

ESSEX MUNICIPAL WASTE STRATEGY - UPDATE

1 SUMMARY

- 1.1 The purpose of this report is to update Members of the current situation in relation to the development of the Joint Waste Management Strategy for Essex and in particular, to provide details of the proposed framework for developing the final strategy.

2 INTRODUCTION

- 2.1 The Waste Management Advisory Board (WMAB), of which Rochford is a Member, has been overseeing the creation of a Joint Waste Management Strategy for Essex, Southend and Thurrock.
- 2.2 As detailed in previous reports to this Committee, Environmental Resources Management Consultants (ERM) were commissioned to produce a draft strategy and the firm of Weber Shandwick were commissioned to undertake an extensive consultation process across the County on the draft document.
- 2.3 This consultation process finished on 30 November 2002, since which time Weber Shandwick have presented their analysis of the responses to the WMAB.
- 2.4 During this process, all of the Local Authorities were asked to give their response on which of the suggested options was their preference, in principle. At the meeting of this committee on 7 November 2002, Members agreed to support, in principle, option one, which included a recycling target of 60% and fitted with the Council's current policy of non-incineration.

3 STRATEGIC FRAMEWORK

- 3.1 Since the consultation process has been completed, a two day workshop was held for senior officers from all the District / Borough / County and Unitary Authorities in Essex. The purpose of the workshop was to discuss the ways in which the draft strategy and feedback received, could be further developed into a final strategy that included practical methods of managing the County's waste.

3.2 As a result of these discussions, the following key elements have been suggested and adopted in principle by the WMAB, to form the framework from which the final strategy will be produced.

- Waste minimisation and waste avoidance.
- Education and awareness.
- Recycling and recovery objectives.
- Review of markets.
- Review need for waste transfer stations.
- Review need for material recovery facilities / bulking stations (MRF's).
- Development of composting facilities.
- Proposals for the management of residual waste.
- Detailed assessment of potential costs and economic assessment of the long-term opportunities.
- Area solutions.
- Timetable.

3.3 Appendix One provides further details of each of these key elements that form the framework and the key statements that have been supported by the WMAB, for inclusion in the final strategy.

3.4 The process of adopting this framework is currently being proposed in all the Waste Collection and Unitary Authorities in Essex. It must be emphasised that this is not the final strategy that Members are being asked to adopt but it is the framework and a process from which the detailed final strategy can be prepared for future approval.

4 ENVIRONMENTAL IMPLICATIONS

4.1 The implementation of an effective Waste Management Strategy can significantly impact on the environmental conditions that exist within the District.

5 RECOMMENDATION

5.1 It is proposed that the Committee **RESOLVES**

That Members consider the contents of this report and agree to adopt the detailed framework that is proposed for developing the final Joint Waste Management Strategy for Essex. (CD(F&ES))

Roger Crofts

Corporate Director (Finance & External Services)

Background Papers:

None.

For further information please contact Jeremy Bourne on:-

Tel:- 01702 318163
E-Mail:- jeremy.bourne@rochford.gov.uk

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FRAMEWORK FOR DEVELOPING A JOINT WASTE MANAGEMENT STRATEGY FOR
ESSEX.

FRAMEWORK FOR DEVELOPING A JOINT WASTE MANAGEMENT STRATEGY.

The key elements that form the framework for the proposed JWMS are:

- Waste minimisation and waste avoidance.
- Education and awareness.
- Recycling and recovery objectives.
- Review of markets.
- Review need for waste transfer stations.
- Review need for material recovery facilities/bulking stations (MRF's).
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- Area solutions.
- Timetable.

The key statements supported by the WMAB are shown in bold/italics.

WASTE MINIMISATION AND WASTE AVOIDANCE.

There was consensus from the consultation exercise that waste minimisation and waste avoidance should form a key feature in the development of a strategy for dealing with waste in Essex. There was universal concern over the amount of unnecessary packaging waste being put out for disposal.

