Towards a Regional Resources Strategy Consultation

A report prepared for *emda*

Atkins Limited

July 2010

This document forms part of the *emda* Knowledge Bank

emda: Towards A Regional Resources Strategy Consultation

Final Report

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Contents

Glossary of Terms

Term	Meaning / Definition
C&D	Construction and Demolition
C&I	Commercial and Industrial
Emda	East Midlands Development Agency
EMRA	East Midlands Regional Assembly
GOEM	Government Office for the East Midlands
IRS	Integrated Regional Strategy
MCA	Multi Criteria Analysis
MSW	Municipal Solid Waste
RES	Regional Energy Strategy
RSS	Regional Spatial Strategy
RWS	Regional Waste Strategy
RWS06	Regional Waste Strategy 2006

Executive Summary

In November 2009 the East Midlands Development Agency (*emda*); EMRA and the Government Office for the East Midlands (GOEM) commissioned Atkins to consult with stakeholders in the East Midlands to gauge interest and support for the idea of a Regional Waste to Resource Strategy and also to identify any existing data sources, waste resource opportunities and groups or individuals willing to take an active part in making the strategy a reality.

The brief for the consultation was to identify stakeholder priorities and perceptions on:

- The role of regional agencies in the transition
- What the region should hope to achieve from a Regional Resources Strategy
- The kinds of steps needed to achieve these goals
- The range and extent of transformation required
- The conflicts and challenges foreseen
- The respective roles of industry and agencies
- The physical nature of a resources management approach
- Perceptions of the costs that may be involved in the transition and the value that might be derived
- How the approach would respond to and border on extra-regional activities
- Who would benefit
- The risks
- Whether legislative frameworks in place would allow the transition or would need to change
- What kinds of actions should be set out to achieve the transition
- What success would look like

The project was designed to build on work by AECOM who reviewed the 2006 Regional Waste Strategy earlier in 2009 and assessed progress against the action plan. AECOM proposed a move forward from a Regional Waste Strategy to a Regional Resource Strategy.

The Current Situation

Recent political and policy developments, however, mean that the original brief is no longer relevant.

The new coalition Government elected in May 2010 has already made it clear that there is no longer anything compelling regional working and it will be up to the Local Authorities to decide how, if at all, they wish to continue with a regional approach:

- The Regional Spatial Strategies have been revoked
- Emda will not exist beyond April 2012 and will be wound down during the intervening period, while the future of GOEM is uncertain
- Funding for the Leaders Boards and other networks such as RTAB has been withdrawn
- A new Localism Bill and planning system based on the Conservatives' Open Source Planning paper will rebalance power in favour of local communities
- The new local enterprise partnerships (LEPs) will be led by elected local authority leaders in 'natural economic areas'
- Guidance issued when the RSS were revoked says Planning Authorities should continue to press ahead with their waste plans. For the transitional period they will continue to be informed by the data and information which has been collated by the Regional Waste Technical Advisory Bodies, but this function will be transferred to local authorities.

And while the current review of waste policy in the UK is not expected to report until next spring, it is reasonable to assume that it will fit within the parameters of the new localism agenda.

In addition, selected follow-up interviews with key waste players in the region – particularly the county authorities/waste partnerships – have made it clear that a regional approach to waste minimisation and management is very unlikely to be pursued unless national policy and legislation dictates that it should.

Nevertheless, despite a disappointingly low response, the consultation and research exercise has pointed up a number of important issues and a range of interesting and constructive ideas that should play a key role in shaping the waste minimisation and management approach in the East Midlands and also identifies areas where the outgoing regional agencies can support the local authorities and county waste partnerships over the coming months.

It is important to remember, however, that while the information collected provides useful insights on approaches to waste management in the region, it will not be until all the uncertainties are resolved that a fully informed decision can be taken on the best way forward.

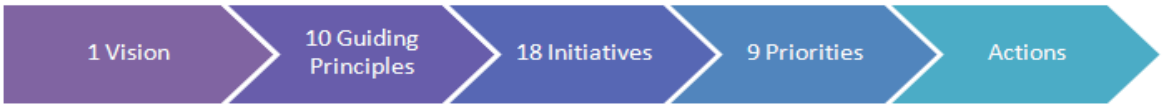
Project Background

The Regional Waste Strategy 2006 (RWS06) was produced by EMRA to improve the management of waste arisings within the East Midlands between 2006 and 2020. It was the region's first strategic response to the waste agenda, presenting 10 regional priorities and an action plan involving a wide range of stakeholders. Since the implementation of the RWS06, good progresses have been made over the last three years, the East Midlands is now the region with the highest recycling rate in England. However, there are still some gaps that need to be considered.

EMRA produced a Regional Energy Strategy in 2009, which aims to improve sustainable development and deliver a sustainable economic growth within the East Midlands for the next 15-20 years. It is the region's first strategic response to influence decisions on the generation, supply and use of energy by presenting 8 regional priorities and an action plan involving a wide range of stakeholders.

The regional Steering Group's first step in the move towards a Resource Strategy was to commission AECOM to undertake a Strategic Review of the RWS06. The report provided a framework for the development of a Regional Resource Strategy.

The first focus of AECOM was on the existing priorities and action plan progress. This involved a gap analysis and assessment of each of the priorities in terms of their suitability to be taken forward into the Resource Strategy. AECOM suggested an approach to a Regional Resource Strategy in liaison with the Steering Group:



A preliminary vision ***"To apply economic, social and environmental considerations to a Regional Resource Strategy to work towards a zero waste region by 2020"*** and 10 guiding principles were developed in consultation with the Steering Group. The guiding principles are overarching fundamental principles which should steer the implementation of priorities and actions.

Using the best available waste and resource data sources, AECOM defined 16 potential waste resources. Initiatives were then developed based on the 16 waste types identified; they directly relate to improving the resource management of each of the waste types identified. 2 additional initiatives were identified in key areas that felt to be critical in the development and delivery of a Resource Strategy.

Each initiative was assessed in order to identify the top 9 initiatives that will be taken forward as priorities in the Regional Resource Strategy. A Multi Criteria Analysis (MCA) tool was developed to rank the initiatives based on an overall score corresponding to ***the overall potential of an initiative to achieve the social, economic and environmental objectives for recovering resources from waste in the East Midlands***. AECOM identified the following priorities:

1. Improve waste and resource data collection;
2. Awareness raising, education and promotion of best practice to achieve behavioural change to improve waste and resource management;
3. Improved resource management of organic waste;

4. Improved resource management of waste plastics;
5. Improved resource management of wood wastes;
6. Improved resource management of inert wastes from construction and demolition;
7. Improved resource management of food waste;
8. Improved resource management of chemical wastes;
9. Improved resource management of waste metals.

The methodology proposed by AECOM has some limitations:

- There is a limited amount of data available, and a significant lack of accuracy (+/- 50%);
- Resource information are also limited; there is no consideration of practicality, processing costs or end markets;
- The ranking system (MCA tool) does not take into account of sensitivity to risks such as changes in legislation, waste volumes, NIMBY attitudes, political attitudes or market volatility;
- AECOM did not identify actions; they suggest that the Steering Group will develop them following the stakeholder consultation.

Next steps

To take the strategy forward to the next stage, the steering group commissioned two pieces of work –

- The development of a comprehensive stakeholder list, including all individuals and organisations with an interest in waste in the East Midlands and using that list, the creation of a stakeholder network who would meet regularly to develop a joined up approach to waste in the region. Margaret Bates from Northampton University who is a member of the steering group is leading this project.
- A consultation exercise designed to reach all those in the stakeholder network, plus the wider public, which would both gauge interest and support for the idea of the Regional Waste to Resource Strategy and also identify any existing data sources, waste resource opportunities and groups or individuals willing to take an active part in making the strategy a reality. An integrated team of consultation and waste specialists from Atkins was appointed to take forward this element of work.

Consultation methodology

In consultation with the project steering group a methodology for the consultation was agreed that included a mix of techniques and channels designed to appeal to a range of audiences. This involved:

- A consultation leaflet and questionnaire
- Online consultation
- Stakeholder workshops
- Follow up phone calls
- A public exhibition
- Local media relations

In view of a disappointing response to the consultation it was decided to do further online research and some follow-up interviews with those who responded, to add to the knowledge-base informing the way forward.

However, at the end of March 2010 (when the project as originally conceived finished) the announcement of the general election was known to be imminent and from that point on until after the new coalition government's first budget on June 22, 2010 great uncertainty surrounded many aspects of government policy.

It was known that the regional tier of government was likely to be scrapped, but not exactly how or when these changes would be introduced. Consequently it was not possible to meaningfully assess the implications for the development of a regional waste to resource strategy.

For this reason the follow-up interviews were not carried out until late June and early July 2010 when some of the detail of the new coalition government's approach had started to emerge and respondents were able to begin to express a view on a way forward.

The aim of both exercises was to identify, where – if at all – a regional perspective on the waste agenda would still be useful and appropriate.

Summary of Findings

International Best Practice

Best practice in waste minimisation and management is based around the internationally recognised concept of the 3Rs – Reduce, Reuse and Recycle and the waste management hierarchy. The waste hierarchy specifies the order of preference for dealing with waste with priority given to waste reduction, reuse and recycling with the least desirable approach being disposal of waste in landfill.

The primary motivation of any waste strategy must therefore be to reduce waste at source. In addition it has been shown time and time again across the world that the success of the implementation of the 3Rs programme will depend on:

- Strong and co-ordinated governance eg codes of practice and legislation
- Having sufficient waste infrastructure in the form of collection systems that support source segregation and appropriate recycling and recovery technologies
- Creating an economic environment that promotes waste reduction, reuse and recycling as opposed to disposal through the 'polluter pays principle.' This is an extension of the producer responsibility principle not only shifting responsibilities to the producer but also the environmental costs associated with managing and disposing of wastes.
- Communication of the programme and its importance to the public so that they are aware of how their actions can make a difference

The online best practice review encompassing key literature, useful perspectives and ideas from a wide range of sources from the public, through special interest groups, to the waste press and also recent comments and speeches from key organisations and thought leaders in the waste industry, underline this approach.

The results of the consultation and follow-up interviews further support the recommendations of international best practice.

The first key recommendation of this project is therefore to recommend that any approach adopted in the East Midlands, whether regional, at county level or locally, is holistic – responding to the 3Rs and the waste hierarchy – rather than trying to separate the issue of waste as a resource from the issue of reducing waste in the first place.

Initial Consultation

The initial consultation pointed up a number of important issues that must be tackled. Many of these were identified in the Aecom report and the consultation serves to underline their importance.

It is clear that there is no quick fix answer to any of the questions. The consultation was in many ways a fishing exercise designed to identify ready-made information sources and solutions that could be easily drawn together and taken forward. No such sources and solutions emerged, nor did any individual or organisations willing or able to take the lead in developing and implementing a Waste to Resource Strategy for the East Midlands. Key issues that emerged were:

- It will be essential for someone to take the initiative and drive the process forward, if it is ever to be more than a good idea.
- Another pressing issue will be to review the full stakeholder network list and ensure that all contact details are up to date, that the most appropriate contact is identified in each organisation and that identified contacts have been contacted and agreed to accept that role.
- Clear definition of roles and responsibilities is essential – for instance who will lead and what contribution can be expected from organisations eg WRAP, the Environment Agency and Defra

- Understanding of public perception
- Comprehensive information on the waste streams, the routes to recycling for each and life-cycle analysis of the various disposal v recycling options
- What works and what doesn't
- Financial and environmental cost/benefit/impact analysis
- Projected demand for resources in the UK
- Areas where resources need to be focussed
- Communication plan and material, public education strategy and material, background and supporting information for present and potential participants
- Comprehensive database of information, contact points for best practise and "one stop shop" solutions, companies recommended to deal with the waste streams etc
- Development of the strategy

Online Research

The online research also provided useful sources of information and additional possible actions.

Sources of Information

Despite the perceptions of respondents to the first stage consultation a great deal of data about waste in the East Midlands is actually available online, for instance:

- Defra, the Environment Agency and WRAP all collect waste data. Extensive information is now available largely on the WRAP website, but also through Defra and the EA. For instance Material and Market Development Recommendations in East Midlands, WRAP 2007 (updated April 2010) which examines capacity in the region and concludes that as a whole it has sufficient capacity to manage the waste it produces and with the addition of the capacity from sites granted planning permission and awaiting determination, over-provision of capacity would range from 5.6 million tonnes to 8.2 million tonnes in 2020.
- EMRA completed a Study into Waste Management Capacity in the East Midlands in 2009, which is available on the EMRA website.
- While EERA led a National Study into Commercial and Industrial Waste Arisings, 2009, which extrapolates from research in the north west to make assumptions about the other UK regions. The full report, together with links to a spreadsheet for calcultating forecasts and the data tables for each region can also be accessed through the EMRA website at www.emra.gov.uk/publications/housing-planning-and-transport/waste/national-study-into-commercial-and-industrial-waste-arisings

Together these reports fill many information gaps identified by consultation respondents and while they are not yet providing a full picture form a useful basis for further research to fill the gaps.

The second key recommendation of this project is therefore to ensure that all key stakeholders are made aware of existing data and information resources.

Solutions Identified by Other Strategies and Initiatives

Online research also identified a wide range of solutions and actions driving other strategies and initiatives around the world. For instance:

- Pushing those who produce goods that end up as waste to take responsibility for their products, for instance with product stewardship schemes
- Increasing resource recovery from commercial, industrial, construction and demolition wastes eg ensuring agencies and government take construction and demolition waste as a raw material.
- The development of local markets for recovered materials
- Separate food waste collection schemes for all households
- An anaerobic digestion plant building programme
- A policy 'preference' for kerbside sorting of waste streams by collection contractors

- Sector plans providing more specific waste reduction strategies for individual waste intensive sectors eg municipal waste, retail, construction, infrastructure
- Development of a Waste Prevention Programme for all wastes, ensuring the prevention and reuse of waste is central to all actions and policies
- Landfill bans for specific waste types to ensure the value from these resources is captured
- Ensuring that
    - Households use material goods for their intended life and do not dispose of them while still useful. Lifetime Optimisation and Restorative Economy are successful strategies
    - Edible food is not treated waste
    - Industry understands the feasibility of resource efficiency strategies in individual sectors
    - National support and policies are in place to balance winners and losers in pursuing this approach

Other useful insights are contributed by:

- Economies of Scale, Defra's 2007 Waste Management Optimisation Study which concludes that while many types of waste management facilities get less expensive to run on a simplistic basis as the capacity increases, there are other factors such as transport and planning. Political, social, economic and legislative factors all have an effect and there are many barriers to collaboration and integration. Case studies from waste partnerships showed that in Essex full integration would be marginally more expensive and offer fewer benefits than a two-area scenario. This may demonstrate the point at which diminishing returns are experienced.

  On the other hand including commercial waste collection in modelling would make more waste available in a smaller area, reducing transportation cost and increasing the scale at which transfer stations become more cost effective, particularly in rural areas.
- Third Sector: Investment for Growth, WRAP 2009 concludes that Resource Recovery Third Sector Organisations could make a very significant contribution to the waste agenda but need support, advice and business opportunities.
- ICE in How to Deliver a National Resource Management Strategy, 2007, suggests that a key first step would be to establish a national leadership body drawn from the relevant government departments and an agent to join up people who need to make decisions and show how a resource management strategy can be delivered at a regional and local level – most probably EA or WRAP. It's role would include:
    - Material flow management (collecting and providing data at national, regional and local levels)
    - Public sector corporate governance, including strategic planning for procurement of capital programmes
    - Local government in respect of built development, contract management (land use planning and material resource management opportunities) and community liaison
    - Assisting the private sector to implement new systems and facilities
    - Liaising with the specialist groups, networks or professional organisations and community groups. Seeking a tactical local response and responding to and promoting new ideas and technological innovation
    - Advising the government about the funds and pump priming mechanisms that are needed and helping to ensure they are put into place
- Waste suggestions from the public which include:
    - Make local authority recycling regimes the same and able to recycle everything possible
    - Tax all plastic containers differentially (producers and users) according to how easy it is for that type of plastic to be reused or recycled, and the revenue ring-fenced to support reuse and recycling.
- North Kilworth CIC, led by leading waste industry figure Peter Jones which plans to set up and operate a community anaerobic digestion facility that will provide energy for sale to the National Grid and reinvest the profits into village projects designed to deliver a sustainable community.

- The Furniture Re-use Network which represents 350 charities and non-profit groups involved in re-use across the UK.
- The WRAP/AWM Programme which gives recycling businesses in the region an opportunity to benefit from funding and practical support.
- The fact that quality is increasingly important to the recycling industry supply chain, opening up opportunities for UK businesses, a key theme emerging from WRAP's third international markets conference that took place in London recently
- The Waste to Resources programme funded by One North East and BREW which provides businesses in North East England with access through a free website to support for waste management, resource efficiency and energy saving, identifying areas of opportunity, useful contacts and case studies
- Ashburton Council and the Wastebusters Trust in New Zealand which is a successful long-term partnership with an international reputation. Wastebusters is a 'community trust' which is employed by the council to deliver waste minimisation. Extensive education and ownership by the community are seen as the key to the success of the initiative.
- Recycle Mania in the USA. For ten weeks every year, schools compete against each other to see which school can collect the most recyclables. In 2009 4.7 million students and 1.1 million faculty and staff on these campuses collectively recycled or composted just over 69.4 million pounds of waste.

Recent Ideas from the Waste Industry

Ideas have also come from the Waste Industry:

- Peter Stone WRAP chairman suggests that fast-changing developments which the waste management industry will need to respond to include:
    - The new coalition government's emphasis on "localism" and the major review of waste policy in England just announced by Secretary of State for the Environment, Caroline Spelman
    - Tougher EU legislation
    - A move by all UK national governments towards zero waste - with ambitious recycling targets
    - The possibility of global markets demanding higher quality in materials being exported
- The waste industry has welcomed the national review of waste policy and the role the sector will play in helping to create a 'leaner, greener economy'. Their own suggestions for priorities include:
    - Stimulate reuse and recycling above disposal
    - Tackle the 'obstacle' of the planning system
    - Bringing together and "accelerating" the existing "fragmented" waste policy in England
    - A clear set of policies that give certainty and stability to the industry and which fully take into account the science behind individual technologies
    - Kerbside sorting
    - Generate a domestic closed loop for packaging material
    - Ongoing work by WRAP to produce a 'matrix' of preferred options for different waste types as a basis for guidance on implementing the waste hierarchy
    - The use of carbon metric for targets - as opposed to the current weight-based system
- Peter Jones says that although there is a 'massive' opportunity financially, corporate giants will not move into the sector in the current climate because of the many risks that currently face investors.
- The Renewable Energy Association has said that it wants to see a statement from the Government as a matter of urgency which guarantees that all existing anaerobic digestion projects will be grandfathered

Ideas from Follow-up Interviews

Suggestions for regionally driven actions that would be useful at this point if resources are available were:

- Identifying all the small waste organisations in the East Midlands, both private businesses and third sector, together with what they do now and their potential
- Filtering down the framework of support to these smaller waste organisations, giving them a greater voice and identifying business opportunities on their behalf, with the aim of ensuring that most waste is dealt with locally
- Exploration of the possibility of developing dedicated resource recovery parks – working on the synergies and symbiosis. But also very much serving the needs of the local area and the waste created there.
- Act as champions/facilitators for the localism agenda providing guidance, advice and education and information about national strategy as the situation develops
- Continuing to encourage networking both inside the region and over the border

Suggestions for Possible Ongoing Work

Clearly many actions will now sit at national or local level, but taking everything that has emerged from the consultation and research into account, this report concludes with a number of suggestions for possible ongoing work on a regional level which reflect consistent themes throughout the project.

