen as a reduction in level of service.

During the consultation exercise it will be important to ensure that questions are phrased so as to avoid raising public expectations regarding what can be delivered.

It will be important to consider common messages and service delivery across the Partnership so as to avoid confusion by residents using schemes and when residents move between districts.

Trade waste/commercial waste is an important waste stream and consultation with these producers will also be important for the strategy development process.

Role of Targets

It is important that target setting is smart, that clear measurement is in place which is supported by good evidence, in particular if carbon targets are pursued.

There are a number of low carbon strategies being developed in Merseyside and it will be important that the waste strategy links into these successfully.

It will be important that there is joined up consultation with other council departments and services and that there is promotion of the 'one planet living' message.

A clear message on carbon targets for residents will be required to encourage buy in and action for the delivery of waste strategy targets. Due consideration will be required as to the best methods for conveying the message.

There was agreement with the proposed current range of targets.

Other Strategic Considerations

There are many possible approaches to possible joint working and governance arrangements that could help to drive improved service efficiencies, including the final signing of the Inter Authority Agreement (IAA), setting up a Joint Waste Authority or a Joint Waste Committee along with options relating to joint procurement of waste services and working towards common collection methods across the Partnership. It was agreed that all approaches should remain on the long list for further consideration. For joint working to be explored it will be important for there to be greater clarity regarding Partner issues and priorities.

The need to revisit the role of the Levy in relation to delivery of the strategy was accepted along with consideration of other funding mechanisms that may be appropriate.

The importance of leading by example in respect of internal waste management activities and the influence on environmental performance that can be applied to the supply chain through procurement activity was also recognised as important elements for the strategy.

Residents are often interested in end markets for recyclate and so should be consulted on the importance of local markets.

The importance of cascading information and a joint approach to communication was agreed by members.

4.3. Workshop Conclusions

The short list of options as agreed by officers and members through the workshop process is as set out in Table 6.

The agreed list of delivery mechanisms relating to waste prevention, re-use and recycling and composting following the officer and member workshops is as follows;

Waste Prevention
▪ Enforcement of policies such as HWRC permit schemes, no side waste, ▪ Restricting residual waste capacity & collection frequency ▪ Lobbying government and working with retailers ▪ Waste prevention activity in schools, commercial waste generators, in house ▪ Incentives for waste prevention ▪ Promotion of activity such as junk mail, real nappies, home composting – overall promotion of behavioural change ▪ Zero Waste Places Standard ▪ Focus on food waste prevention ▪ Waste prevention activity in schools, commercial waste generators, in house

Re-Use
▪ Charging for bulky waste collection ▪ Support for re-use/refurbishment activity, through separate collections, sorting of bulky waste collection, encouraging HWRC based schemes, involvement of the third sector ▪ Support the third sector in bulky waste collection and bulky waste deconstruction (both MSW & C&I remit) ▪ Re-use campaigning & promotion, e.g. SWAP days, Freecycle/Freegle ▪ In-house activity on re-use – e.g. removal of single use cups, use of milk bottles, rechargeable battery units ▪ Lobbying government, working with local retailers and commercial producers, schools ▪ Re-Use credits

Recycling and Composting
▪ Separate food waste collection (household & trade customers) ▪ Incentives to recycle, e.g. reduced container capacity for residual, AWC, increased recycling capacity, high frequency of recycling collection ▪ Recyclables only HWRCs, trade only HWRCs ▪ Full coverage of collection schemes & maximised bring bank provision ▪ In-house recycling schemes ▪ Expand range of dry recyclables collected; Cardboard, colour separated glass, aerosols, foil, plastic film, tetrapak, WEEE, batteries ▪ Provision of recycling services for all MSW waste streams - trade, litter recycling (on street bins), street cleansing ▪ Provision of common services across the MHWP

Other strategic issues were discussed and it was agreed that all proposed approaches to joint working & governance, financial considerations, leading by example should be retained. These are summarised below;

Other Strategic Considerations

▪ **Joint Working & Governance;**
  ▪ Creation of Joint Waste Authorities (various combinations)
  ▪ Joint Waste Committee/Joint Waste Board
  ▪ Joint contract procurement for collection services (e.g. for different services and by different authority groupings)
  ▪ Related opportunities for depot sharing, collection round optimisation, efficiency saving, modal transport, reduced transport impacts
  ▪ Common policies re waste collection services, e.g. side waste, charging for bulky

waste
    - Common service provision, e.g. all on AWC/co-mingled collections/food waste
- **Financial Considerations**
    - Current Levy arrangements and potential role in incentivising recycling
    - Community Infrastructure Levy & other funding routes
- **Leading by Example**
    - Role of in-house Procurement policies to influence the supply chain re improved waste and resource management and specify low carbon approach
    - Role in supporting and developing local markets
    - In house recycling, waste prevention and carbon footprint reduction activity, EMS policies

4.3.1. Communication and Consultation

There was also agreement regarding the importance of developing a common communication strategy and resources sharing across the partnership.