The WMAB supported the inclusion of the following key statements in the framework:

- *Support and encourage the community to pursue waste minimisation and avoidance practices.*
- *Develop a series of action programmes to:*
 - *Share best practice by all partner councils;*
 - *Promote and support a green procurement campaign.*
 - *Support community understanding and opportunities.*

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- o *Setting measurable performance targets.*
- o *Work with small and medium sized enterprises (SME's) and other local institutions on efficient waste/resource management practices.*
- o *Influence government and major institutions on long-term objectives and policy issues.*

It was recognised that the combined influence from all partner authorities is significant and should be used to focus support.

EDUCATION AND AWARENESS.

The County Council and its partners have, for some time, been developing and implementing education programmes in schools and with community groups to raise awareness of the importance of waste minimisation, recycling and general environmental matters.

The WMAB supported the inclusion of the following key statements in the framework:

- o *Develop action orientated education programmes in support of objectives.*
 - o *Encourage and support local engagement from school and community groups.*
- o *Develop a programme with local SME's and industry on the importance of waste as resource.*
- o *Targeted community events to raise awareness.*
 - o *Link with specific action being undertaken by individual partner authorities.*
 - o *Develop and maintain a countywide waste awareness programme.*

RECYCLING AND RECOVERY OBJECTIVES.

There was a general agreement that the JWMS should set a vision to recycle 60% or more of household waste. However, in setting this vision there was recognition that the objectives on delivery should be realistic and practical reflecting the ability of individual collection authorities to work towards this vision. When considering the development of new infrastructure, account will need to be taken of the phased implementation of new collection systems by each collection authority.

The WMAB supported the inclusion of the following key statements in the framework:

- o *Set a vision to recover and recycle 60% or more of household waste.*

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- *Develop an Implementation Plan that recognises the ability of individual partner authorities to introduce new or revised collection systems over a period of time in support of this objective.*
- *Continue to review technological advances in waste management systems in support of this objective and maintain flexibility in opportunities for improved performance.*
- *Develop complementary solutions in an agreed partnership framework.*
 - *Having full regard to the waste hierarchy, seeking added value in all waste management practices and recognising waste as resource.*

REVIEW OF MARKETS AND QUALITY.

The effective marketing of recovered materials will play a key role in the development of a new and comprehensive Business Plan in support of the recycling and recovery objectives. It is evident that the implementation of an effective marketing plan (in support of the Business Plan) could make a significant contribution to the financial implications of an integrated solution. However, to ensure that the marketing of materials forms an integral part of the overall solution a thorough and comprehensive understanding of the market opportunities for each fraction of waste being managed must be undertaken.

The WMAB supported the inclusion of the following key statements in the framework:

- *Proper understanding of market requirements.*
 - *Quality and quantity opportunities.*
 - *Any change is likely to affect collection or interim processing systems.*
- *Market opportunities -- price.*
 - *The paper, plastic, glass, metals, textiles, green waste and compost.*
 - *Size of markets, main influencing factors, Index for future values.*
 - *Major players.*
- *Our ability to meet market requirements*
- *Joint marketing opportunities -- Business Plan -- shared Marketing Plan where it makes financial and economic sense.*
- *Role of ReMade Essex -- marketing division for a combined marketing strategy?*

TRANSFER STATIONS.

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As part of an overall review of infrastructure requirements consideration will need to be given to the development of transfer stations. The function of transfer stations is to accept waste from collection authorities and their value is their ability to store, bulk and send for processing/disposal waste in separated or mixed form.

For collection authorities, the benefit is in having a local transfer station in or closer to their District/Borough that avoids 'lipping away' and therefore increases collection productivity and efficiency. For the waste disposal authority, the value is in the ability to hold or store separated waste and, where appropriate, feed it into processing and disposal infrastructure as required. However, it is recognised that a full financial appraisal of the implications as assessed against alternative options will need to be completed before any commitment can be made.