All the actions listed below have been identified during research and consultation as important in the move towards a zero waste society and hopefully the resources will be available to implement at least a selection:

- Act as champions/facilitators for the localism agenda providing guidance, advice, education and information about national strategy as the situation develops, how it should be translated locally, roles and responsibilities
- Continue to encourage networking both inside the region and 'over the border'
- Ensure that all key stakeholders are made aware of existing data and information resources. Explore options with both private and public sector to create a regional online 'one stop shop' along the same lines as waste to resources in the north east
- Develop a matrix of essential data still missing and an action plan to fill the gaps. If resources allow begin to implement the action plan
- Work with WRAP and the waste partnerships to develop an education and publicity programme that can be used throughout the region based around a series of key waste minimisation, reuse and recycling messages such as 'do not throw things away while they are still useful' and 'edible food is not waste' and using innovative approaches such as recycle mania
- Identify all the small waste organisations in the East Midlands, both private businesses and third sector; re-use, recycling and end users of recycled material; together with what they do now and their potential
- Develop and implement an action plan for filtering down the framework of support to these smaller waste organisations, giving them a greater voice and identifying business opportunities on their behalf, with the aim of working with local authorities to ensure that most waste is dealt with locally
- Work with local authorities to establish the feasibility of developing dedicated resource recovery parks – working on the synergies and symbiosis. But also very much serving the needs of the local area and the waste created there. Including possible locations and possible businesses to be involved
- Develop a range of innovative off the shelf bottom up approaches for local communities such as North Kilworth CIC and Wastebusters Trust
- Support the county waste partnerships in working towards making their recycling regimes the same and able to recycle everything possible, including separate food waste collection schemes for all households and a policy preference for kerbside sorting of waste streams by collection contractors
- Explore options for encouraging product stewardship schemes on a regional and local level
- Work with the waste partnerships to develop specific waste reduction strategies for individual waste intensive sectors eg commercial, industrial, construction and demolition

1. Introduction

The East Midlands Development Agency (*emda*) is one of nine Regional Development Agencies set up across England in 1999 by the government. Its key role has been to be the strategic driver of sustainable economic development across the region. As such *emda* has been responsible for the development of the Regional Economic Strategy, and its review every three years. The Regional Economic Strategy 2006: "A Flourishing Region" provides a shared vision for the region and a route map for sustainable economic success to 2020.

As part of its role in improving the East Midlands economy, *emda* have identified waste management as a priority sector. Total waste arisings within the region were estimated to be 25.6 million tonnes per annum in 2003, and are projected to rise to 27.8 million tonnes per annum by 2020. Costs associated with the treatment/ disposal of waste arising were estimated to be somewhere between £400 million and £500 million in 2005/06, rising to in excess of £1 billion by 2020[1]. While a significant economic burden to the regional; the way in which waste is perceived and subsequently managed has also been identified as an opportunity.

The Regional Waste Strategy (RWS) was produced by EMRA in 2006 in order to improve the management of waste arisings within the East Midlands. Its primary aim was to inform the waste section of the Regional Spatial Strategy (RSS), but its scope was widened to form the region's first strategic response to the waste agenda, presenting 10 regional priorities and an action plan involving a wide range of stakeholders.

In view of the regional economic burden associated with waste and its vision of a sustainable economic region, *emda*; in partnership with the East Midlands Regional Assembly (EMRA) and the Government Office for the East Midlands (GOEM) (Steering Group), are working towards a transition from a Regional **Waste** Strategy to a Regional **Resource** Strategy. The first step in the move towards a Resource Strategy was commissioning a report by AECOM in 2009 to review existing RWS06 priorities and assessing the region's progress against the action plan. The report took an evidence based approach to reviewing the priorities and provides a framework for the move towards a resource focused strategy.

Atkins was subsequently commissioned to undertake a consultation process to ensure effective stakeholder engagement in the transition from a Regional Waste Strategy to the development of a Regional Resource Strategy.

[1] Regional Waste Strategy 2006

2. The First Stage of the Project

2.1 Document Review

As a first step the key documents were reviewed to inform the consultation. After discussion with *emda,* there were three documents that it was agreed needed to be reviewed, as having particular relevance to the move towards a Resource Strategy.

- The AECOM Report
- The Regional Waste Strategy 2006
- The Regional Energy Strategy 2009

The wider national policy context was also explored.

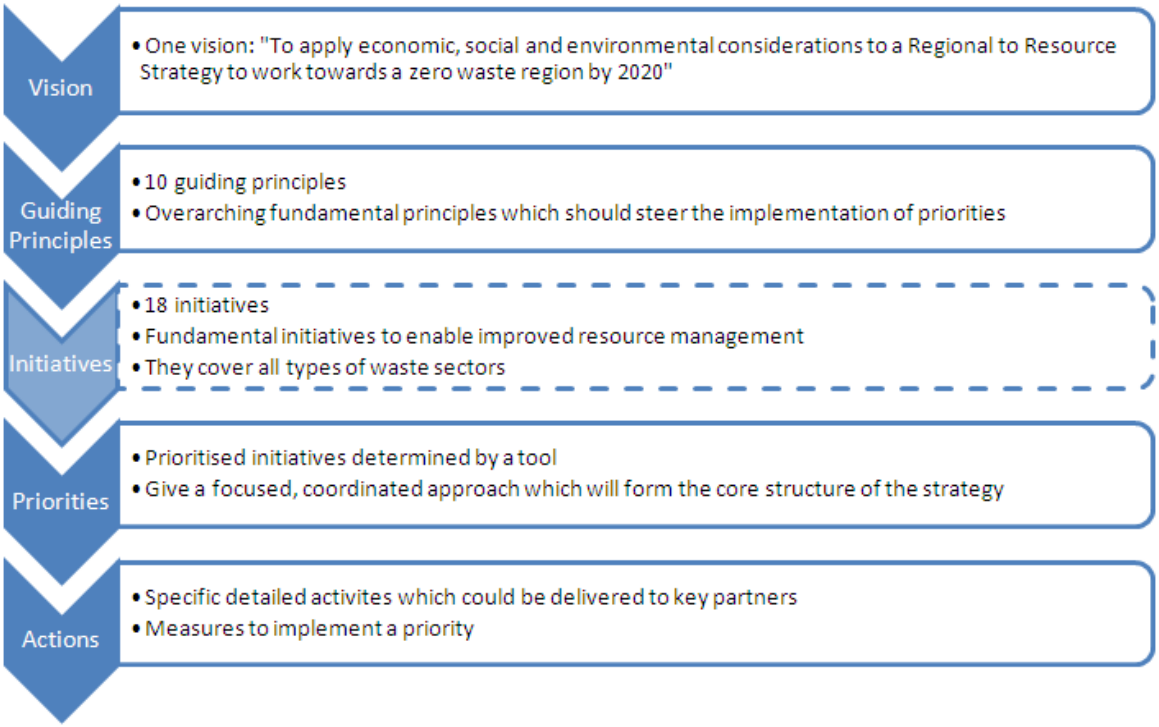
2.1.1 The AECOM Report

Initially, AECOM carried out a review of the current RWS06, primarily focusing on the existing priorities and action plan progress. This involved a gap analysis and assessment of each of the priorities in terms of their suitability to be taken forward into the Resource Strategy. Relevant and modified priorities were then transposed into the development of the propose approach to a Regional Resource Strategy.

It is important to note that the work AECOM has undertaken in the move towards a Regional Waste to Resource Strategy relates to a continuation of the RWS06 and therefore focuses on resources associated with solid waste. No consideration is given to other resources such as water and energy or virgin materials, unless directly linked to solid waste.

AECOM's proposed approach is summarised below.

Proposed Approach to a Regional Resource Strategy



Vision

A preliminary vision was developed in order to give an idea of long-term aspirations to stakeholders and promote the discussion on further developments. The following vision was identified in consultation with the Steering Group (*emda*, EMRA and GOEM):

To apply economic, social and environmental considerations to a Regional Resource Strategy to work towards a zero waste region by 2020.

Guiding Principles

10 high level principles or guiding principles have been identified in consultation with the Steering Group, they are overarching fundamental principles which should steer the implementation of priorities and actions. Each priority should be assessed against the 10 guiding principles before it is progressed.

Guiding Principle	Short Description
Planning for the future	Consider new and existing infrastructures in terms of resources
Reduce waste	Waste minimisation and prevention at source
Consider innovative approaches	Encourage organisations and individuals to consider a broad range of solutions especially innovative solutions
Consider life cycle impacts	Consider carbon footprint and greenhouse gas issues and reduce dependence on resources
Maximise economic benefits to the region (*emda*)	Reduce waste costs, improve resource efficiency, and generate employment…
Improve knowledge of waste arisings and resource demand in the region	Gather information on wastes and resources (waste arisings, potential and destination…)
Consider the proximity principle	Regional self sufficiently but consider practicality (economic & environmental reality)
Ensure the Resource Strategy is integrated with other strategies and policies: energy, water, minerals, planning…	Some waste type might contribute to other strategies Comply with planning policy
Improve awareness of waste and resource efficiency	Raise awareness of costs of resource inefficiency & associated disposal costs
Increase the re-use of wastes as resources	Increase re-use and recycling to reduce use of virgin materials

Initiatives – Waste to Resource

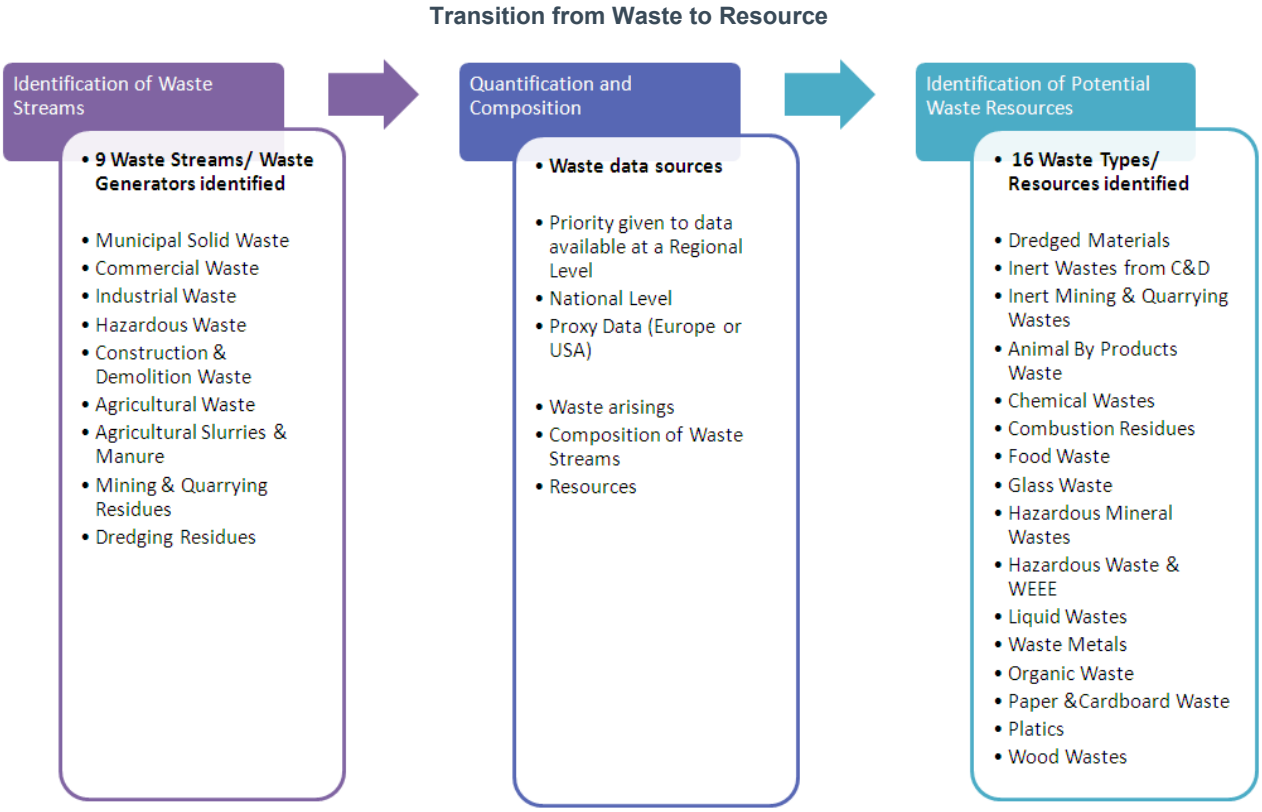
The current RWS06 is based on the management of waste streams or 'waste generated by source categories' (e.g. MSW, Industrial Waste, Agricultural Waste, etc.) Using the best available data sources, AECOM have quantified waste streams within the East Midlands Region, with specific focus on their composition. Nine different waste streams were identified and their composition analysed for waste materials or types which have the potential to be utilised as a resource. Sixteen waste types were identified, the majority of which were found to occur in a number of different waste streams. For example, the waste stream MSW contains several waste types: food waste, glass waste, hazardous waste and WEEE, waste metals, organic waste, paper and cardboard waste, plastics and wood wastes.

Initiatives

In liaison with the Steering Group, initiatives were then developed based on the 16 waste types identified. The 16 initiatives directly relate to improving the resource management of each of the waste types identified. The same supporting wording was used in order to allow fair comparison in identifying priority initiatives.

Two additional initiatives were identified relating to data collection and behavioural change. These differ from the first sixteen as they cut across all the other initiatives, and should therefore be addressed as part of every initiative. They identify two key areas felt to be critical in the development and delivery of a Resource Strategy.

Transition from Waste to ResourceThe flow diagram below shows the methodology used to move from a waste based strategy to a resource based strategy.



Priorities

Each of the proposed initiatives was assessed in order to identify the top nine priorities to incorporate into the Regional Resource Strategy. A Multi Criteria Analysis (MCA) tool was developed in order to rank the initiatives.

Methodology

The MCA tool was developed by AECOM to determine the effectiveness of each initiative in delivering sustainability objectives. Each initiative was scored against criterion relating to the three dimensions of sustainability; environmental, social and economic.

Equal weighting was given to economic, social and environmental parameters. Factored into the overall ranking system was the amount of waste targeted by each initiative, taking into account recycling and reuse activities already undertaken.

It is important to note that the initiatives were assessed equally and were therefore not influenced by statutory responsibilities.

For each initiative the overall numerical score calculated was loosely defined as '*the overall potential of an initiative to achieve the social, economic and environmental objectives for recovering resources from waste in the East Midlands*.'

The initiatives were then ranked on the basis of their overall numerical score.

Priorities Identified

The tool provided the ranking set out below. AECOM suggested that the top 9 initiatives should be taken forward as priorities. However, consideration should also be given to other bottom initiatives in further work.

Top 9 Initiatives or Suggested Priorities	Bottom 9 Initiatives
1. Improve waste and resource data collection	10. Improved resource management of paper & cardboard waste
2. Awareness raising, education and promotion of best practice to achieve behavioural change to improve waste and resource management	11. Improved resource management of hazardous waste and WEEE
3. Improved resource management of organic waste	12. Improved resource management of inert mining and quarrying wastes
4. Improved resource management of waste plastics	13. Improved resource management of ABP waste
5. Improved resource management of wood wastes	14. Improved resource management of glass waste
6. Improved resource management of inert wastes from construction and demolition	15. Improved resource management of combustion residues
7. Improved resource management of food waste	16. Improved resource management of liquid wastes
8. Improved resource management of chemical wastes	17. Improved resource management of hazardous mineral wastes
9. Improved resource management of waste metals	18. Improved resource management of dredged materials

Limitations

Waste Data

AECOM found that there is limited data available relating to waste arisings within the East Midlands.

Significant variation exists in the comprehensiveness of data available for different waste arisings. While MSW and hazardous wastes are relatively well recorded in terms of volume, composition, and management (recycling/ composting/ recovery); they only make up a small proportion of the overall waste arisings within the region. Where gaps in data exist estimations have been taken using external proxy data. It is reported that it is very likely that some of the waste arisings may be double counted. Potential inaccuracies of +/- 50% exist. Sensitivity Analysis was undertaken re-running the MCA tool using waste data of +50% and -50%. No significant change in the order of the ranking of the initiatives was apparent. The tool was reportedly designed to handle uncertainties and is more sensitive to order of magnitude than absolute waste arisings.

In addition the identification of individual waste types with the potential to be considered as a resource was limited by the presentation of available data. For example hazardous waste and WEEE have been grouped together as information was not separately available.

Although current data was deemed to be sufficient for such high level assessment, more accurate data would enable to provide decision makers a better evidence based support.

Resource Information

As information is only available in terms of waste arisings the MCA tool is unable to assess the social, environmental and economic benefits of the resource potential. In reality the tool only assess the potential of a particular waste type to be a resource. Some waste types will have poor potential to be used as a resource due to factors such as practicality, processing costs and end markets.

Further resource data would have allowed more focus to be given to resource value, existing waste to resource use, and potential resource use.

The MCA tool can be re-run/ modified to assess resource data if and when it should become available. In the meantime it acts as a stepping stone to developing robust evidence based Regional Waste to Resource Strategy.

Risk

The MCA takes no account of sensitivity to risks such as changes in legislation, waste volumes, NIMBY attitudes, political attitudes or market volatility.

Sensitivity analysis was undertaken in relation to the weighting of social, environmental and economic parameters. These weightings can be adjusted to take account of potential fluctuations in these areas.

Actions

The identification of specific actions did not fall within the remit of the AECOM report. It is envisaged that these will be developed by the Steering Group following comprehensive stakeholder consultation.

2.1.2 National and EU Policy

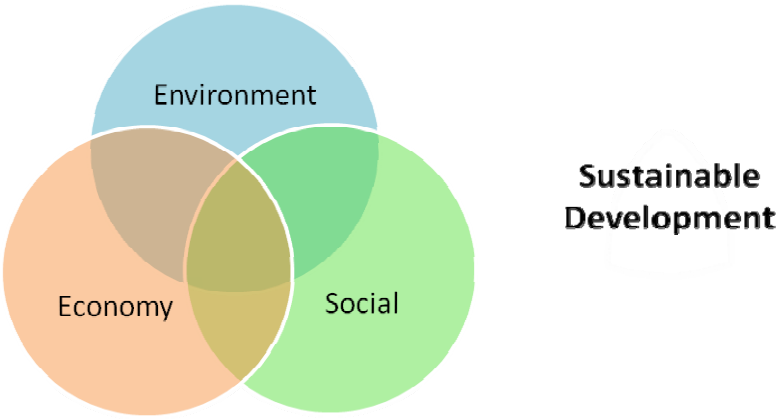
Historically waste legislation and policy has governed how waste is managed and ultimately disposed. Over more recent years this has evolved; with increasing focus on environmental impacts, climate change and sustainability, to encompass waste minimisation and reuse, recycling and composting, recovery and the diversion of waste from landfill. The UK Waste Strategy 2000 outlined the concept of the waste hierarchy which details the optimum way of managing waste by focusing on waste minimisation and re-use.

Most legislation and policy revisions have placed an increased emphasis on managing waste arisings as a resource. Two key drivers are the revised EU Waste Framework Directive 2008 and the Waste Strategy 2007. The relevance of these on *emda's* move towards a Regional Resource Strategy has been outlined below.

Sustainability is key in understanding the drive towards the management of waste as a resource. A concept developed in the 1970's, sustainability came to prominence following the publication of the UN World Commission on Environment and Development's Brutland Report 1987. The UN defines sustainability as *'development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs'*. It encompasses environmental, social and economic dimensions, in the short to long term and on a local, regional and national scale.

In environmental terms, waste management is currently high profile. Currently, the Copenhagen Climate Change Conference considered the relations with waste and climate change and use waste as a resource to produce energy.

Sustainability is commonly represented in the following diagram.



European Union – Waste Framework Directive 2008

The main objective of the Waste Directive (2008/98/EC) is to minimise waste, encourage recycling and waste recovery as well as to protect the environment and human health.

Several articles refer to the best way of dealing with waste, the future priorities in terms of waste management, and new ways of considering waste. This should be taken into consideration when defining priorities and actions in the future Regional Resource Strategy, as it should be in adequacy with legislation at higher levels: European and national.

Article 4 of the waste directive reinforces a major aim of the former Waste Framework Directive. It stipulates that when dealing with waste, a waste hierarchy should be applied; priority should be given to waste prevention and re-use, then recycling/ composting, energy recovery and finally disposal.