Initial feedback from officers and members relates to ensuring that future consultation questions are phrased appropriately, that questions attempt to gauge tolerance levels to proposed changes to collection systems and methods of delivery and also to be mindful of raising public expectations.

The issue of engaging with 'hard to reach' communities was also raised as a concern. Consideration should be given to the best techniques for consultation with all sections of the community (including 'hard to reach' areas) and possible draft consultation questions produced.

5. Recommendations for the Strategy Development Process

The conclusions from the Issues and Options Review undertaken to date is set out in Section 4. The short list of options agreed by the officers and members is as set out in Table 6 and the agreed list of mechanisms for delivery in Section 4.3. These will be taken forward to the next stages of the strategy development.

5.1. Further Work as Part of This Study

As discussed in Section 1.2, there are a number of other work streams taking place as part of the JMWMS review. Following completion of the waste compositional analysis in August it will be necessary to revisit the work undertaken as part of this study and in particular to review the waste flow modelling work in the light of revised waste compositional data. This review is scheduled to occur in late August early September 2010 and is part of this overall 'Issues and Options' study.

5.2. Additional Work Streams

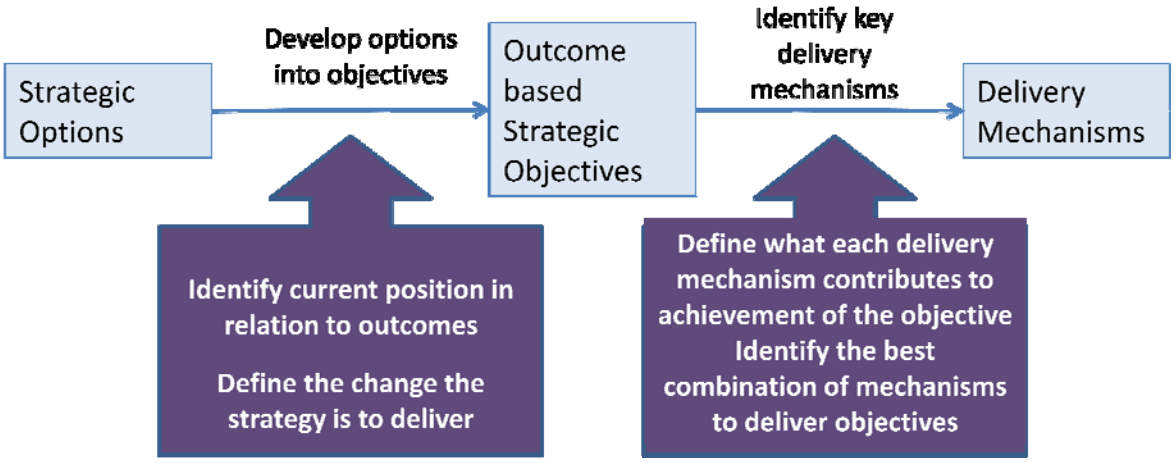
It is recommended that the next stage of the strategy development process includes a detailed options appraisal that builds on the work undertaken to date and provides the level of analysis required to enable the short list of options to be refined and strategy targets to be set. This is particularly relevant to areas where the strategy is planning to break new ground, for example the use of carbon impact targets.

5.2.1. Overview of the Detailed Options Appraisal Process

The short list of options that has been identified defines the proposed strategic outcomes for the strategy and describes, at a high level, what the overall strategy hopes to achieve. In order to move the strategy process forward it is important that these options are refined into specific strategic objectives for the strategy that have a more focussed and definable outcome that can be measured over a given time period, e.g. a specific target that the strategy wishes to deliver such as a reduction in tonnes of waste sent to landfill or reduction in the amount of CO_2 generated by waste activities.

In addition to defining the strategic objectives, the next phase of work will also need to assess how the different delivery mechanisms, that have been identified, will contribute to the proposed objectives. Different delivery mechanisms will have a varying impact on the different objectives and this assessment needs to determine the "best" combination of mechanisms taking account of the cross-cutting themes of affordability, value for money and deliverability.