The WMAB supported the inclusion of the following key statements in the framework:

- *Location (each district/Borough area)?*
- *Multi-material capability.*
 - *Dry recyclable material.*
 - *Paper (EN 643), newsprint, plastics, mixed cans, green waste (yet to be defined), textiles, glass (maybe mixed or colour separated).*
 - *Residual waste.*
- *Examine the link with CA site development.*
- *Combine with local depot if appropriate*

REVIEW NEED FOR MATERIAL RECOVERY FACILITIES/BULKING STATIONS (MRF'S).

The waste collection authorities have identified a range of collection systems they are using or intend to use for the collection and recovery of recyclable waste. The type of material recovery facility/bulking station (MRF) required cannot yet be determined. However, there was general agreement that consideration will need to be given to a range of options which would support collection authorities. It is further recognised that the detailed assessment of the financial implications would need to be carried out before any commitment could be given to developing MRF infrastructure.

The WMAB supported the inclusion of the following key statements in the framework:

- *Need to make a provision for co-mingled and kerbside collection systems (MRF support would come in the form of bulking and quality checks prior to market).*
- *Need for clear input quality standards from delivery and collection systems.*

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- *Need for clear output specifications to comply with market requirements.*
- *Funding opportunities and cost implications need to be reviewed.*
- *Development of a business and marketing plan.*
- *Need to assess the:*
 - *Environmental.*
 - *Financial.*
 - *Social.**Impacts of operating local –v- countywide –v- area developments.*
- *Transport.*
- *Locality.*
- *Proximity to road, rail and sea networks and marketing links.*

DEVELOPMENT OF COMPOSTING FACILITIES..

The Landfill Directive and the proposed legislation in the Waste and Emissions Trading Bill (WET) will introduce allocations for landfill allowances of biodegradable municipal waste including provisions for borrowing, banking and trading of the allowances. There will be a specific duty on waste disposal authorities not to exceed allocated allowances of biodegradable municipal waste being sent to landfill.

This requirement will impose a statutory duty on waste disposal authorities to monitor the amount of biodegradable waste being presented for disposal and introduce new processing systems to compost, aerobically or anaerobically, organic waste. Standards in composting specifications are being prepared and will form the basis for future marketing and use of this recovered material. It is envisaged that failure to comply with allocated allowances will result in a financial penalty being levied against a waste disposal authority.

The introduction and development of further composting infrastructure will need to form a crucial part of the joint municipal waste strategy if the County Council is to avoid penalties for the landfilling of organic waste.

The WMAB supported the inclusion of the following key statements in the framework:

- *In vessel system, or windrow if allowed for garden waste.*
- *Input specification for material -- output linked to market opportunities for the material.*
 - *Grade 1 (Soil Association Accreditation or BSI standard).*

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- *Grade 2/3.*
- *Kitchen (putrescible) waste remain in residual waste for anaerobic digestion?*
 - *Complimentary to anaerobic digestion.*
 - *Recovery of biogas.*
- *Need to assess the:*
 - *Environmental.*
 - *Financial.*
 - *Social.*

Impacts of operating local –v- countywide –v- area developments.
- *Transport.*
- *Locality.*
- *Proximity to road, rail and sea networks and market links*

PROPOSALS FOR THE MANAGEMENT OF RESIDUAL WASTE.

In its submission to the 'War on Waste' consultation, the County Council stated that an innovative approach should be developed which achieves the mechanical separation of residual waste and seeks to recover and recycle higher percentages of waste in support of its objectives.

Final Sorting of Residual Waste (FSW).

The County Council confirmed that it wished to see a solution that replaced a possible Mechanical Biological Treatment (MBT) process with an FSW¹ process that will sort and segregate residual waste into three broad fractions:

1. Dry recyclable materials; the details of which are yet to be confirmed but is likely to include the doorstep recovery of metals, plastics, newsprint, card and possibly glass.
2. Material suitable for processing in Anaerobic Digestion (mainly organic).
3. Residual material for disposal in landfill (mainly inorganic/inert).