In the introduction of the waste framework directive, several references to waste as resources can be found. Paragraph 19 states that it is important to recognise that using wastes as resources are potential benefits to the environment and human health. Paragraph 28 defines that “this Directive should help move the EU closer to a ‘recycling society’, seeking to avoid waste generation and to use waste as a resource”.

Waste Strategy for England 2007

The UK produced a new Waste Strategy for England in 2007. It introduced a new vision: to *increase producer and consumer responsibility so that waste management is a shared responsibility in society* (producers, retailers, consumers, local authorities and waste management industries).

The objectives and targets of the strategy are clear:

- Encourage prevention and re-use
- Meet the Landfill Allowances Trading Scheme targets
- Increase diversion from landfill of non-MSW waste
- Invest in infrastructure
- Increase recycling and recovery

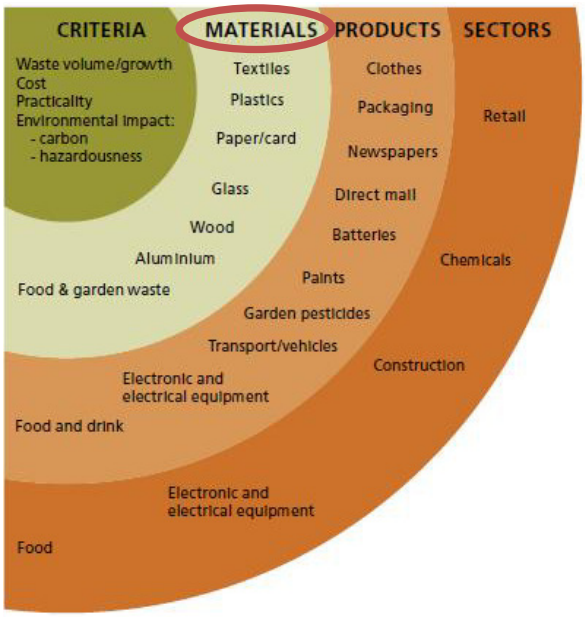
A key focus is targeting action on materials, products and sectors. The strategy states that former producer responsibility by sector has not sufficiently targeted waste reduction, or reached certain key waste streams. It stresses the need to reduce waste growth and landfilling by better design and use of materials.

It also says that action needs to focus on key waste materials which can be used as resources and have the greatest scope for improving environmental and economic outcomes: paper, food and garden, aluminium, glass, plastics, wood and textiles. (These have been determined by life cycle analysis with data available). This is a new way of approaching waste compared to the previous national waste strategy.

A section on local and regional governance set out the regional arrangements to achieve economic development supporting increased use of waste a resource, giving the Regional Development Agencies the power to:

- Develop waste and resource efficiency needs of businesses,
- Develop economic opportunities associated with improved resources management,
- Identify the waste management infrastructure needs associated with business waste,
- Ensure business link advisors have appropriate knowledge.

Key Waste Materials Targeted



2.1.3 Regional Policy

The Regional Waste Strategy is part of a bigger picture driven by the Integrated Regional Strategy (IRS). The Regional Spatial Strategy (RSS) directly relates to the IRS; its energy and waste sections are informed by two other documents: the Regional Waste Strategy and the Regional Energy Strategy.

Integrated Regional Strategy Structure

Regional Waste Strategy 2006

The Regional Waste Strategy 2006 (RWS06) was produced by EMRA to improve the management of waste arisings within the East Midlands between 2006 and 2020. It is the region's first strategic response to the waste agenda and to the principles stated in the RSS, presenting 10 regional priorities and an action plan involving a wide range of stakeholders.

The strategy aims to achieve a more sustainable way of dealing with waste by improving design (waste minimisation), increasing recycling and recover of waste. In addition, the RWS06 identifies the current waste

management capacity of the East Midlands with a view to determine which waste infrastructures are needed in the future in order to comply with the government's Planning Policy Statement 10.

To deliver a response to the principles stated above, the RWS06 focuses on 10 priorities:

- Planning our Future Waste Management Infrastructure – due to expected future waste growth in the East Midlands, there is a need to develop new waste infrastructure for recovery and disposal of waste to avoid landfilling and meet the different targets. This is realised through support to Local Authorities.
- Awareness Raising, Education and Promotion of Best Practice to Achieve Behavioural Change – the highest priority of the strategy relates to waste minimisation by changing the way people and businesses behave in relation to waste with the creation of a behavioural change plan.
- Improving the Efficiency of our Resource, the Reduction and Sustainable Management of Commercial and Industrial (C&I) Waste – a large amount of waste produced in the region are from the C&I sector, industries are generally inefficient in terms of energy used to produce goods and services. This priority aims to tackle the problem of C&I waste by supporting companies and ensuring that they seek to improve their efficiency.
- Prevention and Improved Management of Hazardous Waste – recent changes in the legislation reduced the capacity of hazardous waste disposal. This priority relates to the minimisation of hazardous waste and to the insurance that hazardous waste are dealt properly.
- Prevention and Improved Management of Municipal Solid Waste (MSW) – MSW are dealt more specifically by Local Authorities but there is a need to ensure that EU and UK targets for recycling and recovery are achieved and exceeded.
- Influence Procurement and Market Development – improving the recycling rates mean that more recycled materials would be available on the market. This priority also looks at the need to develop new and alternatives waste treatment facilities within the region.
- Reduction and Management of Construction and Demolition (C&D) Waste – a large amount of waste produced in the region are from the C&D sector, industries are generally inefficient in terms of resources used. This priority relates to the promotion of best practise and increase of re-use and recycling in the C&D industry..
- Managing the Waste Impacts of Regional and Sub-Regional Growth – The development of Northamptonshire will lead to more waste arisings. There is a need to ensure that best practises are achieved in the development of new housing at a planning level, design level and during the construction phase.
- Addressing Agricultural and Rural Waste Management – agricultural waste faces more stringent controls. This priority relates to address the waste management needs and infrastructure in the region.
- Reducing Fly-Tipping – controls on waste management are more stringent and actions should be implemented on this expensive waste stream management.

An action plan has been developed to respond to each priority. Good progress has been made over the last 3 years but there are still some gaps.

The East Midlands is now the region with the highest recycling rate in England; one of the key initiatives is the creation of the East Midlands Local Authority Waste Network which enables Local Authorities to share their knowledge and experience across the region. Another important action consists in the creation of behavioural groups to raise the awareness of new and developing waste management technologies. Other good progress refers to the good use of the Regional Technical Advisory Group and Business Link to improve links and communication with government departments and industries.

However, some actions were undelivered or did not achieve totally the expectations. No action plan was clearly defined for "Planning our Future Waste Management Infrastructure"; this makes more difficult the achievement of the priority. Although the creation of behavioural groups was welcomed, there is no ongoing behavioural change programme. The regional waste awareness group and the regional hazardous waste forum were not set up; this suggests that some actions might have been not forgotten. In addition, focus was only given to planning for C&I waste.

Regional Energy Strategy 2009

The Region Energy Strategy (RES) has been reviewed in 2009. Recent EU and UK legislation on climate change and energy required the need for a new strategy taking into account these changes. The RES 2009 was produced by EMRA to improve sustainable development and deliver a sustainable economic growth within the East Midlands in the next 15-20 years. This referred to the role of supporting the IRS to deliver against the energy and climate change objectives.

It is the region's first strategic response to influence decisions on the generation, supply and use of energy making connections with other strategies and particularly the waste sector. The RES presents three main area of development: energy for communities, energy for enterprises and communicating the challenge. 8 equal regional priorities are proposed and an action plan involving a wide range of stakeholders is detailed to achieve these priorities.

The strategic Priority 3 Business Performance refers to the government's Low Carbon Industrial Strategy. It aims to improve the productivity and performance of businesses through more efficient use of energy and resources.

One aim of Priority 4 Economic Exploitation is to develop programmes to promote opportunities in Energy from Waste and bio energy markets. There is a clear reference to use waste as generator of energy. *Emda* is already supporting three anaerobic digestion feasibility and demonstration programmes to use biogas produced as an automotive fuel. The strategy makes reference to the Regional Technology Framework which identified energy and waste as priorities in particular in relation with renewable energy, waste minimisation, management and recycling.

Finally, other references to increase the delivery of renewable energy and the development of district heating or Combined Heat and Power facilities are found in the RES 2009.

2.2 The Consultation Process

2.2.1 Initial Consultation

The final draft of the AECOM report was informed by consultation at a stakeholder event in March 2009. From an initial list of 60 potential attendees, 30 were invited, selected by the steering group from a range of organisations across the East Midlands. Fourteen stakeholders actually attended the debate, including most steering group members.

The aim was to widen involvement in the development of the strategy beyond the steering group members to a cross section of relevant organisations in the region, at the same time as ensuring a manageable debate.

The stakeholder organisations who took part in the process were the Environment Agency, East Midlands Environment Link, Derby City Council, Farming & Agriculture Federation, Northampton University, NISP, Envirowise, Lincolnshire Country Council, Wastecycle, ICE, Biffa, *emda,* East Midlands Improvement and Efficiency Partnership, WRAP, EMRA, and GOEM.

The group 'reality checked' and generally supported the overall idea of moving from a regional waste to a regional resource strategy, as well as the draft guiding principles and draft initiatives proposed.

The stakeholders also raised a variety of issues which they felt required further thought. These are detailed in section 7.3 of the AECOM report and informed the final approach to developing the Regional Waste to Resource Strategy.

Nevertheless, they felt strongly that it was important to move forward with developing the new strategy at the same time as collecting any additional information required, rather than waiting until the entire evidence base was in place.

It was also agreed that continued engagement with stakeholders would be essential going forward.

Following completion of the AECOM report, therefore, the steering group agreed that the next step in the development of the Regional Waste to Resource Strategy should be to widen involvement in the process.

2.2.2 The Next Step

To this end they commissioned two pieces of work –

- The development of a comprehensive stakeholder list, including all individuals and organisations with an interest in waste in the East Midlands and using that list, the creation of a stakeholder network who would meet regularly to develop a joined up approach to waste in the region. Margaret Bates from Northampton University who is a member of the steering group is leading this project.

- A consultation exercise designed to reach all those in the stakeholder network, plus the wider public, which would both gauge interest and support for the idea of the Regional Waste to Resource Strategy and also identify any existing data sources, waste resource opportunities and groups or individuals willing to take an active part in making the strategy a reality. An integrated team of consultation and waste specialists from Atkins was appointed to take forward this element of work.

2.2.3 The Consultation Brief

The brief for the consultation was to identify stakeholder priorities and perceptions on:

- The role of regional agencies in the transition
- What the region should hope to achieve from a Regional Resources Strategy
- The kinds of steps needed to achieve these goals
- The range and extent of transformation required
- The conflicts and challenges foreseen
- The respective roles of industry and agencies
- The physical nature of a resources management approach
- Perceptions of the costs that may be involved in the transition and the value that might be derived

- How the approach would respond to and border on extra-regional activities
- Who would benefit
- The risks
- Whether legislative frameworks in place would allow the transition or would need to change
- What kinds of actions should be set out to achieve the transition
- What success would look like

2.2.4 Consultation Methodology

Overall Approach

In consultation with the project steering group a methodology for the consultation was agreed that included a mix of techniques and channels designed to appeal to a range of audiences.

In the East Midlands a large number of disparate national, regional and local organisations have roles and responsibilities in relation to waste management. In addition to the 'inner circle' of key stakeholders, a wide range of other organisations, groups and individuals needed to be involved to ensure the successful transition to and then implementation of the Regional Waste to Resource Strategy.

It was agreed that the consultation should primarily be aimed at the organisations and individuals on the network list being developed as part of the parallel project, but that it would also be important to test the water with the wider public and to try to reach anybody who ought properly to be part of the stakeholder network but who had inadvertently been missed from the list. Key groups this approach would involve would include:

- The 'inner circle' of organisations, many of which are already involved in the development of the strategy, such as GOEM, EMDA, EMRA, EA, WPA's, WDA's, WCS's, RTAB (Regional Technical Advisory Body) and DEFRA.
- Other key stakeholder groups such as planning authorities and local authorities generally, the waste management industry, local and regional business, business support providers, industry representative bodies eg construction and agriculture, the voluntary sector, special interest groups such as the environmental lobby, community groups and organisations
- The wider public
- The media

The aim would be to build on the work done, ensuring that existing networks and engagement activities were maintained and expanding the focus to embrace all target groups, in order to deliver the understanding, buy-in and proactive commitment necessary to make the development and successful implementation of a regional resource strategy a reality.

It would also be important to try to identify responsibilities and partners for activities and also opportunities to use the existing networks and communication channels of stakeholder groups to spread the message to a wider audience.

In this way the steering group would learn about the perceptions, issues and expectations of its stakeholders and use these views to assist in managing, supporting and influencing the transition to an RRS. It would also improve transparency and hopefully deliver proactive support in the implementation of the strategy.

Preparing for Consultation

As a first step it was agreed that a consultation leaflet and questionnaire should be developed explaining what has happened so far, what needs to happen next and asking the questions:

- Are we all agreed that this is a good idea?
- What should the region hope to achieve from a Regional Resources Strategy?
- What is it for?
- What will it actually do?

- Who would benefit?
- Where are the risks?
- What would success look like?
- How should issues outside its scope be handled such as minimisation and disposal of wastes unviable as a resource and how will they link in with the strategy?
- How much of a step change is it? What needs to be done to make that change? Is it really practical and achievable? What are the conflicts and challenges likely to be:
- Do we know enough about waste management in the East Midlands to be able to assess what needs to be done and what changes would be needed eg waste generation, wastes form, how they are handled, by whom and their destination. If yes where is the information? If no, what are the gaps and how should they be filled?
- What would the change mean in terms of infrastructure and services?
- Which waste types that have been identified as having 'potential' for use as a resource are really practical – ie resources demands, market influences and values – are the priorities identified the right ones? Information to prove this – is it available now? If so where? Can it be provided?
- Would the legislative frameworks in place allow the transition or would they need to be changed?
- How much would it cost to make the change? Would the benefits outweigh the costs?
- Would it be possible to deliver the strategy entirely within the East Midlands or would it be necessary to use facilities/markets outside the region? If so what would be necessary and how should the process be managed?
- What work still needs to be done to answer these questions? Who will do it? How much will it cost? How long will it take?
- Who will do what?
- Local authorities
- Regional agencies
- Industry
- Agencies
- Issues outside the scope of the strategy
- Filling in the gaps

The breadth of information being sought through the consultation exercise was considerable. It was therefore agreed that all material should acknowledge the fact that very few respondents, if any, would be in a position to answer all the questions, but that any contribution would be a welcome and valuable addition to the overall picture.

Electronic copies of the leaflet and questionnaire produced, as well as the full network stakeholder list, are appended.

The Consultation

The consultation was held from the end of January until the beginning of March. The short project timescale meant that a longer period was not possible. This was not a statutory consultation, so no fixed period was required and in addition was intended as a preliminary exercise that would be built on in later stages of the development of the waste to resource strategy. Consequently it was agreed that a longer timescale was not necessary at this stage.

Online consultation

In view of the large area to be covered, the large number of interested parties and the limited budget available, the engagement document and questionnaire were made available online rather than printed and distributed.

After discussion with the webmasters, communication and consultation teams of the key stakeholders such as local authorities and other government agencies to agree the best approach, the EMRA consultation site

formally hosted the consultation, with links from other key stakeholders' sites. The introductory text used on the various websites is appended.

Because of the short timescale it was not possible to arrange for a formal consultation with citizen's panels in the region, but a number of webmasters agreed to email their panels with the news that the questionnaire was online and inviting them to respond.

Stakeholder workshops

Two sets of two workshops were planned with key stakeholders. It was felt that holding two would make it possible to include a wider cross-section of organisations. The intention was to hold each pair on a single day and for the workshops to last approximately two hours.

The first pair or workshops was intended to explore stakeholders' initial responses to the questions identified in the brief, the second pair to identify their reactions to the emerging themes – conflicts, opportunities and recommendations – which would inform the final report.

The workshops were arranged at Leicester University's conference centre for February 19 and 26, 2010 – a two hour session in the morning and a second in the afternoon, on both days. The venue was chosen because of its central location within the East Midlands and its accessibility from the other main centres by a range of transport modes. Free parking was also available on site and the centre is a new building purpose built to current design and access standards.

The steering group developed an invitation list of over 100 from the wider stakeholder network list of more than 500 people and organisations. The list included a mix of stakeholders from a range of different groups including academia, local and regional government, government agencies, the waste industry, other business, voluntary and community groups, representative bodies and special interest groups. The list is appended.

Email distribution

All those on the invitation list were informed about the consultation, asked to fill in the questionnaire and invited to the workshops by email. They were given a choice of attending either workshop on both days – or just one if they were unable to attend two. The consultation document and Word version questionnaire were attached and a link provided to the online document and questionnaire. Phone contact details were provided for anyone who wanted to ask questions. The covering email is appended.

A slightly different email was sent to the remainder of those on the wider stakeholder network list, explaining about the consultation and asking them to fill in the questionnaire, attaching hard copies of and links to the consultation documents and providing contact details. Although the email didn't specifically invite them to the workshops, the attached consultation document incorporated a general invitation to anyone who would like to attend to get in touch. The covering email is appended.

Follow up phone calls

Response to the workshop invitation was very low (fewer than 10 altogether). It was therefore decided that it would be a more cost-effective use of limited resources to cancel the workshops and to follow up the invitations by phone, asking recipients either to fill in the questionnaire or to provide the information over the telephone to allow the researchers to fill it in on their behalf. In this way it was hoped to increase the response rate.

A wider public event

It was agreed by the project steering group that as the main purpose of the consultation exercise was to collect expert information and proposals on a practical way forward for a regional resource strategy, wide public consultation would not be the best use of limited resources at this stage. The time for wider consultation will be when a draft resource strategy has been developed and there are easily comprehensible concrete proposals.

However, it was also agreed that limited public involvement would be of benefit, to test response to the idea of a regional resource strategy and make it possible for a wider audience to put forward good ideas should they wish to do so.

With this in mind, in addition to the online leaflet and questionnaire, a full day, manned, public exhibition was held in the Westfield shopping centre in Derby on February 20. Derby was chosen as central and accessible for people based throughout the region and the popular Westfield centre as a location with high footfall.

A 6'6"x8' pop-up exhibition wall was produced based on the consultation document, explaining briefly about the idea of waste as a resource and providing details about where to find the engagement document and questionnaire. An electronic version of the exhibition wall is appended.

Local media

The project, the half day exhibition and the whereabouts of the engagement document, were also publicised through the local media.

2.3 The Results of the Consultation

2.3.1 Introduction

Despite the efforts made to engage a wide range of stakeholders as well as the wider public, response to the consultation was very disappointing. In all only 15 questionnaires were completed, none of them by members of the general public.

Moreover, public interest in the Derby exhibition was very low, despite being located in a prominent position in the Westfield Centre, with high footfall throughout the day.

Nevertheless the organisations that did respond are major waste players in the region:

- Derbyshire County Council
- Nottinghamshire County Council
- Lincolnshire County Council
- Biffa Waste Services Limited
- VT Group Services Limited
- Alternative Recycling Technologies
- Saint-Gobain PAM UK Ltd
- Storefield Group Ltd
- The Harboro Rubber Co Ltd
- Association for Organics Recycling
- Wastecycle Ltd
- Seagull Recycling Ltd
- Peter Jones (formerly chairman of Biffa) representing North Kilworth CIC
- Institution of Civil Engineers (East Midlands Branch)
- Education for All

They usefully expand the core group of experts prepared to take an active part in responding to the waste minimisation and management agenda in the East Midlands.

The responses received also help to identify initiatives and actions to move the Waste as a Resource agenda forwards.

An excel spreadsheet showing how each of the organisations who responded answered each question can be found in Appendix 1. Analysis of answers by question is below.