An overview of the proposed process is summarised below:



To explain the process with reference to the short list of options an example is given below;

For example for Option 1 – *Reduce the climate change/carbon impacts of waste management* – it will be important to identify current carbon impacts of municipal waste on Merseyside then to define what the required reduction is, e.g. in terms of a targets such as tonnes of CO_2 emitted, reduction in greenhouse gas emissions and which of the delivery mechanisms will help achieve this outcome, e.g. collection of food waste, increased recycling of certain materials.

There is also likely to be overlap between the objectives in terms of what they want to achieve and also the delivery mechanisms that will contribute to them as more than one delivery mechanism will contribute to more than one objective.

The detailed options assessment process will also enable the necessary actions and targets to be defined at a district as well as partnership level.

The detailed options appraisal should also link into the Strategic Environmental Assessment work stream previously identified.

5.2.2. Setting the Carbon Baseline

As the reduction of climate change impacts is a key option on the short list it will be necessary to also establish a methodology for measuring the baseline position in relation to the carbon impacts of the strategy. In order to be able to set meaningful targets for the strategy in relation to reducing carbon impacts it will be first necessary to define the baseline position for the Partnership. This will involve agreeing the boundaries for the study, the necessary units for measurement and the use for tools such as WRATE, the Environment Agency life cycle assessment tool.

It is understood that work to establish a regional approach to carbon measurement will commence shortly therefore linking into this study will be important for the waste strategy review.

5.2.3. Timescales

The timing of the detailed options assessment work will depend on a number of factors including;

- the timing of the work to establish a carbon baseline and also
- whether is it is preferable to complete the options appraisal work before or after the completion of the compositional analysis work as the waste composition will impact on both the baseline position and the related detailed options assessment.

Appendix A Scores from Ranking of ‘Issues’

Scores and Weighted Scores from Officer Workshop

Number	Theme	High (Red)	Medium (Yellow)	Low (Green)	Total	Total Weighted Scores	Comments
3	Reduction of climate change/carbon impacts	18	0	0	18	54	Merge with 4
11	Waste prevention	18	0	0	18	54	Merge with 13
34	Affordability	15	3	1	19	52	
35	Deliverability	16	1	0	17	50	
4	Low carbon economic activity	9	9	4	22	49	Merge with 2 & 3
33	Value for money	14	3	1	18	49	
16	Landfill diversion/ recovery of residual waste	15	1	1	17	48	
2	Sustainable consumption and production	10	7	2	19	46	Merge with 4
22	Reducing the ecological footprint	9	8	2	19	45	
9	Reduce the carbon impacts of waste management	14	1	0	15	44	Combine with 3 & 4
27	Promoting behavioural/cultural change	8	7	1	16	39	Merge with 25
20	Renewable energy generation	8	6	2	16	38	Link to 16
15	High recycling = 50-55%	6	6	7	19	37	
1	Resource efficiency	11	1	0	12	35	
24	Provision of sufficient capacity for waste management activity	7	2	10	19	35	
25	Promotion of key waste messages & awareness raising	5	8	4	17	35	Merge with 27
12	Waste re-use and remanufacturing	4	9	3	16	33	
5	Protection of natural resources	5	6	3	14	30	Link with 2
23	Importance of partnership working & working together	2	10	4	16	30	
28	Self sufficiency and the proximity principle	2	11	2	15	30	Merge with 21
29	Sustainable procurement	3	5	11	19	30	
8	De-coupling of economic growth and waste growth/impacts	3	8	4	15	29	

Number	Theme	High (Red)	Medium (Yellow)	Low (Green)	Total	Total Weighted Scores	Comments
19	Energy efficiency	4	7	3	14	29	Link to 3 and 19
10	The waste hierarchy	2	10	2	14	28	Merge with 7
26	Provision of efficient services	4	6	4	14	28	Link with 33
30	Leading by example	2	5	11	18	27	
32	Healthy, safe and prosperous communities	4	4	7	15	27	Link with 6
6	Sustainable communities	2	6	8	16	26	Link with 32
31	Market development	1	6	11	18	26	
18	Innovation	2	4	11	17	25	
21	Reducing transport Impacts	2	8	3	13	25	Merge with 28
7	Sustainable waste management	4	5	1	10	23	Merge with 10/Link with 9
17	Consideration of all waste streams (MSW, C&I, C&DE)	0	8	7	15	23	
13	Zero waste	1	5	9	15	22	Merge with 11
14	High recycling = 60-70%	1	2	13	16	20	Merge with 15 - Theme high recycling

Appendix B Officer Workshop Briefing Papers

Appendix C Member Consultation Briefing Papers