Anaerobic Digestion² (AD)

¹ FSW (Final Sorting of Residual Waste). A process to separate organic, recyclable and residual waste prior to further processing, recovery or disposal.

² A process where biodegradable material is encouraged to break down in the absence of oxygen. Material is placed in an enclosed vessel and in controlled condition the waste breaks down into a digestate and a biogas.

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The County Council put forward the view that Anaerobic Digestion should be pursued as a complementary process in support of an FSW 'front-end' recovery system. The primary advantage of AD is the capture of biogas that can be used for a number of innovative purposes including energy generation, heating or as a fuel substitute. The resultant digestate could be used as a high-grade landfill cover, used in coastal nourishment or in other low grade soil substitute programmes². AD would meet the requirements of the Landfill Directive, the objectives of the Bio-Waste Directive and meet the needs of the EU strategy on soil set out in the 6th Environmental Action Programme.

Anaerobic Digestion would not be a replacement for the composting and marketing of a high grade green waste but would be a complementary technology for dealing with putrescible waste, contaminated paper and soiled products suitable for processing in a controlled environment.

The principal target from the AD process would be the recovery and use of bio-gas for the benefit of the local community.

In support of this position, the WMAE supported the inclusion of the following key statements in the framework:

- *Residual waste will still contain recyclable material that needs to be recovered.*
- *FSW (final sorting waste)*
 - *Picks up low participation and capture rates.*
 - *Prepares waste for further processing.*
- *Anaerobic digestion.*
 - *Biogas – power generation?*
 - *Inert by-product.*
- *Complementary to total solution.*
- *Examine:*
 - *Process options.*
 - *Pasteurisation treatment for mixed waste?*
 - *Flexibility in system design.*
 - *Consider further options for 'future proofing'.*
 - *Waste Local Plan provisions.*
- *Need to assess the:*

² The County Council will approach Defra and the Environment Agency to confirm the 'classification' of the digestate before finally determining the most appropriate use for the material.

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- *Environmental*
- *Financial*
- *Social*

Impacts of operating countywide – v - area infrastructure

- *Transport*
- *Locality*
- *Look at the development of a modular system.*

DETAILED ASSESSMENT OF POTENTIAL COSTS AND ECONOMIC ASSESSMENT OF THE LONG-TERM OPPORTUNITIES.

There is recognition that a detailed and comprehensive assessment of the financial implications on the collection authorities, unitary authorities and the County Council will need to be completed before any commitment can be made to a final joint waste management strategy. It is further recognised that collection systems and processing systems will need to be phased in over a period of time and careful planning will need to take place to ensure that infrastructure is optimised and fully utilised. A number of 'what if' scenarios will need to be developed to assess the costs and implications of alternative ways of collecting segregated materials, recovering, processing and managing waste.

Members will recognise that the effect of new legislation with its increasing standards will result in increased costs to both collection and disposal authorities. Mention was made earlier for example of the new requirements for dealing with biodegradable waste.

The challenge over the next few months will be to develop a series of financial models which identify how the partners in the joint waste management strategy can minimise the financial effects of new systems and at the same time optimise the environmental opportunities and take advantage of any social gains in employment and/or in supporting local industry.

There will undoubtedly need to be a new and more progressive relationship between the collection authorities and the County Council to determine how best to invest in new systems and infrastructure and make clear to the Essex community the total cost of waste management in the County.

It will be important to ensure the financial burden does not fall exclusively on either tier of local authority but to recognise the importance of shared responsibility if the joint waste management strategy is to be effective.

The WMAB supported the inclusion of the following key statements in the framework:

- *Local market – v - global market*
- *ReMade Essex – role and future responsibilities.*

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- *Consider options for cost base.*
 - *Recycling credits.*
 - *Investments in systems to improve performance.*
- *Develop a number of cost scenarios for a range of alternative approaches.*
- *Shared funding and shared responsibility*
- *Income from marketing of materials.*
 - *Any social or ethical issues*

AREA SOLUTIONS.