It is important to remember that this was a piece of qualitative research. This is unlike quantitative research where a series of closed questions is asked with a choice of fixed answers, usually along the lines of strongly agree/agree/neutral/disagree/strongly disagree. Quantitative research is often used when a strategy has been developed and the aim is to gauge support or otherwise for fixed proposals. It lends itself well to formal statistical analysis and results can clearly be demonstrated visually using graphs and charts.

The aim of this research, however, was to identify ideas and information on a wide range of issues related to the waste as resource agenda in the East Midlands, before work on developing a proposed action plan began.

It was therefore agreed that a qualitative approach would be most appropriate, asking a series of open questions that would allow respondents to express their opinions freely. Consequently a wide range of answers were given and not all respondents answered all questions.

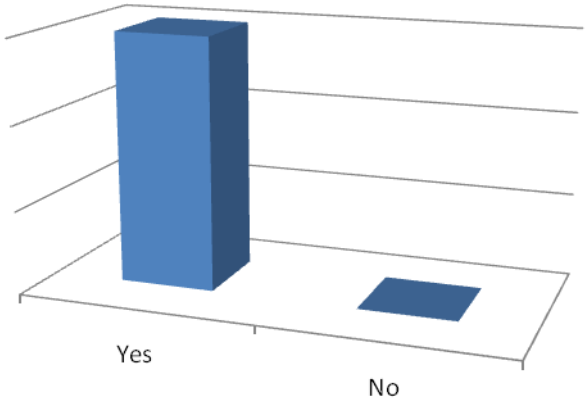
For this reason while the research has been useful – as intended – in identifying key themes and issues to be further explored, it is not statistically robust and the analysis of answers to the questions set out below should be viewed in that light.

2.3.2 Questionnaire Responses

Question 1 - Do you agree in principle with the idea of waste as a resource?

100 % of those who filled in the questionnaire positively supported the idea in principle.

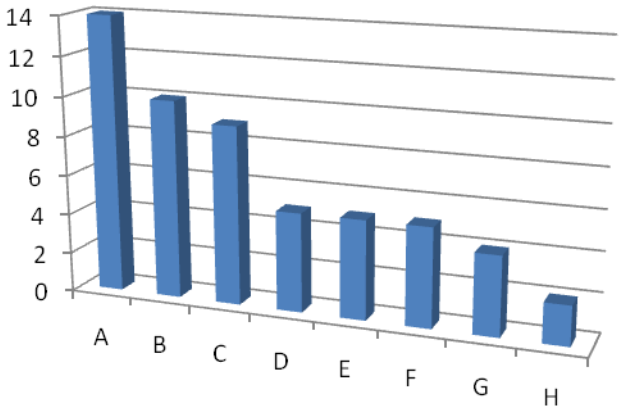
Yes	15
No	0



Question 2 - what would the benefits be?

A variety of answers were given to this question but a number of key themes emerged, with most respondents putting forward multiple benefits. Energy creation, reduction in waste to landfill and contribution to economic growth were the most frequently mentioned, with energy creation cited by all but one respondent.

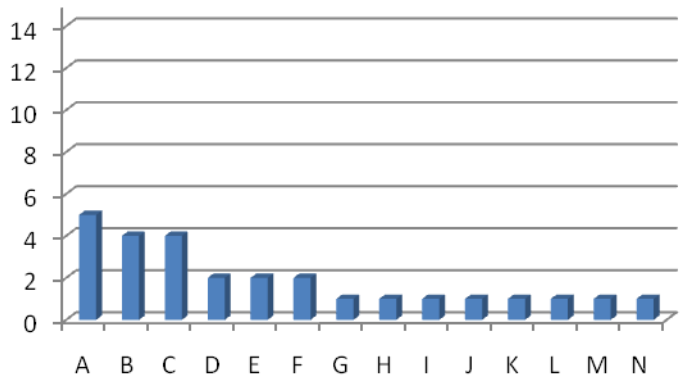
A	Energy creation	14
B	Reduction in waste to landfill	10
C	Contribution to economic growth eg jobs	9
D	Sustainable living eg adherence to the waste hierarchy	5
E	Reduction in greenhouse gases	5
F	Less impact on the environment eg natural resources	5
G	Changed mindsets and perception	4
H	Reduced costs	2



Question 3 - What should an action plan deliver?

No entirely convincing themes emerged in answer to this question. Once again respondents gave a wide variety of answers, the majority only cited by one or two people. Partnership working; education, awareness and best practice advice; and targets, the right framework were the most often mentioned, but even these were mentioned by a third or less of respondents.

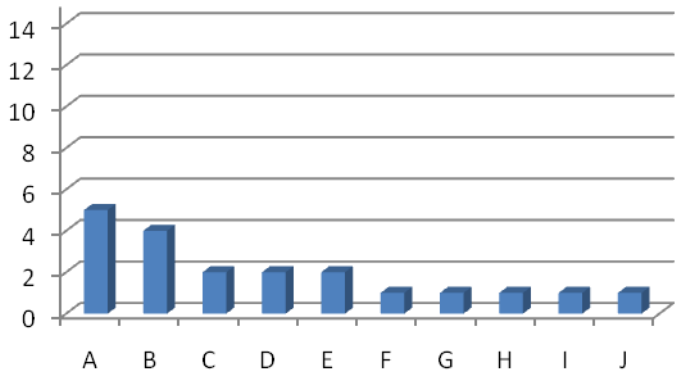
A	Joined up/partnership working	5
B	Public education/publicity/increased awareness/best practice advice	4
C	SMART targets/the right framework	3
D	Business opportunities/joint working eg carbon neutral business chains joined by synergies	2
E	Financial support for small/medium waste companies esp those using innovative methods	2
F	Sufficient infrastructure eg processing capacity	2
G	Help for local authorities to deliver	1
H	Increased recycling and re-use	1
I	Increased environmental awareness	1
J	Increased / maximised recovery of energy	1
K	Movement of waste up the waste hierarchy, with a particular focus on landfill diversion	1
L	Reduced reliance on use of virgin raw materials	1
M	Practical strategies/technology for each waste and collection/separation of waste streams	1
N	Cost benefit analysis	1



Question 4 - How much of a step change do you think will be required?

The majority of respondents agreed that the step change would be significant, but for a variety of reasons, set out below. Changes in behaviour both by waste producers and the public were the most cited. The majority felt the various players are motivated. One respondent didn't answer the question, one said they did not know the answer and only one felt the change would be minimal.

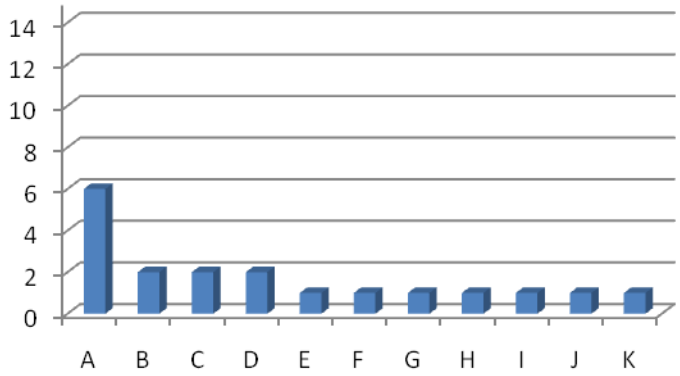
A	A change in the behaviour of waste producers	5
B	A significant step change in public attitude	4
C	Infrastructure	2
D	A technological step change by those dealing with waste	2
E	Funding/support	2
F	Buy in from all partners	1
G	Strong leadership	1
H	A rise in landfill costs	1
I	A major change in legislative restrictions and application processes	1
J	Coherent strategies and solutions	1



Question 5 - Do you foresee any conflicts or challenges?

Once again respondents gave a variety of answers. However the most mentioned issue was the need to change public perception and behaviour.

A	Changing perception and behaviour	6
B	Planning	2
C	Current policy of exporting recyclable waste abroad	2
D	The need for policy to support approach	2
E	The need for incentives	1
F	Legislative restrictions	1
G	Investment in new infrastructure	1
H	Ensuring a consistent approach to recycling and waste collection	1
I	The ability/cost effectiveness of waste disposal companies to use new separation technology	1
J	The cost effectiveness of markets for recyclers	1
K	No	1

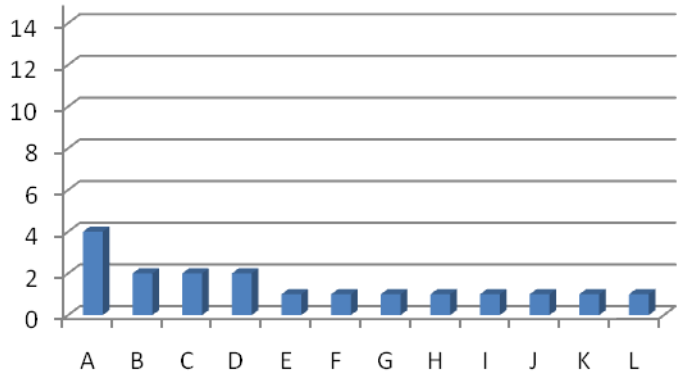


Question 6 - Are there any risks?

Only 12 respondents answered this question. Once again a wide range of issues were raised. The most frequent answer was doing nothing, but this was cited by less than a third of respondents.

A	Doing nothing	4
B	Market stability	2
C	Planning	2
D	Delivery costs are too high	2
E	Technology fails to deliver	1
F	Waste producers fail to take up new techniques and simply pay for landfill	1
G	The changes open regulation loop holes that result in negative environmental impacts	1

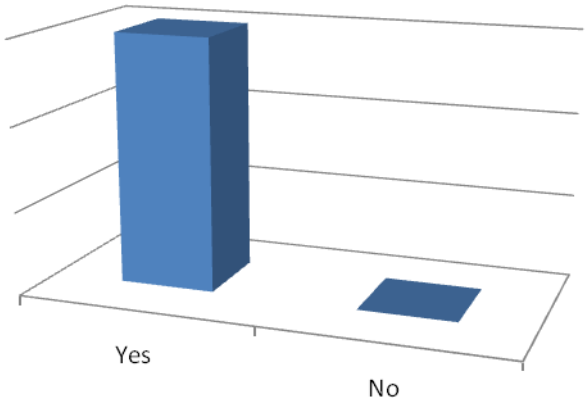
H	EA regulations and restrictions which handicap operators	1
I	Infrastructure not delivered soon enough	1
J	Change of government/policy	1
K	Cultural acceptance	1
L	Emissions shift from landfill to atmospheric end receptors	1



Question 7 - Do you agree with the proposed approach, principles and priorities?

100 % of those who filled in the questionnaire positively supported the proposed approach, principles and priorities.

Yes	15
No	0

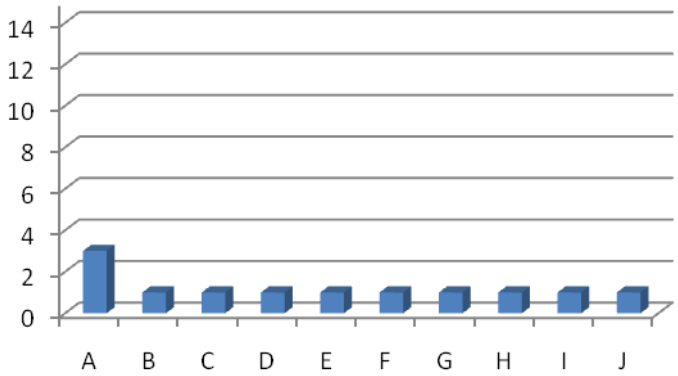


Question 8 - If not, do you have any alternative suggestions?

About half of the respondents felt that detailed proposals were needed before it would be possible to make meaningful comment. A range of suggestions were put forward for issues that needed concrete actions. Awareness-raising was the only topic identified by more than one respondent.

A	Awareness raising and education	3
B	Strategy/plans for collection, separation and recycling for each waste stream	1
C	Specific technologies to be developed and business opportunities to be taken up	1
D	Actions to move up the waste hierarchy	1
E	Management framework	1
F	Innovative use of materials	1
G	How greenhouse gases will be reduced – link waste to carbon	1

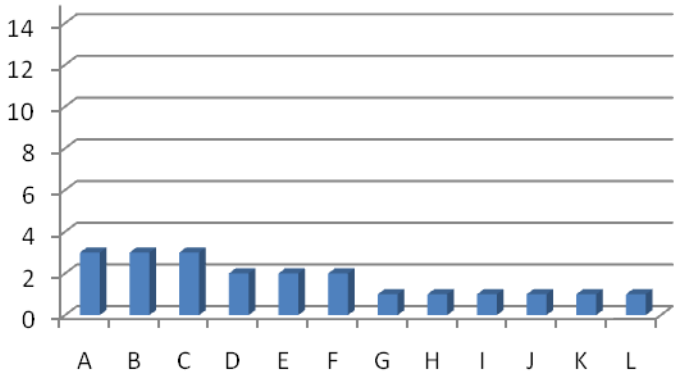
H	Methods for putting waste recyclers In touch with waste producers	1
I	Measures focused on small and medium sized waste producers	1
J	Measures to increase different waste streams so they become viable	1



Question 9 - Who can help with the solution?

Once again respondents gave a range of answers, with no issues standing out as of key importance. The need for everyone to work together, Local Authorities to take a key role and for business and the public to understand and buy into what is needed, were the three answers given most often - each cited by three respondents. One respondent observed that small and medium sized companies with excellent results struggle to access government schemes.

A	Everyone working together	3
B	LAs	3
C	Business and the public in terms of understanding what is needed	3
D	Recycling companies	2
E	Waste contractors	2
F	The Government	2
G	Environment Agency and other principle stakeholders	1
H	Universities	1
I	Overseas best practice	1
J	Industry and professional bodies	1
K	Energy companies	1
L	Specialist consultancies	1

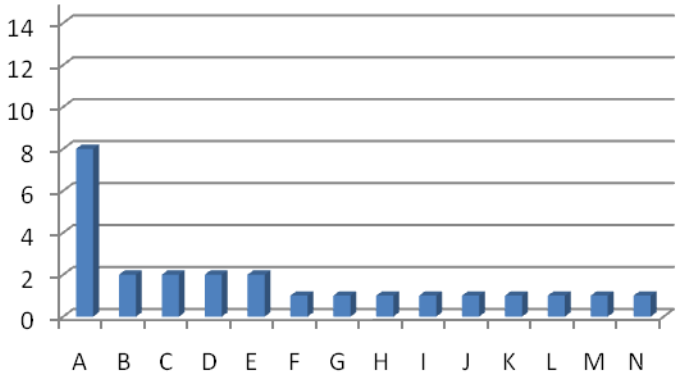


Question 10 - What are the practical steps that need to be taken to achieve the transition?

Only 13 respondents answered this question, one only indirectly with the comment that the scheme must be easy to operate to ensure buy-in. One local authority respondent observed that a plan should not be made at regional level and then just be passed onto local government to deliver. Another said that from a local

perspective the transition already appears to be happening. Once again there was a wide range of answers, but education and publicity targeting waste producers of all kinds including manufacturers and also the public emerged as the key issue.

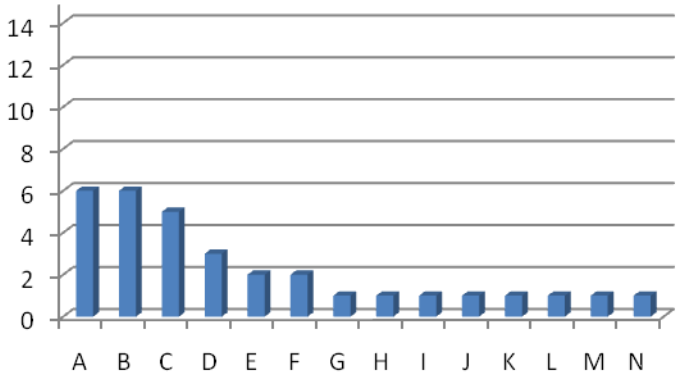
A	Increased education and publicity targeting waste producers with cost effective solutions eg manufacturers to produce items that can be easily recycled and also the public	8
B	Timely determination of planning applications and environmental permits for waste treatment facilities	2
C	Infrastructure eg more recycling locations	2
D	Feasibility studies	2
E	Consultation	2
F	Financial incentives (tax rebates?) for new technology	1
G	Relaxation of regulatory red tape on practical operations which encourage recycling activities	1
H	Data collection; analysis and evaluation	1
I	Supporting policy where necessary eg minimum targets for reuse and recycling on new build	1
J	A strategy for dealing with non-municipal waste	1
K	An effective Board with sub groups for each waste stream	1
L	Clear action plan with realistic targets	1
M	The commitment of all stakeholders to make it happen	1
N	The funding to make it happen	1



Question 11 - What information is needed?

Once again 13 respondents answered this question. One felt that enough information is now available, but it needs to be coordinated better through the EA as a national database. The other respondents' answers were mainly variations on the theme of waste and resource data and public perception. The view of nearly half the respondents was that the basic information about waste streams, projected demand for resources and routes to recycling and reuse still isn't available.

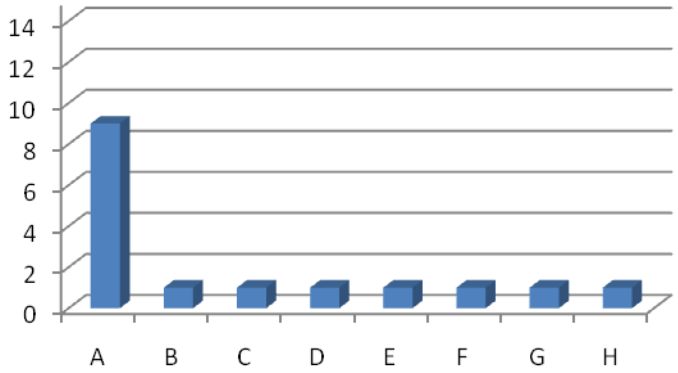
A	Waste streams	6
B	Routes to recycling and reuse	6
C	Projected demand for resources	5
D	Commercial opportunities	3
E	Understanding of public perception	2
F	Education resources, contact points for best practice and "one stop shop" solutions for communities	2
G	What each organisation is planning to do to promote the 'resource agenda' going forward	1
H	Success rates	1
I	Available support	1
J	Recovery options	1
K	Infrastructure required	1
L	The benefits of a resource approach – both financial and environmental	1
M	Access to key decision makers	1
N	Companies recommended to deal with the waste streams	1



Question 12 - How much will it cost?

Out of the 11 respondents who answered this question, 9 said the cost would be unknown until a strategy is developed. Four suggested issues that would need to be taken into account. These are highlighted below. One made a suggestion specific to the cost of an individual school. Only one put forward an estimate per household.

A	Don't know	9
B	Our expectation is around £10,000 per household capital cost	1
C	The aim should be cost neutral for the recycling and waste producing companies - the costs could be offset by recovered energy savings and disposal charges	1
D	Scheme development, consultation and administration costs	1
E	Grants for universities may be required for research/development	1
F	Set up grants for new businesses	1
G	The commercial gains will far exceed the costs, but some pump priming is needed - new technologies and implementing them.	1
H	Costs can be reduced in third sector organisations are used	1

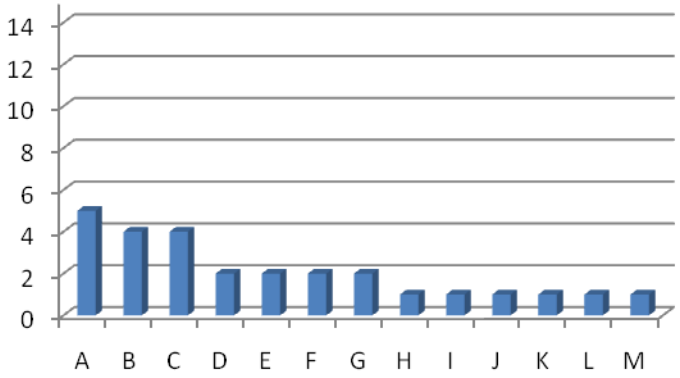


Question 13 - Who should be involved?

Eleven respondents answered this question, once again giving a range of answers. Some simply said all key stakeholders others mentioned particular groups.

A	Local authorities	5
B	All key stakeholders	4
C	Waste industry	4
D	Regional and central government	2

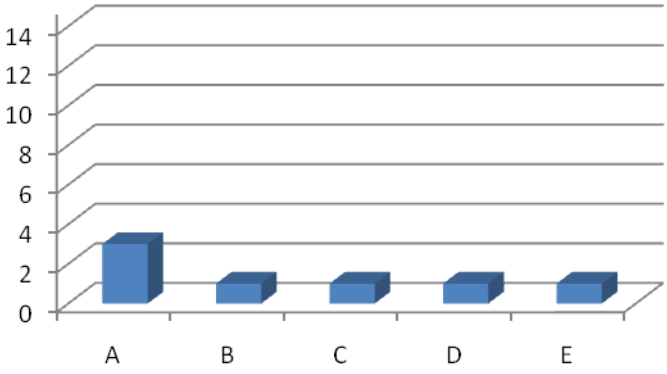
E	The third sector	2
F	All waste producers	2
G	Regulators	2
H	Business advisors	1
I	Chamber of Commerce and CBI	1
J	Environmental campaign groups	1
K	Government agencies	1
L	The public	1
M	Schools	1



Question 14 - Roles and responsibilities e.g. the waste industry, government agencies, local authorities, the wider business community, the voluntary sector, the public

Twelve respondents answered this question, although a number of the answers were generic – 'roles need to be clearly defined' or 'everyone will need to work together' or 'clear messages need to be given.' Consequently no very clear view of who should do what emerged.

A	Local authorities are key eg promoting waste minimisation and also recycling, collection and recovery, encouraging planning applications for waste technology solutions	3
B	Waste industry to encourage innovation for new techniques	1
C	EA to actively assist operators make changes rather than simply enforce regulations	1
D	DEFRA, WRAP, LARAC, NAWDO, etc will need to work with LAs and Contractors from a policy shaping and delivery perspective	1
E	No change to current roles	1



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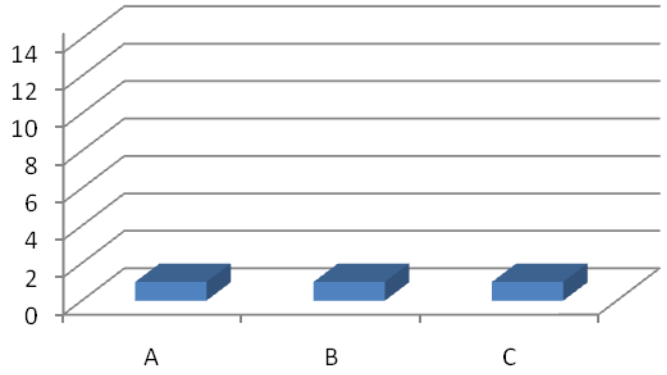
Question 15 - Operations and management i.e. how the approach would actually work

There were only six answers to this question. Of these only three made specific suggestions.

A	Strive for continuous improvement techniques	1
B	Link waste producers to potential users of their waste material	1

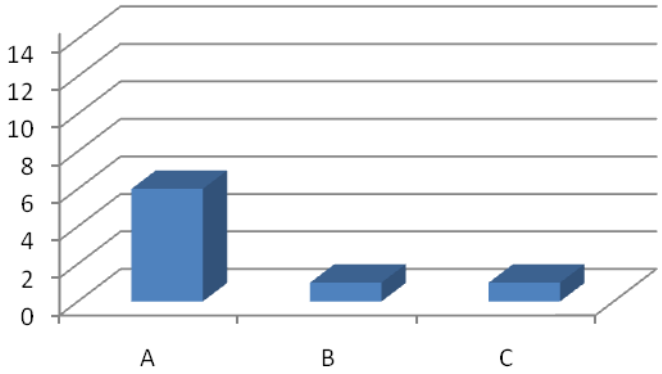
C	Licencing and registration of approved consultants	1



Question 16 - Costs in comparison to the value that might be derived

There were 8 responses to this question. Although expressed differently the view of the majority was that the value would soon exceed the costs. One specified a 6 year payback.

A	The value will exceed the costs	6
B	A detailed balance sheet needs to be completed to estimate cost savings	1
C	Initially it may be necessary for recycling subsidies to be available to enable companies to invest in people and equipment	1



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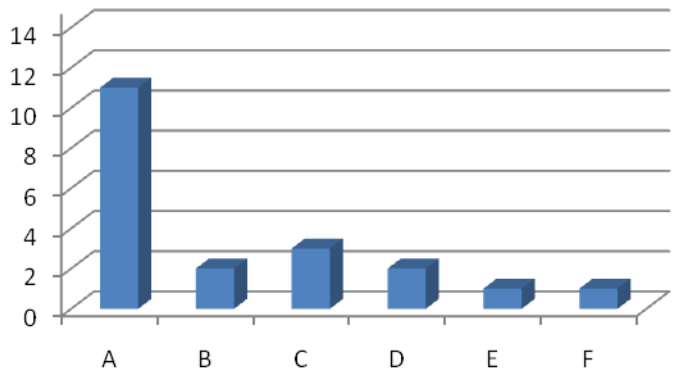
Question 17 - Any need to work beyond regional boundaries

All of the 11 respondents who answered this question agreed that it would be essential to work beyond regional boundaries. Two expressed the view that it is a national problem, two that national policy and legislation would be central, three that sharing best practice is important and one that there should be no boundaries. One of the local authority respondents sounded a note of caution that local strategy could limit the opportunities for wider collaboration.

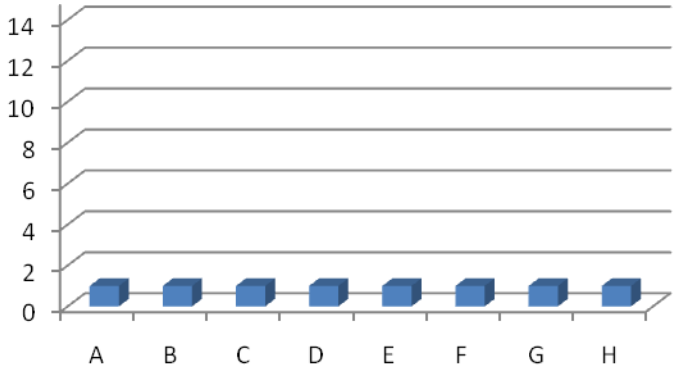
A	Yes	11
B	National policy and legislation will be important	2
C	It is important to share best practice	3
D	It is a national problem	2
E	There is no reason for boundaries	1
F	Local strategy could limit wider working	1



Question 18 - The legislative framework

There were 8 responses to this question, once again putting forward a wide range of ideas. No two answers were the same. All answers focused on national rather than regional or local issues.

A	The EA need to adopt a more pragmatic approach towards regulation	1
B	Legislation should encourage companies to adopt more professional solutions to waste management	1
C	Numerous areas of waste, resource and energy legislation and policy / strategy frameworks	1
D	I am not a great believer in legislation	1
E	LATS compliance	1
F	Banning of certain materials ie wood from landfill	1
G	Minimum targets to be achieved in reuse and recycling from deconstruction, refurbishment and development	1
H	Legislation must be strong and robust yet flexible enough to allow flexibility	1



The Consultation Reponses Summarised

As can be seen, although there was considerable variation in consultation responses, clear themes and broad consensus emerged which will be important in moving towards dealing with waste as a resource in the East Midlands.

However, while clear views were expressed and a number of ideas put forward, very little concrete information about exactly how a regional approach to using waste as a resource in the East Midlands should be organised and managed, was forthcoming.

This was true across the sectors responding – local authorities, large and small players in the waste industry and special interest groups.

Overall the consensus was that the move to viewing waste as a resource will require careful planning and work. All respondents generally supported the proposed approach. The responses can be summarised as:

The benefits

- An improvement in public perception
- Waste becomes a resource not a problem
- The resulting concrete resources - electricity, heat etc
- Reduced demand on natural resources (renewable energy)
- Reduction in landfill waste
- Reduction in emissions and carbon footprint
- Environmental improvements
- More effective recycling
- Jobs in the recycling sector
- Reduced costs for residents
- In tune with the European Waste Directive and other legislation
- Conformity with sustainable production and consumption principles
- Regional economic growth

Success Criteria

- 'Buy-in' from all partners with strong leadership, including co-ordination and unity amongst the LAs.
- Increased reuse, recycling and environmental awareness
- A step change in technology
- A step change in culture/attitude both for the public and businesses
- Increased/maximised recovery of energy
- Reduced reliance on use of virgin raw materials.

Biggest challenges and risks

- Doing nothing
- Failing to change perception and behaviour
- Planning
- Making the process cost-effective
- Legislative restrictions
- Technology fails to deliver

What a strategy must deliver

- The realistic and easy to operate means to deliver culture change
- Realistic targets, incentives and where necessary, legislation
- A joined up regional approach and cross-sector, cross-boundary working
- Education and awareness raising
- Practical strategies/technology/plans for recycling each form of waste and for collection/separation of waste streams.
- Sufficient reprocessing capacity to accommodate the increased quantity of commodities
- Movement of waste up the waste hierarchy, with a particular focus on landfill diversion –a rise in landfill costs
- Help from regional and national government to local authorities to deliver the step change
- Technology and business development
- Financial support for small and medium specialist recycling companies
- A network of business opportunities

- Links from waste producers to potential users of their waste material.
- Coordination of all relevant information in a single database

Cost

- Scheme development, consultation and administration costs
- Grants for universities may be required for research/development
- Grants for new businesses
- Initial funding for the development of new technologies and implementing them.
- Aim should be cost neutral for the recycling and waste producing companies
- Costs could be offset by recovered energy savings and disposal charges
- The value of recycling should far exceed the costs

Who to involve

- Everyone, working together
- New recycling technology companies
- National, regional and local government
- Government agencies
- The waste industry
- Business and public sector waste creators
- Industry bodies
- Universities
- The public
- Regional Chamber of Commerce and CBI; Local Authorities
- Environmental campaign groups.
- The third sector

Immediate tasks

- Clear definition of roles and responsibilities – get everyone on board
- Understanding of public perception
- Comprehensive information on the waste streams, the routes to recycling for each and life-cycle analysis of the various disposal v recycling options
- What works and what doesn't
- Financial and environmental cost/benefit/impact analysis
- Projected demand for resources in the UK
- Areas where resources need to be focussed
- Communication plan and material, public education strategy and material, background and supporting information for present and potential participants
- Comprehensive database of information, contact points for best practise and "one stop shop" solutions, companies recommended to deal with the waste streams etc

3. The Second Stage of the Project

3.1 Introduction

In view of the disappointing response to the consultation it was decided to do further online research and some follow-up interviews with those who responded, to add to the knowledge-base informing the way forward.

However, at the end of March 2010 (when the project as originally conceived finished) the announcement of the general election was known to be imminent and from that point on until after the new coalition government's first budget on June 22, 2010 great uncertainty surrounded many aspects of government policy.

It was known that the regional tier of government was likely to be scrapped, but not exactly how or when these changes would be introduced. Consequently it was not possible to meaningfully assess the implications for the development of a regional waste to resource strategy.

For this reason the follow-up interviews were not carried out until late June and early July 2010 when some of the detail of the new coalition government's approach had started to emerge and respondents were able to begin to express a view on a way forward.

This section of the report summarises the main findings of the research and the follow-up interviews. A more detailed digest of information can be found in Appendices 2, 3 and 4.

The aim of both exercises was to identify, where – if at all – a regional perspective on the waste agenda would still be useful and appropriate, bearing in mind that it is now known that the Government is moving swiftly to implement its localism agenda and remove the regional tier of government. For example:

- The Regional Spatial Strategies have been revoked
- Emda will not exist beyond April 2012 and will be wound down during the intervening period
- Funding for the Leaders Boards has been withdrawn
- Funding has been cut across the board affecting a range of projects and initiatives eg the RTABs

Nevertheless much still remains uncertain. Details are still awaited of:

- The review of UK waste policy announced in June 2010, with proposed new policy setting out strategy, roles and responsibilities not expected until spring 2011
- The new Localism Bill which will be passed by November 2011
- The new planning system based on the Conservatives' Open Source Planning paper which is unlikely to begin to emerge until the autumn
- National and local government funding for the coming years which will not be known until the results of the Spending Review have been announced in October 2010
- The future of the Government Offices which will also not be known until the Spending Review

All those who took part in the follow-up interviews stressed that the views expressed are a snapshot of the moment and that it will not be possible to make a fully informed response until at least next spring when, hopefully, all relevant information about Government policy going forward should be available.

It is important to remember, therefore, that while the information collected provides useful insights on approaches to waste management in the region, it will not be until all the uncertainties are resolved that a fully informed decision can be taken on the best way forward.

3.2 Political Changes that Affect the Project

3.2.1 National Policy

Coalition Manifesto

Working towards a zero waste economy, including:

- Measures to promote a “huge increase in energy from waste through anaerobic digestion
- Encouraging householders to recycle
- Energy from waste through incineration was not mentioned, something which anti-incineration activists have called for more clarity on
- Encouraging “community-owned renewable energy schemes where local people benefit from the power produced”
- The creation of a Green Investment Bank
- A presumption in favour of sustainable development in the planning system although it is not clear whether this means ‘green’ plants will be looked upon favourably

UK Government Review of Waste Policy

A review of waste policy was announced by the environment secretary Caroline Spelman in June 2010, with preliminary findings not expected until the spring. It will look at all aspects of waste policy including household and business waste and recycling services. The terms of reference for the review will be published in the next few weeks, but key issues will be:

- Emphasis on developing "the right infrastructure"
- Each local council developing its own recycling scheme
- More facilities for processing recyclable rubbish in the UK – rather than sending it abroad
- Greatly increase the country's capacity for anaerobic digestion
- Establishing end markets for materials
- New ways of dealing with commercial waste and promoting "responsibility deals" with businesses to drive down the amount of waste created in production and retail.
- Supporting businesses - rather than "stifle" them with red tape - in order to tackle it.
- Simplifying and speeding up the planning system, with a presumption in favour of sustainable development which includes waste management
- Consumers having greater awareness of waste
- Clearer labelling of what can be recycled.

WRAP

On April 1 2010, WRAP became the single point of contact for businesses and organisations looking for support and guidance to improve their resource efficiency. It absorbed six other resource efficiency programmes in England – NISP; Envirowise; Construction Resources and Waste Platform; BREW; Centre for Manufacturing and Reuse; and Action Sustainability.

In view of the many changes underway since the new Government took office it may be that its role continues to evolve in the coming months. This is unlikely to become clear until the review of waste policy is announced next spring.

3.2.2 Regional Policy

The new Government has already made it clear that there is no longer anything compelling regional working. As already stated:

- The Regional Spatial Strategies have been revoked

- Emda will not exist beyond April 2012 and will be wound down during the intervening period, while the future of GOEM is uncertain
- Funding for the Leaders Boards and other networks such as RTAB has been withdrawn
- A new Localism Bill and planning system based on the Conservatives' Open Source Planning paper will rebalance power in favour of local communities
- The new local enterprise partnerships (LEPs) will be led by elected local authority leaders in 'natural economic areas'
- Guidance issued when the RSS were revoked says Planning Authorities should continue to press ahead with their waste plans. For the transitional period they will continue to be informed by the data and information which has been collated by the Regional Waste Technical Advisory Bodies, but this function will be transferred to local authorities.

It will be up to the Local Authorities to decide how, if at all, they wish to continue with regional working.

3.3 International Best Practice

Best practice in waste management is based around the internationally recognised concept of the 3Rs – Reduce, Reuse and Recycle and the waste management hierarchy. The waste hierarchy specifies the order of preference for dealing with waste with priority given to waste reduction, reuse and recycling with the least desirable approach being disposal of waste in landfill

3.3.1 Reduction at Source

Waste reduction refers to the minimisation of waste at source and is the most preferred waste management option according to the waste management hierarchy. Despite this, most Waste Minimisation Strategies adopted throughout the world have set targets in relation to increasing recycling and recovery rates and reducing the total amount of waste sent to landfill as opposed to reducing waste at source. Only newer strategies are beginning to consider the implementation of targets for waste reduction on either a total reduction of waste produced over a given timeframe or on a waste per capita basis.

Waste reduction is harder to measure and quantify than overall quantities of waste recycled, recovered or landfilled. This is because material that does not ever enter the 'waste stream' is never recorded as a waste and as such only limited statistical information is available. It is possible that within the next few years more data may become available on the success of recently implemented waste reduction strategies once available data has been analysed and performance against targets measured.

In Europe, the revised Waste Framework Directive is requiring Member States of the European Union to design and produce waste prevention programmes by December 2013. There is currently discussion amongst Member States as to what levels of waste reduction can be achieved. In general, a level of around 10-15% has been considered achievable due to the ability for a comparatively high number of the European population to undertake home composting of organic material as a relatively high proportion of residential dwellings have gardens and/ or suitable outdoor space.

International waste reduction strategies often revolve around redesigning products and how they are made so as to avoid the creation of waste. For example, multinational industries will often look to reduce packaging as a means of maximising profits and minimising material usage. Often, these products are packaged in the least amount of packaging material that can safely and securely contain the product with no potential for further reductions.

3.3.2 Recycling & Recovery

Those cities employing a mixture of recycling and recovery achieve the highest levels of waste diversion to landfill. In cities such as Singapore, Tokyo and Copenhagen, waste to energy facilities complement recycling measures, to achieve a landfill diversion rate of >75% with a recycling rate of between 20-55%.

Even the world leaders in waste minimisation and diversion from landfill still require disposal of some residual waste materials to landfill. The reduction in environmental impacts associated with disposal of waste in landfills can be reduced through appropriate design and engineering of landfills.

In Europe and the United States (and increasingly elsewhere in the world) strict regulations specify the design and engineering requirements to ensure that pollution emanating from landfill sites is kept to a manageable minimum. Key features of a modern engineered landfill are:

- Installation of basal and side liners that prevent leachate polluting ground water
- Installation of temporary and permanent capping systems, after waste deposits.
- Installation of leachate collection and treatment systems.
- Limiting the amount of rainfall entering the waste body thereby limiting the volume of leachate production.
- Containing and extracting landfill gas to prevent odours escaping and causing a nuisance.
- Regular and ongoing monitoring (even once closed).

The primary motivation of any waste strategy must therefore be to reduce waste at source. The success of the implementation of the 3Rs programme will depend on:

- Strong and co-ordinated governance eg codes of practice and legislation
- Having sufficient waste infrastructure in the form of collection systems that support source segregation and appropriate recycling and recovery technologies
- Creating an economic environment that promotes waste reduction, reuse and recycling as opposed to disposal through the 'polluter pays principle.' This is an extension of the producer responsibility principle not only shifting responsibilities to the producer but also the environmental costs associated with managing and disposing of wastes.
- Communication of the programme and its importance to the public so that they are aware of how their actions can make a difference.

3.3.3 Case Studies Demonstrating this Approach

Austria

Austria has been chosen as a case study for waste reduction due to the effective approach that was taken to reduce wastes such as construction and demolition waste and packaging waste.

The Waste Prevention and Recovery Strategy of Austria 2006-2011 aims broadly to promote resource conservation and reduce the generation of greenhouse gas emissions, hazardous waste etc.

Extensive scientific research on construction and demolition waste, industrial waste, recycling and extended producer responsibility was commissioned and stakeholder groups extensively consulted. As a result, the Strategy was developed and focuses on issues such as:

- Minimisation and reuse of construction and demolition waste
- The development of reusable packaging

The Strategy is implemented locally through the Austrian Provincial Waste Management Plan which calls for authorities to:

- Analyse waste generated locally and design and implement waste prevention campaigns accordingly
- Stimulate public awareness
- Minimise waste in public works and increase the use of recycled materials
- Introduce environmental management systems to local businesses to support commercial and industrial waste reduction

Japan

Japan created its waste management initiative 'A Sound Material Cycle Society' as part of the 3R Initiative launched at the G8 Sea Island Summit in 2004. The definition of a 'Sound Material Cycle Society' is one where 'environmental load is reduced' and the 'consumption of natural resources is minimised'.