During discussions, the WMAB agreed that consideration should be given to the introduction of an area approach. It was recognised that in order to move the process forward there might be value in adopting a geographical or thematic split in developing an optimum solution. A number of collection authorities recognise that there might be financial advantage to work co-operatively and share assets, equipment etc and to develop an area solution in support of the JWMS.

A number of authorities are already exploring ways of working together in the Thames Gateway area and are seeking to develop a solution that will meet their particular needs. There is no doubt that the economic, social and demographic challenges differ across the County. An analysis of waste arisings will show a significant difference in type and quantity based on economic and social factors. Therefore, there is logic in designing processing and recovery systems that reflect these factors.

The WMAB supported the inclusion of the following key statements in the framework:

- *Within a countywide context.*
 - *Consider the value of developing an area solution.*
 - *Linkages to proximity principle.*
 - *Geographical and thematic split*
 - *Co-operative working between collection authorities and with waste disposal authorities*
- *Supporting infrastructure developed on area basis*
 - *Recognising the area demographic and social variances.*

TIMETABLE.

Time has become an imperative. We need to move the programme forward and to develop a JWMS by the end of this calendar year. The County Council's current

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waste disposal contracts come to an end in 2007 and there will be new legislation (WET) that will limit the amount of biodegradable waste that can be sent to landfill.

The following programme was agreed by the WMAB and needs to form an integral part of the JWMS.

The WMAB supported the inclusion of the following key dates in the framework:

Short term Timetable 2003

- | | |
|----------------------------|--|
| February 2003 | <input type="checkbox"/> Broad strategy framework presented to WMAB; members to seek endorsement from their authority. |
| April 2003 | <input type="checkbox"/> Feedback from authorities on endorsement of broad strategy framework. |
| | <input type="checkbox"/> WMAB agrees final framework (detailed work on strategy to commence) |
| | <input type="checkbox"/> Agree programme for annual conference |
| 30 th June 2003 | <input type="checkbox"/> Annual conference for wider audience of elected members. |
| July 2003 | <input type="checkbox"/> WMAB considers detailed strategy. |
| | <input type="checkbox"/> Seek formal endorsement by each authority. |
| October 2003 | <input type="checkbox"/> Detailed strategy agreed by each authority; work to commence on implementation programme. |
| | <input type="checkbox"/> Review Member/Officer arrangements for WMAB & JWQSG (Joint Waste Officer Steering Group). |

Longer Term Timetable (indicative dates affecting need for infrastructure)

- | | |
|---------------|--|
| October 2003 | WMAB agrees:
<input type="checkbox"/> detailed strategy.
<input type="checkbox"/> Organisations(s) to implement. |
| November 2003 | WMAB agrees any engagement of technical, financial and legal consultants/specialist. |
| Spring 2004 | Implementation of WET (WDA's paying penalties for excessive landfilling).

Invite tenders for longer term contracts. |

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<i>Autumn 2005</i>	<i>Award contracts. (Second strategy recycling target)</i>
<i>Early 2006</i>	<i>First planning application received. (WEEE directive implementation). (Landfilling of Tyres ceases).</i>
<i>2007</i>	<i>First planning permission granted – waste disposal authority contracts expire (some may be extended).</i>
<i>2008</i>	<i>First Infrastructure operational (transfer stations, MRF's, In-vessel composting, etc)</i>
<i>2009</i>	<i>1st phase Anaerobic Digestion operational (essential to meet Landfill Directive requirements).</i>
<i>2010</i>	<i>Landfill directive – 25% reduction in 1995 level of biodegradable municipal solid waste.</i>
<i>2013</i>	<i>Landfill directive – 50% reduction in 1995 level of biodegradable municipal solid waste.</i>
<i>2020</i>	<i>Landfill directive – 65% reduction in 1995 level of biodegradable municipal solid waste.</i>