Japan's 3Rs are heavily weighted towards waste prevention. The emphasis of the Japanese programme from the outset is on eco-design and life-cycle thinking in the reduction and reuse sectors of activity. Recycling considers waste as a resource itself. The plan was developed in response to the increasing volumes of waste being generated in Japan through on-going rapid industrial development and the limitations imposed by Japan's relatively small land mass. Key features of the 3R initiative include:

- A governing framework of legislation focussing on waste management including: green procurement, packaging and construction and demolition waste.
- Increasing business and public awareness In the 'First Progress Report of the Fundamental Plan for establishing a Sound Material Cycle Society' produced by the Central Environment Council in February 2005, it was reported that an approximate 12% reduction (to approximately 50 million tonnes) in waste had been recorded in the year 2002. The report went on to say that while wastes produced by business entities decreased, waste produced by households did not significantly decrease.

California

California is an affluent US state that generates a high quantity of waste and set a challenging target to divert 50% of its waste by 2000 which was accompanied by the creation of various programmes and strategic directives to ensure that this recycling rate was maintained and enhanced.

In 1989 California introduced a landmark 'Integrated Waste Management Act' which required that the state's 450 jurisdictions divert 25% of waste from landfill by 1995 and 50% by 2000.

To this end, the California Integrated Waste Management Board (CIWMB) was created to oversee the 92 million tonnes of waste the state creates annually. By 2005, California was diverting 52% of its waste from landfill. The CIWMB provided comprehensive information on a variety of media (such as websites, flyers, etc) to provide guidance, support and advice to stakeholders to increase awareness.

Western Australia

The waste strategy for Western Australia published in March 2010 is designed to move Western Australia to a position of best practice in waste management. The strategy is firmly based on the waste hierarchy and is designed to tackle a range of key challenges, many put forward by the public who have played a major part in shaping the strategy:

- A focus on education and public information
- Empowering and supporting local government and the private waste management sector
- Pushing those who produce goods that end up as waste to take responsibility for their products, for instance with product stewardship schemes for:
    - packaging and containers
    - glass
    - domestic hazardous materials and products containing hazardous materials, including chemicals, paint, fluorescent lights and batteries
    - electronic waste
    - tyres
    - mattresses
    - used oil
- Increasing resource recovery from commercial, industrial, construction and demolition wastes, agencies and government owned instrumentalities will be required to take construction and demolition waste stream for use as raw material.
- The development of local markets for recovered materials

Welsh Assembly

A zero waste strategy has been launched by the Welsh Assembly Government containing a 70% recycling and composting target. Towards Zero Waste is an update of the Welsh Assembly's 2002 Wise About Waste strategy, which provides a policy framework to deliver an ultimate target of becoming a zero waste society by 2050. The strategy sets out a framework of policies aimed at meeting waste reduction targets, these will include:

- The wider uptake of separate food waste collection schemes for all households in Wales
- An anaerobic digestion plant building programme with funding of £26 million
- The provision of smaller bins to encourage recycling
- A policy 'preference' for kerbside sorting of waste streams by collection contractors
- A series of sector plans, which will provide more specific waste reduction strategies for individual waste intensive sectors eg municipal waste, retail, construction, infrastructure

Scottish Government

Scotland's Zero Waste Plan launched on June 9 2010 sets out the Scottish Government's vision for a zero waste society. This vision describes a Scotland where all waste is seen as a resource; waste is minimised; valuable resources are not disposed of in landfills, and most waste is sorted, leaving only limited amounts to be treated.

To achieve this vision the Plan sets out a series of measures, particularly:

- Development of a Waste Prevention Programme for all wastes, ensuring the prevention and reuse of waste is central to all actions and policies
- Landfill bans for specific waste types to ensure the value from these resources is captured
- Separate collections of specific waste types, including food, to avoid contaminating other materials
- Two new targets to apply to all waste: 70 per cent target recycled, and minimum 5 per cent sent to landfill, both by 2025
- Restrictions on the input to all energy from waste facilities encouraging greater waste prevention, reuse and recycling
- Encouraging local authorities and the resource management sector to establish good practice commitments and work together to create consistent waste management services
- Improved information on different waste sources, types and management highlighting further economic and environmental opportunities
- Measure the carbon impacts of waste to prioritise the recycling of resources which offer the greatest environmental and climate change outcomes

Zero Waste Scotland is the organisation created to support delivery of the Zero Waste Plan. It will serve as a one-stop-shop for businesses and individuals looking for advice or support on how to use resources more efficiently, reduce waste and recycle more.

Hampshire 'More from Less'

In Hampshire, the County Council has been developing a resource management approach since 2001. They have established a Natural Resources Initiative to coordinate partnerships in the areas of water, biodiversity and waste, and to initiate new ones for soil and energy. The missing resource focus was materials and it was agreed to develop a material resource strategy in conjunction with the major stakeholders in the county. Experience during the 1990s in introducing a major municipal system and infrastructure guided the approach. However, delivering resource management is more complex and hands off, relying on gaining the commitment of many different organisations.

The aim is to recover 60% of materials in the county. Percentages vary by sector, with some recovering very high levels whilst other material streams are more difficult.

- The minerals and waste local plan provide will detail criteria and sites to enable new resource processing to take place
- District and unitary Local Development Frameworks will incorporate appropriate policies and guidelines
- Policies at regional level will make recovery happen
- All the local authorities moving from the waste to the resources agenda
- LAA and Local Public Service Agreement (LPSA2) targets will be used to deliver demand via capital programme procurement to stimulate recovered construction materials
- Resource management is being considered as a corporate strategy
- A critical path guides and links all the various levels of activity, from strategic to the tactical.
- Communication is critical: regular meetings of a wide range of groups, organisations and professions is needed as well as other means of effective communication such as websites and emailed newsletters.

The Updated Regional Waste Strategy for England's Northwest

The updated waste strategy for the Northwest published in April 2010 adheres to the waste hierarchy and the overall approach has been set out as a series of key messages, to be delivered through the implementation of Policy Statements and an Action Plan. These can be summarised as:

- Ensuring sustainable consumption and production
- Maximising the economic value of commercial, industrial, construction, demolition and excavation waste

- Developing markets to exploit the economic value of waste, particularly in the context of its use as a fuel
- Finding opportunities based on robust evidence to stimulate market development by reducing waste to landfill
- Integration of waste management facilities into most types of development
- Investment in necessary higher levels of skills and education
- Sustainable procurement
- Harnessing the enhancing existing skills and expertise in Waste Disposal Authorities and other organisations

The strategy also identifies a number of issues that still need to be addressed, particularly:

- Guidance for local authorities on the development of Resource Management Plans
- The development of sub-regional and local targets to assist waste reduction
- Research into opportunities for biodegradable waste collection and secondary treatment strategies at subregional and local levels
- Monitoring frameworks to determine the capacity of waste management facilities
- Development of higher education and skill training courses in the region
- Development of policies for agricultural, hazardous and radioactive waste streams
- Review of markets for recovered and re-processed materials

Towards Resource Management - The Northern Ireland Waste Management Strategy 2006 – 2020

The Northern Ireland Waste Management Strategy is firmly founded on the principles of the EU Waste Framework Directive, particularly the “waste hierarchy”. In the new Strategy, greater emphasis is placed on the importance of waste prevention and of breaking the link between waste production and economic growth. The need to increase waste recycling and recovery through a mixture of approaches is reinforced, including the renewal of recycling targets, focused awareness campaigns and the possible introduction of incentive schemes.

A strategy for identifying and procuring the right infrastructure is set out - including new waste disposal and treatment facilities. Energy from waste will be a necessary component of the mix of technologies required, particularly in light of the urgent need to develop energy from renewable sources.

3.4 Review of Key Literature

Extensive online research has been carried out to identify key existing research reports, strategies and other documents that could be used to inform the project. The short summaries of relevant literature below highlight points of particular relevance the project. Further information on each of the documents can be found in Appendix B, together with the location of the full documents online.

3.4.1 Material and Market Development Recommendations in East Midlands, WRAP 2007 (updated April 2010)

The report says that the region does not have significant, indigenous reprocessing infrastructure in the same way that other regions have. Nevertheless it concludes that the need for a bespoke regional market development programme has not been demonstrated. To take one forward, however, it would be necessary to:

- Arrange formal co-ordination between delivery organisations
- Carry out a full inventory of the location, capacity and accepted waste streams at material recovery facilities and transfer stations, and the potential for these facilities to increase their treatment capacity.
- Material flows for tyres and plastics on a regional basis.
- A full inventory of plastic manufacturing businesses within the region.
- Structure of the hospitality sector within the region and typical waste arisings from these types of businesses.
- Identify which materials specifically could benefit from support from market development activities and where in the region support is required.
- Increase and improve the collection rates of materials (e.g. tonnage, quality, source or material, type of material).
- Increase the processing and reprocessing capacity (e.g. processing to produce a quality of material suitable for use by manufacturing process, creating a new product from recyclates).
- Encourage the procurement of products with a recycled content, to drive the demand for products and fully close the recycling loop.

Tables summarising the main issues for recycling, the barriers to increasing recycling and the opportunities for increasing recycling in the region, together with sector summaries can be found in Appendix B.

3.4.2 Study into Waste Management Capacity in the East Midlands, EMRA 2009

The report concluded that the region as a whole has sufficient capacity to manage the waste it produces in 2010, 2015 and 2020. The only sub-region that was not self-sufficient was Leicestershire. With the addition of the capacity from sites granted planning permission and those awaiting determination, the over-provision of capacity in the region would range from 5.6 million tonnes to 8.2 million tonnes in 2020.

82% of site operators were unwilling or unable to provide an estimate of capacity in the longer term as sites do not operate over a planned period. Lack of space or perceived problems in obtaining planning permission were cited as the biggest barriers to expansion.

3.4.3 Meeting the UK Climate Change Challenge: The Contribution of Resource Efficiency, WRAP November 2009

The report concluded that there is considerable scope for reducing emissions by ensuring:

- Households use material goods for their intended life and do not dispose of them while still useful. Lifetime Optimisation and Restorative Economy are successful strategies
- Edible food is not treated waste
- Industry understands the feasibility of resource efficiency strategies in individual sectors
- National support and policies are in place to balance winners and losers in pursuing this approach

3.4.4 Environmental Benefits of Recycling, WRAP 2010 Update

WRAP's 2006 report Environmental Benefits of Recycling was updated this year to explore the new waste management options and streams emerging in the intervening years. The latest findings reinforce the key conclusion of the first report that recycling of paper/cardboard, plastics and biopolymers gives more environmental benefits than other waste management options. For wood, textiles and more innovative technologies such as gasification, pyrolysis and anaerobic digestion more studies are needed to be able to make firm conclusions, although early results are encouraging.

3.4.5 Economies of Scale - Waste Management Optimisation Study, Defra 2007

The report concluded that while many types of waste management facilities get less expensive to run on a simplistic basis as the capacity increases, there are other factors such as transport and planning that increase costs as scale increases and thus there are optimal scales of operation that vary with the technology type and the type of area that is host to the facility. Political, social, economic and legislative factors all have an effect and a considerable number of barriers to collaboration and integration were identified which focussed on authorities having differing objectives, perceived loss of service control and performance and lack of understanding.

Case studies from waste partnerships in Shropshire, Norfolk, West Sussex, Halton, Warrington and Essex all clearly demonstrated substantial cost savings and environmental, socio-economic benefits from integrating services and aggregating local authorities. However, given the geographic scale of the Essex waste partnership it was concluded that full integration would be marginally more expensive and offer less benefits than a two-area scenario. This may demonstrate the point at which diminishing returns are experienced.

The practical optimal scale for the differing technologies was found to be:

- Energy from Waste (EfW) (400ktpa)
- Mechanical Biological Treatment with Refuse Derived Fuel (MBT-RDF) (200ktpa)
- In-Vessel Composting (IVC) (50ktpa)
- Green Waste Windrow Composting (GW Windrow) (50ktpa)
- Materials Recycling facilities (MRF) (50ktpa)

The modelling assessments discounted the effects of commercial waste collection, however if included, it would have the effect of improving the efficiency of collections as more waste would be available for collection in a smaller area. This would reduce transportation distances; because the area needed to collect the same proportion of waste would reduce. Whilst the practical optimal scale of the technology alone would remain the same, transportation costs would reduce at each facility scale. This may increase the scale at which transfer stations become more cost effective, particularly in rural areas, and could remove the need for transfer stations in urban areas at very large treatment facility scales.

3.4.6 Third Sector: Investment for Growth, WRAP November 2009

The report concludes that Resource Recovery Third Sector Organisations could make a very significant contribution to a thriving third sector and the delivery of a range of cross-cutting benefits that would be of tangible value to communities and the local authorities that aim to support them, including a very significant contribution to compliance with the revised WEEE Directive and diversion of recoverable material away from landfill. To make the most of this potential the RRTSOs need.

- Support to achieve value for money in their finance arrangements
- Advice on how to gain access to the materials and markets that they need to thrive
- How to increase their positive impact on the communities they serve.
- Opportunities created through subcontracting or to act as service delivery and development hubs

3.4.7 The Case for a Resource Management Strategy, ICE 2006

This study argues that existing waste management strategies are largely an end-of-pipe response to the 122 million tonnes of municipal, commercial and industrial waste produced annually in the UK. National waste strategies have been designed to comply with landfill diversion and recycling targets. No regard has been

given to whether this waste can be used more effectively as a resource. Repositioning them as resource management strategies, would provide opportunities for large-scale benefits to be created by decoupling economic growth from both waste generation and CO2 emissions.

3.4.8 How to Deliver a National Resource Management Strategy, ICE 2007

- Establish a national leadership body drawn from the relevant government departments and an agent to join up people who need to make decisions and show how a resource management strategy can be delivered at a regional and local level
- Collect the data to develop business cases for new systems and technologies and the investment in new facilities and reverse logistics systems.
- Enable options for delivery by giving business the detail they need in order to invest and by getting the private sector to share non confidential data with strategic planners.
- Use public sector leverage to create demand by sending a clear signal to industry with a commitment to use a percentage (at a reasonable and attainable level) of recovered construction material.
- Develop action to overcome barriers to change by creating links between leadership and the organisational capacity to make things happen.
- Gain commitment from key people to deliver a strong signal to the market, which is capable of responding by delivering material to specification and price. A new way of working
- Government and business are used to working flexibly in a range of organisational models: partnerships, joint ventures, agreements, coalitions, alliances and formal contractual arrangements.

Some existing organisations would be ideal candidates for the new agency role. The two organisations with the greatest expertise and credibility are the EA and WRAP. The new agent has to do more than the current players as it will have to consider, facilitate and make change happen across all sectors. It will also be the means to remove real and perceived barriers to market development in the recovered materials arena. The agent must also have the authority to influence areas of governance, especially at regional and local level:

- Material flow management (collecting and providing data at national, regional and local levels)
- Public sector corporate governance, including strategic planning for procurement of capital programmes
- Local government in respect of built development, contract management (land use planning and material resource management opportunities) and community liaison
- Assisting the private sector to implement new systems and facilities
- Liaising with the specialist groups, networks or professional organisations and community groups. Seeking a tactical local response and responding to and promoting new ideas and technological innovation
- Advising the government about the funds and pump priming mechanisms that are needed and helping to ensure they are put into place

3.4.9 National Study into Commercial and Industrial Waste Arisings, EERA 2009

In 2006, the North West Regional Technical Advisory Body commissioned a study from consultants Urban Mines to find out how much waste was produced in that region. In 2009, the Chairs of all the Regional Technical Advisory Bodies (RTABs) in England agreed to use this work to calculate how much waste is produced in each of the other English Regions. The study was funded jointly by all the English RTABs (other than the North West) with a steering group led by the East of England.

The full report, together with links to a spreadsheet for calcultating forecasts and the data tables for each region can be accessed through the EMRA website at www.emra.gov.uk/publications/housing-planning-and-transport/waste/national-study-into-commercial-and-industrial-waste-arisings.

3.5 Other Useful Ideas and Insights

The information summarised in this section of the report was also identified during the online research. While not falling into the key literature category set out in the previous section, it does provide a range of insights and ideas which can usefully contribute to the project and is therefore included here.

3.5.1 Waste Suggestions from the Public (Online Discussion Fora)

- Make local authority recycling regimes the same and able to recycle everything possible
- Tax all plastic containers differentially (producers and users) according to how easy it is for that type of plastic to be reused or recycled, and the revenue ringfenced to support reuse and recycling.
- Municipal composting bins.
- Modern energy from waste plants which are as clean as any other conventional thermal energy plant.
- The carrot and stick approach to dealing with waste rewards people to produce more recyclable waste, rather than take steps to reduce the amount they produce in the first place eg refundable glass bottles, indicate the price of plastic packaging on all fruit, veg, meat and bakery items.

3.5.2 Solutions Simply for Sustainability, Community Solutions with Global Impact North Kilworth CIC Business Plan, 2010

North Kilworth (in South Leicestershire) has established a Community Interest Company (CIC) and plans to set up and operate an anaerobic digestion facility (10-15K tonnes of material throughput) that will provide energy for sale to the National Grid. Through the gate fees charged for material, the sale of electricity and tultimately the by product digestate an income stream will be generated for the CIC. The CIC profits will then be reinvested into the Community through the provision of fund for Village Projects.

The CIC intend to fully involve the Environment Agency, water utility and other relevant regulatory bodies. The plan also depends on sponsorship from housing developers, energy generators and possibly, waste management companies to provide leveraged match funding for grant applications in exchange for equity participation in the CIC and a long term yield in terms of dividends proportionate to their contribution.

The wider vision is to create an exemplar low carbon community, to demonstrate a practical framework for moving to a “one Planet lifestyle” for others to emulate in terms of energy, food, employment and the environment.

The anaerobic digestion facility is intended to provide the funds to enable other projects. The thinking behind the plan is that the viability of such village based systems is becoming increasingly attractive because:

- Around 35% of UK traditional coal and nuclear power generation facilities are being decommissioned
- Although the intention is that the shortfall will be filled by lower emissions gas fired combined Heat and Power plants, there are political risks around gas supply mainly dependent on Russia/Georgia or Oman
- There are question marks around the capacity of centralised wire and pipe distribution networks being able to cope with large numbers of distributed systems and major investment will be needed
- Farmers face growing pressures to cease the disposal of untreated animal slurries to land due to the build up of nitrates salts in the soil
- Organic routes to nitrogen fertiliser via aerobic and anaerobic digestion of waste organic material becomes more viable as chemical nitrogen costs pass the £1000 per tonne level.
- Annual increases in the tonnage tax of organic material sent to landfill are stimulating interest in alternative technologies that were previously uneconomic. By 2012 Landfill gate fees plus tax will exceed £100 per tonne.
- The Waste Resources Action Programme has produced evidence that 7 million tes of food waste (250 kg per house) is sent to landfill each year. DEFRA are considering an outright ban on organic material to landfill..

- Recognising the non-competitiveness of landfill many waste companies are ceasing investment in that exit route and are instead seeking to identify alternative treatment technologies.
- Leicestershire County Council (as the Waste Disposal Authority) is now tendering a technology intensive PFI contract for large centralised facilities to process household waste which will incur significant road miles for waste movement.
- County Councils with responsibility for waste disposal are also facing targets for reduced carbon impacts and are looking at lower carbon impact routes for waste

Peter Jones formerly a director of Biffa is the driving force behind the CIC and believes strongly that such community based initiatives have a major part to play in developing a sustainable and resource-efficient society. The full North Kilworth CIC Business Plan can be found at Appendix 4.

3.5.3 Research Paper on Waste Partnership Working

The evidence base to support partnership working is poor and the impact and potential of partnerships in the waste sector has not been analysed and assessed. This paper aims to start to address the gap in knowledge. It focuses on partnership working for the management of municipal waste, and identifies and characterises a range of different types including partnerships between local authorities and between local authorities and their service providers. It concludes that policy rhetoric promoting partnerships for delivering sustainable resource management and as a local governance mechanism is not borne out in practice and should be treated with caution.

3.5.4 ICE Work on Waste and Resource Management

The Waste and Resource Management Panel focuses on moving the UK towards a resource management economy and the role of the sector in carbon management.

In 2004, ICE estimated that by 2020 the UK will need between 1500 and 2300 new facilities to recycle, reprocess, treat, and dispose of its waste at a cost of between £10Bn and £30Bn. They believe that moving away from burying valuable material in landfills presents an opportunity to recover more value from waste, creating jobs and reducing the burden of the environment.

ICE is currently conducting further research and is calling for evidence to build a report on the current standing of the waste and resource management sector, particularly as EU landfill targets become binding. The latest State of the Nation report will be published in November 2010.

3.5.5 The Demolition Protocol, ICE, London Remade and Envirocentre (current)

In tonnage terms, construction and demolition waste is the UK's largest waste stream, accounting for 90M tonnes of material per year in England and Wales alone. Therefore to drive the recovery of demolition material and the use of recycled materials in new structures, ICE, London Remade and Envirocentre, have developed the Demolition Protocol which sets out how the planning system can be used to improve the resource efficiency of construction. There is also a code of practice for the planning and design of waste and resource management facilities within the built environment in the UK and a site colour-coding scheme for construction waste designed to raise waste awareness and encourage waste separation at source.

3.5.6 Warning over Landfill Space, Local Government Association July 2010

Britain could run out of landfill space in less than eight years' time, according to a report by the Local Government Association. Their research shows that 57 million tonnes of waste were sent to landfill in England and Wales in 2008 of which 18.8 million tonnes was household waste – 2 million more tonnes than any other country in the European Union. With just 650 million cubic metres left in landfill capacity Britain is set to reach its landfill limit by 2018. The LGA is calling for councils to work with residents to decide the best approach to making sure as much rubbish as possible is recycled.

3.5.7 Re-use Rather than Recycling

The UK national waste strategy states that re-using, rather than recycling discarded items should be the priority. Ideas that are proving successful at reducing the amount of waste sent to landfill include on-site shops at recycling centres and Council's making a point of passing on useful items to charities such as the

Furniture Re-use Network which represents 350 charities and non-profit groups involved in re-use across the UK.

3.5.8 WRAP/AWM Programme

WRAP and AWM (Advantage West Midlands) are working in partnership to develop the commercial and industrial waste recycling sector in the West Midlands. The WRAP AWM Programme gives recycling businesses in the region an opportunity to benefit from funding and practical support. The programme is an exclusive package of support worth £5.4 million, including grants, practical advice and business development services. Delivered by WRAP on behalf of AWM, the Programme has been designed to increase the capacity and scope of recycling services dealing with commercial and industrial (C&I) waste.

3.5.9 Quality Matters

A key theme emerging from WRAP's (Waste & Resources Action Programme) third international markets conference that took place in London recently was that quality is increasingly important to the whole recycling industry supply chain, opening up opportunities for UK businesses.

3.5.10 Waste to Resources

Waste to Resources is a programme designed to help North East businesses with waste and energy management. It is part funded by One North East with support from Defra's Business Resource Efficiency and Waste (BREW) Programme. A dedicated website - www.wastetoresources.co.uk – is a free service designed to make it easier for businesses in North East England to find support for waste management, resource efficiency and energy saving, whether they want to cut the costs of waste disposal, save energy, exchange or trade waste, or get help to recycle. Incorporating a diagnosis tool to identify possible areas of opportunity it suggests useful organisations and and people in the North East. It also provides case studies of ways other businesses in the north east are saving money while reducing environmental impacts. Read their stories and find out how to follow their examples.

3.5.11 The Waste Collection Commitment

WRAP has joined with the Local Government Association to invite local authorities to make a commitment to the first set of principles for a good waste and recycling service based on the views of the public. The Commitment aims to help local authorities improve residents' satisfaction with how their rubbish and recycling is collected and ultimately boost recycling rates. Based on research on residents' views about what they like and dislike about their existing services and in consultation with local authorities, the Waste Collection Commitment sets out in plain English the principles which should underlie domestic waste and recycling collection services.

3.5.12 State of the Nation: Infrastructure 2010, Institution of Civil Engineers June 2010

The report concludes that some elements of the underlying infrastructure that keep Britain ticking over are creaking at the hinges and need an urgent overhaul to prevent further risks to the environment and the economy. It grades a variety of key sectors and those that have a direct impact on the environment - like energy and local transport – only get a grade D. "The UK relies on considerable imports of energy from other countries, and is heavily dependent on fossil fuels." Waste and resource management get a grade C.

3.5.13 Planning Problems for Waste Recycling Group

Waste Recycling Group (WRG) has had to struggle to extend the Eastcroft Energy from Waste facility. In September 2006, Nottingham City Council refused WRG's application for a third line, which would have allowed Eastcroft to deal with an additional 100,000 tonnes of rubbish every year, on the grounds that it would harm the regeneration of the surrounding area.

3.5.14 Planning for Resource Sustainable Communities - A Code of Practice, ICE and Biffaward (as downloaded June 2010)

The Code of Practice on Waste Infrastructure and Management has evolved to respond to increasing pressures for guidance on the planning and design of waste and resource management within the built

environment in the UK. The Code is aimed at those with responsibility for providing waste management infrastructure, (local authorities, architects, consultants, contractors etc). The Code extends to all types of development, such as housing estates, commercial/industrial parks or a combination of land uses and is a "live" document that is updated to encompass innovation and developments related to the planning and design of waste and resource infrastructure for communities.

3.5.15 Zero Greenhouse Gas Emissions

A new report says Britain could cut greenhouse gas emissions to zero by 2030, creating hundreds of thousands of new jobs and regaining energy security. The right mix of wind power, hydro, solar, biomass - plus an intelligent grid to manage demand, can 'keep the lights on' and supply the energy the country needs– with major win-wins across the economy." Paul Allen CAT

3.5.16 Go-ahead for Leicester Recycling Facility, Planning, 9 July 2010

Construction of one of the country's largest materials recycling facilities is set to go ahead at a former sports ground in Leicester after Landmark Planning secured permission for the project for recycling specialist Casepak. Construction of the 18,580m2 building at Sunningdale Road will go ahead later this year and is due to be in operation in 2011.

3.5.17 North East Sustainable Resources Board, Waste Management News, January 2010

A North East Sustainable Resources Board was established in January 2010 to drive North East waste policy, with funding from both the public and private sector, including £50,000 from One North East to support its administration.

A public/private sector partnership including local authorities and regional government and chaired by former Cabinet Minister Jack Cunningham, it was established to help the region improve its recycling and reuse capability, reduce the amount of waste it produces and make it a leader in waste and resources management.

Its first stated aim was to develop a Regional Resource Management Plan as an integral part of plans for a regional strategy for the North-East. It also expected to act as the main channel of communication between Defra's Waste Strategy Board and regional partners, with a remit covering household, commercial and industrial, construction and demolition and hazardous waste, as well as the third sector.

Nothing has been added to the Board's website since the initial announcement on Tuesday 12 January.

3.5.18 Ashburton Council and the Wastebusters Trust

The successful long-term partnership between Ashburton Council and the Wastebusters Trust in New Zealand has an international reputation. Wastebusters is a 'community trust' which is employed by the council to deliver waste minimisation. Extensive education and ownership by the community are seen as the key to the success of the initiative.

3.5.19 Recycle Mania

Recycle Mania in the USA, the highly acclaimed intercollegiate recycling competition which had participation from 515 colleges and universities in 2009. For ten weeks every year, schools compete against each other to see which school can collect the most recyclables. In 2009 4.7 million students and 1.1 million faculty and staff on these campuses collectively recycled or composted just over 69.4 million pounds of waste over ten weeks.

3.6 Follow-up Interviews

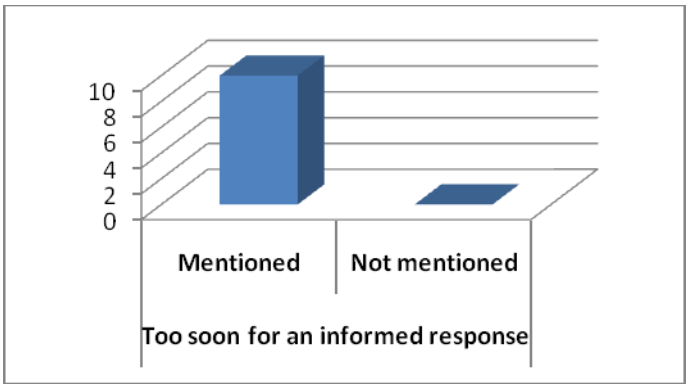
A limited number of follow-up interviews with a selection of the key stakeholders who responded to the consultation in January 2010, including representatives of the county waste partnerships, small and large waste companies and special interest groups, were carried out in late June and early July 2010 when some of the detail of the new coalition government's approach had started to emerge and respondents were able to begin to express a view on a way forward.

The discussion in all cases was around, where – if at all – a regional perspective on the waste agenda would still be useful and appropriate.

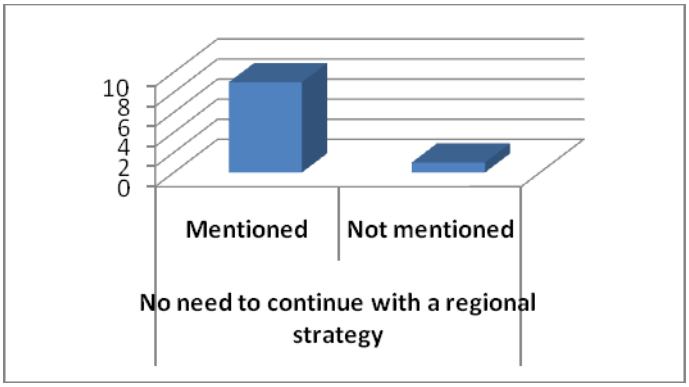
Summaries of the individual interviews can be found at Appendix 3.

A number of key themes emerged during the interviews:

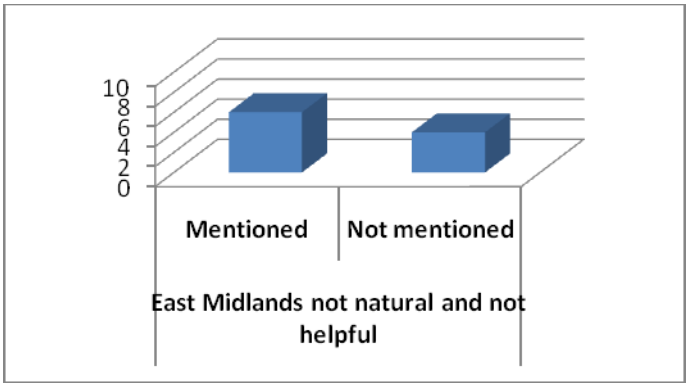
- All respondents stressed that the views expressed are a snapshot of the moment and that it will not be possible to make a fully informed response until at least next spring when, hopefully, all relevant information about Government policy going forward should be available



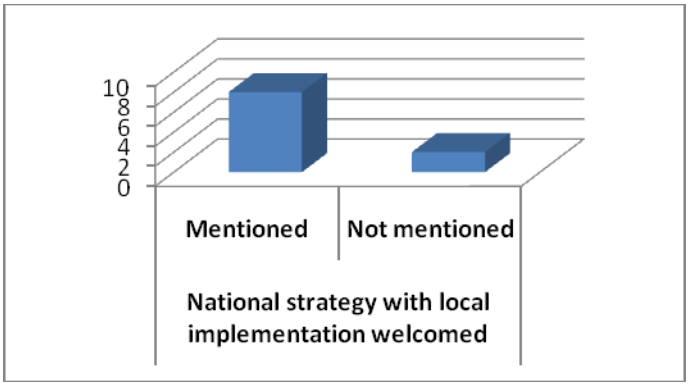
- Only one of the respondents felt that work should still continue on a regional strategy (the representative of a large waste company) and the majority also expressed doubt about the need for continued regional working on a formal basis of any kind



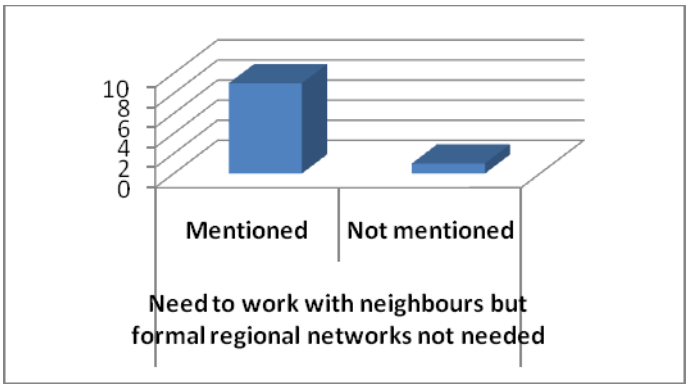
- The majority mentioned the fact that the East Midlands is not a natural economic or social area (both local authorities and small businesses) and that both Northamptonshire and Lincolnshire are very different in many ways to Nottinghamshire, Leicestershire and Derbyshire. Consequently that a one size fits all approach is not only inappropriate but positively unhelpful



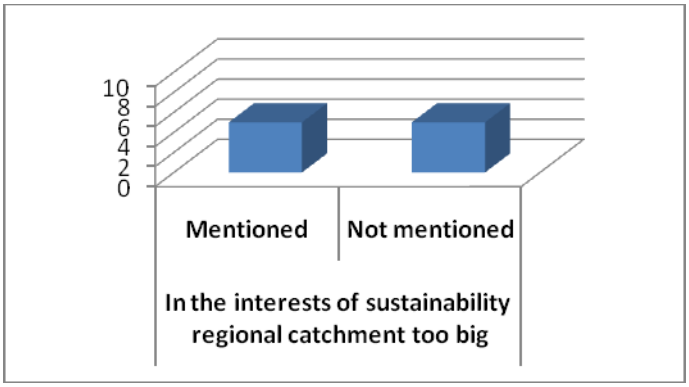
- The great majority of respondents welcomed the move towards a national strategy with implementation at local level and felt that the largest workable size would be county partnership level, although much work would also need to be done at district level



- Most respondents acknowledged the need to continue to work with neighbouring areas, but suggested that existing relationships are now strong and will continue on a less formal basis, which is all that is needed and that working with other neighbours outside the East Midlands region would also be constructive as 'over the border' now, is often actually much closer



- The issue of sustainability and the need to manage waste locally, providing facilities close by and encouraging the development of local business was also mentioned by half the respondents. They expressed the view that a regional catchment where waste would be transported long distances to large facilities was not a sustainable approach. There was also the issue of the possibility of local authorities having large facilities imposed on them and waste coming into the area instead of facilities being tailored to their own needs.



- The smaller local waste businesses all felt that the regional system is slanted too much in favour of large companies. A more local approach will be an improvement and they are hoping for much greater support in ensuring that waste is dealt with where it is created by businesses in the area
- It was also pointed out by more than one respondent that there are now waste partnerships in all five counties, each with its own strategy and they are clear about where they need to be. They will all continue on their own paths.

Suggestions for regionally driven actions that would be useful at this point if resources are available were:

- Identifying all the small waste organisations in the East Midlands, both private businesses and third sector, together with what they do now and their potential
- Filtering down the framework of support to these smaller waste organisations, giving them a greater voice and identifying business opportunities on their behalf, with the aim of ensuring that most waste is dealt with locally
- Exploration of the possibility of developing dedicated resource recovery parks – working on the synergies and symbiosis. But also very much serving the needs of the local area and the waste created there.
- Act as champions/facilitators for the localism agenda providing guidance, advice and education and information about national strategy as the situation develops
- Continuing to encourage networking both inside the region and over the border

3.7 Public Comments from Key Stakeholders

In addition to follow up interviews and relevant literature found online, a number of key stakeholders have recently commented publicly on current political developments that affect the project – when speaking at events, in policy statements or in response to journalists' questions.

3.7.1 WRAP

Speaking and Futuresource in June 2010 WRAP Chairman, Peter Stone, highlighted how hard-pressed Local Authorities could save millions through more partnership working in delivering waste services.

Fast-changing developments which the waste management industry – and WRAP – will need to respond to include:

- The new coalition government's emphasis on "localism" and the major review of waste policy in England just announced by Secretary of State for the Environment, Caroline Spelman
- Tougher EU legislation
- A move by all UK national governments towards zero waste - with ambitious recycling targets
- The possibility of global markets demanding higher quality in materials being exported

Citing an example of how partnerships can deliver great financial benefits, Mr Stone described how Hertfordshire local authorities had formed a consortium to increase revenue from the materials they collect, and are now expecting an additional £500,000 a year as a result.

Mr Stone said by far the most pressing issue was the financial squeeze on budgets and funding. Mr Stone said effective partnership working enables sharing of resources and economies of scale and this would shape the way WRAP works. "We will put greater emphasis on working through partnerships. Our model is to use our expertise and our sector knowledge to act as a catalyst for change and for new initiatives."

Successful initiatives include:

- The Courtauld Commitment which has delivered an estimated 500,000 tonnes less packaging, resulting in local authorities saving £35 million
- Collecting food waste separately, at the kerbside diverting around 140,000 tonnes of food waste from landfill, saving £10m per year
- WRAP's wealth of technical advice and knowledge based on real life experience, is available to LAs in their role as partner

Mr Stone said a critical partnership for local authorities was with their local residents - 90% of people now understand the benefits of recycling although the national recycling rate is still below 40%. He called on Local Authorities to sign up to WRAP's and the LGA's Waste Collection Commitment designed to make it easier for people to reduce waste, recycle and make a difference through recycling.

3.7.2 The Waste Industry

The waste industry has welcomed the national review of waste policy and the role the sector will play in helping to create a 'leaner, greener economy'. Their own suggestions for priorities include:

- Stimulate reuse and recycling above disposal
- Tackle the 'obstacle' of the planning system
- Bringing together and "accelerating" the existing "fragmented" waste policy in England
- A clear set of policies that give certainty and stability to the industry and which fully take into account the science behind individual technologies
- Kerbside sorting
- Generate a domestic closed loop for packaging material
- Ongoing work by WRAP to produce a 'matrix' of preferred options for different waste types as a basis for guidance on implementing the waste hierarchy
- The use of carbon metric for targets - as opposed to the current weight-based system

3.7.3 Peter Jones

Ex-Biffa director Peter Jones, a well-known figure in the industry who sits on a number of high-profile boards advising government and business, has warned that we're heading for a waste crisis in Britain as landfill becomes full but we lack the infrastructure for more sustainable waste management.

He believes the coalition has a much better grasp of what needs to be done than the previous administration, but wants to see some more robust discussions around how it will be implemented.

But while there are obstacles to overcome, he said, the potential for the economy and job market is enormous. The UK currently needs around 1,500 new waste processing facilities and all have the potential to create new employment - most would operate round the clock providing 40-50 shift workers with jobs.

Speaking at an event hosted by clean tech company Ultra Green and elsewhere he said that with environmental, economic and legislative drivers making landfill less and less viable, there is not enough time to get the necessary waste facilities planned, paid for and in place.

He said we are facing 'exciting times' for the industry and 'nobody but an idiot' would invest in landfill now, but that investing in the alternatives isn't an attractive option either. Although there is a ‘massive’ opportunity financially, corporate giants would not move into the sector in the current climate because of the many risks that currently face investors.

Shifting regulation, lack of guaranteed feedstock, uncertainty in the off-take market, and a lack of financial institutions prepared to de-risk investment or the technology, makes putting money into new waste infrastructure something of a gamble, he said.

“It is all very well saying that we need to invest in AD, but you have got to remember that sometimes, this isn’t necessarily the most appropriate solution. It is not a silver bullet and there is never going to be a one size fits all approach.

“The market should drive the choice of technology and the technology should drive the choice of fuel. The technology is not the ends in itself, it is a means to an end and this should be kept in mind when implementing this policy.”

3.7.4 Environmental Services Association

“The UK needs to develop significant waste and recycling infrastructure to meet its Landfill Directive obligations and it is imperative that any cuts do not undermine efforts to recover materials and energy from waste. The timely development of new infrastructure will ensure that the UK does not become liable for EU fines. In this context, the EA will need to retain funding for the processing of permits within the required time scales for new facilities.”

The spokesman added that the new Government has pledged that front-line services should not be affected by the proposed cuts, explaining: “We hope that this extends to ensuring that the EA remains adequately resourced for fighting environmental crime along with its other responsibilities.”

3.7.5 Anaerobic Digestion and Biogas Association

Particularly relevant to the waste and recycling sector is that one of the ways the coalition intends to drive up energy from renewables is through a “huge increase in energy from waste through anaerobic digestion”. This was a point set out in the Liberal Democrat manifesto before the election, and has been largely welcomed by the industry. The Anaerobic Digestion and Biogas Association (ADBA) says it could not have hoped for a better outcome. ADBA chairman Lord Redesdale says: “This is the start of something very exciting, I reckon we will have completely covered the country in AD plants within the next five to 10 years.”

But there is still concern around how the Government intends to implement this policy, particularly at a time when the financing of AD facilities has been beset with uncertainty. Lord Redesdale said: “If we are to increase AD then more local authorities will need to introduce food waste collection at the kerbside, but this needs to be implemented in such a way that what is collected is of good enough quality to be used in AD.”

3.7.6 Renewable Energy Association

As yet there has been no confirmation on the outcome of a consultation by DECC to grandfather the Renewable Obligation Certificates (ROCs) for AD. And there is anxiety from some quarters over the policy to establish a full Feed-in Tariff (FIT) system because all the AD projects in the pipeline have been financed

under ROCs. As a result, the Renewable Energy Association has said that it wants to see a statement from the Government as a matter of urgency which guarantees that all existing projects will be grandfathered.

REA head of external affairs Leonie Greene told MRW: “The proposal to increase overall renewable energy ambition shows strong political commitment.

“However, we are concerned about the details of the renewable obligation and FITs proposal, which could have a huge implication on facilities. All projects in the pipeline have been based on the renewable obligation system. So we want an early statement from the Government to say that all these projects will be grandfathered.”

Greene said there was also concern for the renewable heat incentive as more technologies other than AD needed to be identified, with possibly more funding made available as the industry is “rapidly running out of money”.

3.7.7 UK Without Incineration Network

Some industry professionals also believe the coalition should issue further clarification on where they stand on other forms of energy from waste (EfW) technology, most notably incineration.

UK Without Incineration Network national co-ordinator Shlomo Dowen said: “We welcome AD as the superior form of EfW, but we need to know whether the Government is proposing to use this technology to replace EfW generated through incineration.”

3.7.8 ICE Current Waste and Resource Management Policy Statement

A National Resource Management Strategy is needed that:

- Encourages the designing out of waste at source
- Encompasses all waste streams (municipal, commercial, industrial, construction and demolition etc)
- Links waste management, energy and climate change policy goals
- Facilitates fully functioning, economically scaled supply chains of secondary materials that can feed back into the wider economy
- Brings together governmental responsibilities across DEFRA, DCLG, DBERR, DfT, the Treasury and a plethora of agencies
- Keeps targets under regular review to ensure they are achieving desired outcomes and not becoming ends in themselves
- Speeds up the multi-billion pound investment in infrastructure required to collect, transfer, reprocess and extract resources, including energy from waste by making the planning process for permitting of new strategic facilities simpler and more predictable
- Helping areas develop infrastructure for all waste streams by enabling innovative procurement and stakeholder engagement practice
- Strategic planning that drives integration of waste facilities with transport and energy generation networks. Key levers will include National Infrastructure Policy Statements, Regional Economic Strategies, Regional Spatial Strategies and Local Development Frameworks

3.7.9 Local Stakeholders

Some local stakeholders have commented on the demise of emda.

3.7.10 Nottinghamshire County Council

The public sector must do what it can to help private enterprise thrive, but business should not expect Government to throw money at it. It is going to be privately led – the public sector does not produce jobs.

3.7.11 Derbyshire and Nottinghamshire Chamber of Commerce

George Cowcher, chief executive of Derbyshire & Nottinghamshire Chamber of Commerce, the third largest chamber in the country, says he fears LEPs may amount to no more than an attempt by councils to grab

what is left of agency budgets. “One local authority has already said to me that it wants business involvement but not business leadership and that is hugely worrying. If that's the attitude then it's just about grabbing a budget. Local Enterprise Partnerships will become an irrelevance if they have got no money, no power, and businesses are asked to support them rather than lead them.” Mr Cowcher revealed major employers have voiced serious concerns about the loss of Emda because it has been business-focused.

3.7.12 Nottingham Business School/CBI Regional Chairman

The head of Nottingham Business School has warned that axing regional development agencies will leave regions without any clout. Prof Baback Yazdani, dean of the business school, who is also regional chairman of employers' organisation the CBI, said: "Emda performs valuable and important functions which benefit the private sector and the general economy as well as the redevelopment and regeneration of the city and region. And it has been effective."

4. Conclusions and Possible Next Steps

4.1 The Original Brief

The original brief for this consultation exercise was to identify stakeholder priorities and perceptions on how to develop a Regional Waste to Resource Strategy for the East Midlands:

- The role of regional agencies in the transition
- What the region should hope to achieve from a Regional Resources Strategy
- The kinds of steps needed to achieve these goals
- The range and extent of transformation required
- The conflicts and challenges foreseen
- The respective roles of industry and agencies
- The physical nature of a resources management approach
- Perceptions of the costs that may be involved in the transition and the value that might be derived
- How the approach would respond to and border on extra-regional activities
- Who would benefit
- The risks
- Whether legislative frameworks in place would allow the transition or would need to change
- What kinds of actions should be set out to achieve the transition
- What success would look like

4.2 The Current Situation

Recent political and policy developments mean that the original brief is no longer relevant.

As explained earlier in this report, the new Government has already made it clear that there is no longer anything compelling regional working and it will be up to the Local Authorities to decide how, if at all, they wish to continue with a regional approach:

- The Regional Spatial Strategies have been revoked
- Emda will not exist beyond April 2012 and will be wound down during the intervening period, while the future of GOEM is uncertain
- Funding for the Leaders Boards and other networks such as RTAB has been withdrawn
- A new Localism Bill and planning system based on the Conservatives' Open Source Planning paper will rebalance power in favour of local communities
- The new local enterprise partnerships (LEPs) will be led by elected local authority leaders in 'natural economic areas'
- Guidance issued when the RSS were revoked says Planning Authorities should continue to press ahead with their waste plans. For the transitional period they will continue to be informed by the data and information which has been collated by the Regional Waste Technical Advisory Bodies, but this function will be transferred to local authorities.

And while the current review of waste policy in the UK is not expected to report until next spring, it is reasonable to assume that it will fit within the parameters of the new localism agenda.

In addition, selected follow-up interviews with key waste players in the region – particularly the county authorities/waste partnerships – have made it clear that a regional approach to waste minimisation and management is very unlikely to be pursued unless national policy and legislation dictates that it should.

Nevertheless, despite a disappointingly low response, the consultation and research exercise has pointed up a number of important issues and a range of interesting and constructive ideas that should play a key role in shaping the waste minimisation and management approach in the East Midlands and also identifies areas

where the outgoing regional agencies can support the local authorities and county waste partnerships over the coming months.

4.3 Summary of Findings

4.3.1 International Best Practice

Best practice in waste minimisation and management is based around the internationally recognised concept of the 3Rs – Reduce, Reuse and Recycle and the waste management hierarchy. The waste hierarchy specifies the order of preference for dealing with waste with priority given to waste reduction, reuse and recycling with the least desirable approach being disposal of waste in landfill.

The primary motivation of any waste strategy must therefore be to reduce waste at source. In addition it has been shown time and time again across the world that the success of the implementation of the 3Rs programme will depend on:

- Strong and co-ordinated governance eg codes of practice and legislation
- Having sufficient waste infrastructure in the form of collection systems that support source segregation and appropriate recycling and recovery technologies
- Creating an economic environment that promotes waste reduction, reuse and recycling as opposed to disposal through the 'polluter pays principle.' This is an extension of the producer responsibility principle not only shifting responsibilities to the producer but also the environmental costs associated with managing and disposing of wastes.
- Communication of the programme and its importance to the public so that they are aware of how their actions can make a difference

The online best practice review encompassing key literature, useful perspectives and ideas from a wide range of sources from the public, through special interest groups, to the waste press and also recent comments and speeches from key organisations and thought leaders in the waste industry, underline this approach.

The results of the consultation and follow-up interviews further support the recommendations of international best practice.

The first key recommendation of this project is therefore to recommend that any approach adopted in the East Midlands, whether regional, at county level or locally, is holistic – responding to the 3Rs and the waste hierarchy – rather than trying to separate the issue of waste as a resource from the issue of reducing waste in the first place.

4.3.2 Initial Consultation

The initial consultation pointed up a number of important issues that must be tackled. Many of these were identified in the Aecom report and the consultation serves to underline their importance.

It is clear that there is no quick fix answer to any of the questions. The consultation was in many ways a fishing exercise designed to identify ready-made information sources and solutions that could be easily drawn together and taken forward. No such sources and solutions emerged, nor did any individual or organisations willing or able to take the lead in developing and implementing a Waste to Resource Strategy for the East Midlands:

- It will be essential for someone to take the initiative and drive the process forward, if it is ever to be more than a good idea.
- Another pressing issue will be to review the full stakeholder network list and ensure that all contact details are up to date, that the most appropriate contact is identified in each organisation and that identified contacts have been contacted and agreed to accept that role.
- Clear definition of roles and responsibilities is essential – for instance who will lead and what contribution can be expected from organisations eg WRAP, the Environment Agency and Defra
- Understanding of public perception
- Comprehensive information on the waste streams, the routes to recycling for each and life-cycle analysis of the various disposal v recycling options

- What works and what doesn't
- Financial and environmental cost/benefit/impact analysis
- Projected demand for resources in the UK
- Areas where resources need to be focussed
- Communication plan and material, public education strategy and material, background and supporting information for present and potential participants
- Comprehensive database of information, contact points for best practise and "one stop shop" solutions, companies recommended to deal with the waste streams etc
- Development of the strategy

4.3.3 Online Research

The online research provided useful sources of information and additional possible actions:

Sources of Information

Despite the perceptions of respondents to the first stage consultation a great deal of data about waste in the East Midlands is actually available online, for instance:

- Defra, the Environment Agency and WRAP all collect waste data. Extensive information is now available largely on the WRAP website, but also through Defra and the EA. For instance Material and Market Development Recommendations in East Midlands, WRAP 2007 (updated April 2010) which examines capacity in the region and concludes that as a whole it has sufficient capacity to manage the waste it produces and with the addition of the capacity from sites granted planning permission and awaiting determination, over-provision of capacity would range from 5.6 million tonnes to 8.2 million tonnes in 2020.
- EMRA completed a Study into Waste Management Capacity in the East Midlands in 2009, which is available on the EMRA website.
- While EERA led a National Study into Commercial and Industrial Waste Arisings, 2009, which extrapolates from research in the north west to make assumptions about the other UK regions. The full report, together with links to a spreadsheet for calcultating forecasts and the data tables for each region can also be accessed through the EMRA website at www.emra.gov.uk/publications/housing-planning-and-transport/waste/national-study-into-commercial-and-industrial-waste-arisings

Together these reports fill many information gaps identified by consultation respondents and while they are not yet providing a full picture form a useful basis for further research to fill the gaps.

The second key recommendation of this project is therefore to ensure that all key stakeholders are made aware of existing data and information resources.

Solutions Identified by Other Strategies and Initiatives

Online research also identified a wide range of solutions and actions driving other strategies and initiatives around the world. For instance:

- Pushing those who produce goods that end up as waste to take responsibility for their products, for instance with product stewardship schemes
- Increasing resource recovery from commercial, industrial, construction and demolition wastes eg ensuring agencies and government take construction and demolition waste as a raw material.
- The development of local markets for recovered materials
- Separate food waste collection schemes for all households
- An anaerobic digestion plant building programme
- A policy 'preference' for kerbside sorting of waste streams by collection contractors
- Sector plans providing more specific waste reduction strategies for individual waste intensive sectors eg municipal waste, retail, construction, infrastructure
- Development of a Waste Prevention Programme for all wastes, ensuring the prevention and reuse of waste is central to all actions and policies

- Landfill bans for specific waste types to ensure the value from these resources is captured
- Ensuring that
    - Households use material goods for their intended life and do not dispose of them while still useful. Lifetime Optimisation and Restorative Economy are successful strategies
    - Edible food is not treated waste
    - Industry understands the feasibility of resource efficiency strategies in individual sectors
    - National support and policies are in place to balance winners and losers in pursuing this approach

Other useful insights are contributed by:

- Economies of Scale, Defra's 2007 Waste Management Optimisation Study which concludes that while many types of waste management facilities get less expensive to run on a simplistic basis as the capacity increases, there are other factors such as transport and planning. Political, social, economic and legislative factors all have an effect and there are many barriers to collaboration and integration. Case studies from waste partnerships showed that in Essex full integration would be marginally more expensive and offer fewer benefits than a two-area scenario. This may demonstrate the point at which diminishing returns are experienced.
- On the other hand including commercial waste collection in modelling would make more waste available in a smaller area, reducing transportation cost and increasing the scale at which transfer stations become more cost effective, particularly in rural areas.
- Third Sector: Investment for Growth, WRAP 2009 concludes that Resource Recovery Third Sector Organisations could make a very significant contribution to the waste agenda but need support, advice and business opportunities.
- ICE in How to Deliver a National Resource Management Strategy, 2007, suggests that a key first step would be to establish a national leadership body drawn from the relevant government departments and an agent to join up people who need to make decisions and show how a resource management strategy can be delivered at a regional and local level – most probably EA or WRAP. It's role would include:
- Material flow management (collecting and providing data at national, regional and local levels)
- Public sector corporate governance, including strategic planning for procurement of capital programmes
- Local government in respect of built development, contract management (land use planning and material resource management opportunities) and community liaison
- Assisting the private sector to implement new systems and facilities
- Liaising with the specialist groups, networks or professional organisations and community groups. Seeking a tactical local response and responding to and promoting new ideas and technological innovation
- Advising the government about the funds and pump priming mechanisms that are needed and helping to ensure they are put into place
- Waste suggestions from the public which include:
- Make local authority recycling regimes the same and able to recycle everything possible
- Tax all plastic containers differentially (producers and users) according to how easy it is for that type of plastic to be reused or recycled, and the revenue ring-fenced to support reuse and recycling.
- North Kilworth CIC, led by leading waste industry figure Peter Jones which plans to set up and operate a community anaerobic digestion facility that will provide energy for sale to the National Grid and reinvest the profits into village projects designed to deliver a sustainable community.
- The Furniture Re-use Network which represents 350 charities and non-profit groups involved in re-use across the UK.
- The WRAP/AWM Programme which gives recycling businesses in the region an opportunity to benefit from funding and practical support.

- The fact that quality is increasingly important to the recycling industry supply chain, opening up opportunities for UK businesses, a key theme emerging from WRAP's third international markets conference that took place in London recently
- The Waste to Resources programme funded by One North East and BREW which provides businesses in North East England with access through a free website to support for waste management, resource efficiency and energy saving, identifying areas of opportunity, useful contacts and case studies
- Ashburton Council and the Wastebusters Trust in New Zealand which is a successful long-term partnership with an international reputation. Wastebusters is a 'community trust' which is employed by the council to deliver waste minimisation. Extensive education and ownership by the community are seen as the key to the success of the initiative.
- Recycle Mania in the USA. For ten weeks every year, schools compete against each other to see which school can collect the most recyclables. In 2009 4.7 million students and 1.1 million faculty and staff on these campuses collectively recycled or composted just over 69.4 million pounds of waste.

4.3.4 Recent Ideas from the Waste Industry

Ideas have also come from the Waste Industry:

- Peter Stone WRAP chairman suggests that fast-changing developments which the waste management industry will need to respond to include:
- The new coalition government's emphasis on "localism" and the major review of waste policy in England just announced by Secretary of State for the Environment, Caroline Spelman
- Tougher EU legislation
- A move by all UK national governments towards zero waste - with ambitious recycling targets
- The possibility of global markets demanding higher quality in materials being exported
- The waste industry has welcomed the national review of waste policy and the role the sector will play in helping to create a 'leaner, greener economy'. Their own suggestions for priorities include:
- Stimulate reuse and recycling above disposal
- Tackle the 'obstacle' of the planning system
- Bringing together and "accelerating" the existing "fragmented" waste policy in England
- A clear set of policies that give certainty and stability to the industry and which fully take into account the science behind individual technologies
- Kerbside sorting
- Generate a domestic closed loop for packaging material
- Ongoing work by WRAP to produce a 'matrix' of preferred options for different waste types as a basis for guidance on implementing the waste hierarchy
- The use of carbon metric for targets - as opposed to the current weight-based system
- Peter Jones says that although there is a 'massive' opportunity financially, corporate giants will not move into the sector in the current climate because of the many risks that currently face investors.
- The Renewable Energy Association has said that it wants to see a statement from the Government as a matter of urgency which guarantees that all existing anaerobic digestion projects will be grandfathered

4.3.5 Ideas from Follow-up Interviews

Suggestions for regionally driven actions that would be useful at this point if resources are available were:

- Identifying all the small waste organisations in the East Midlands, both private businesses and third sector, together with what they do now and their potential

- Filtering down the framework of support to these smaller waste organisations, giving them a greater voice and identifying business opportunities on their behalf, with the aim of ensuring that most waste is dealt with locally
- Exploration of the possibility of developing dedicated resource recovery parks – working on the synergies and symbiosis. But also very much serving the needs of the local area and the waste created there.
- Act as champions/facilitators for the localism agenda providing guidance, advice and education and information about national strategy as the situation develops
- Continuing to encourage networking both inside the region and over the border

4.4 Suggestions for Possible Ongoing Work

Clearly many actions will now sit at national or local level, but taking everything that has emerged from the consultation and research into account, this report concludes with a number of suggestions for possible ongoing work on a regional level which reflect consistent themes throughout the project.

All the actions listed below have been identified as important in the move towards a zero waste society and hopefully the resources will be available to implement at least a selection:

- Act as champions/facilitators for the localism agenda providing guidance, advice, education and information about national strategy as the situation develops, how it should be translated locally, roles and responsibilities
- Continue to encourage networking both inside the region and 'over the border'
- Ensure that all key stakeholders are made aware of existing data and information resources. Explore options with both private and public sector to create a regional online 'one stop shop' along the same lines as waste to resources in the north east
- Develop a matrix of essential data still missing and an action plan to fill the gaps. If resources allow begin to implement the action plan
- Work with WRAP and the waste partnerships to develop an education and publicity programme that can be used throughout the region based around a series of key waste minimisation, reuse and recycling messages such as 'do not throw things away while they are still useful' and 'edible food is not waste' and using innovative approaches such as recycle mania
- Identify all the small waste organisations in the East Midlands, both private businesses and third sector; re-use, recycling and end users of recycled material; together with what they do now and their potential
- Develop and implement an action plan for filtering down the framework of support to these smaller waste organisations, giving them a greater voice and identifying business opportunities on their behalf, with the aim of working with local authorities to ensure that most waste is dealt with locally
- Work with local authorities to establish the feasibility of developing dedicated resource recovery parks – working on the synergies and symbiosis. But also very much serving the needs of the local area and the waste created there. Including possible locations and possible businesses to be involved
- Develop a range of innovative off the shelf bottom up approaches for local communities such as North Kilworth CIC and Wastebusters Trust
- Support the county waste partnerships in working towards making their recycling regimes the same and able to recycle everything possible, including separate food waste collection schemes for all households and a policy preference for kerbside sorting of waste streams by collection contractors
- Explore options for encouraging product stewardship schemes on a regional and local level
- Work with the waste partnerships to develop specific waste reduction strategies for individual waste intensive sectors eg commercial, industrial, construction and demolition