Item No 6

Cabinet

13 October 2011

Scrutiny Review of Future Residual Waste Contract

Recommendation

That Cabinet agrees the recommendations of the Residual Waste Task & Finish Group.

1.0 Key Issues

1.1 At its meeting of 31 August 2011, the Communities Overview & Scrutiny Committee received the report of a Task & Finish Group, which had been established to review the procurement arrangements for a possible future residual waste disposal solution.

1.2 This new solution would begin operation from 2013, should no suitable arrangements for waste disposal be realised in partnership with other Waste Disposal Authorities.

1.3 Having considered the findings of the Task & Finish Group, the Communities Overview & Scrutiny Committee resolved to forward its report to Cabinet (see appendix). For convenience, the recommendations are printed below.

Recommendations of the Task & Finish Group

1. Any new residual waste contract(s) should seek to ensure maximum flexibility for the authority – for example, to allow the guaranteed minimum tonnage to be adjusted in line with decreasing waste volumes

2. When assessing bids from potential providers, at least equal weighting should be applied to contract flexibility as the initial cost per tonne

3. In recognition of the uncertainty associated with future residual waste, and in order to take advantage of potential new developments in waste disposal technology, the preference should be for a contract length of no more than 15 years

4. The Communities Overview & Scrutiny Committee should consider reconvening the Task & Finish Group when the preferred spatial option has been published to identify any potential implications it could have on the residual waste contract(s)

5. The preferences expressed within the 2005 Waste Strategy for a thermal treatment system and a centralised energy from waste facility should not be given favour when assessing bids, and the authority should maintain a "technology-neutral" approach

6. The authority should continue its existing policy of letting multiple waste disposal contracts, but also ensure a mix of technologies is utilised. This will mitigate the risk of being constrained by technologies that become outdated or unaffordable due to new disposal innovations or future legislative changes

7. Subject to final legal advice, the Competitive Dialogue procedure should be adopted so as to limit the amount of pre-specification and allow tenderers the flexibility to offer various solutions to meet the authority's needs.

Background Papers

1. Report and Recommendations of the Residual Waste Task & Finish Group (see Appendix)

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Item 6 Appendix

Communities Overview & Scrutiny Committee
31st August 2011

Report and Recommendations of the Residual Waste Task & Finish Group

Cllr Chattaway, Chair of the Residual Waste Task & Finish Group

Recommendation

The Committee agrees the findings and recommendations of the Residual Waste Task & Finish Group and forwards the report on to Cabinet for consideration.

Task & Finish Group Recommendations

The following recommendations relate to the potential procurement of a new residual waste disposal solution, which would begin operation from 2013. The procurement process for this solution would not start until investigations have identified that no suitable arrangements for waste disposal can be realised in partnership with other Waste Disposal Authorities (see paragraph 1.5).

1 **Any new residual waste contract(s) should seek to ensure maximum flexibility for the authority – for example, to allow the guaranteed minimum tonnage to be adjusted in line with decreasing waste volumes**

2 **When assessing bids from potential providers, at least equal weighting should be applied to contract flexibility as the initial cost per tonne**

3 **In recognition of the uncertainty associated with future residual waste, and in order to take advantage of potential new developments in waste disposal technology, the preference should be for a contract length of no more than 15 years**

4 **The Communities Overview & Scrutiny Committee should consider reconvening the Task & Finish Group when the preferred spatial option has been published to identify any potential implications it could have on the residual waste contract(s)**

5 **The preferences expressed within the 2005 Waste Strategy for a thermal treatment system and a centralised energy from waste facility should not be given favour when assessing bids, and the authority should maintain a "technology-neutral" approach**

6 The authority should continue its existing policy of letting multiple waste disposal contracts, but also ensure a mix of technologies is utilised. This will mitigate the risk of being constrained by technologies that become outdated or unaffordable due to new disposal innovations or future legislative changes.

7 Subject to final legal advice, the Competitive Dialogue procedure should be adopted so as to limit the amount of pre-specification and allow tenderers the flexibility to offer various solutions to meet the authority's needs.

1. Introduction

1.1 Warwickshire County Council currently treats approximately 275,000 tonnes of waste per year via a mix of recycling, composting, landfill and energy from waste.

1.2 Between 2013 and 2016, a number of our residual waste contracts are due to expire. This presents an opportunity for the authority to yield savings by procuring more cost-effective arrangements.

1.3 Specifically, these expiring contracts account for approximately 70,000 tonnes of residual waste per year and are held with:

- Landfill site operators
- Coventry's Energy from Waste (EfW) facility
- HW Martins' Refuse Derived Fuel (RDF) plant

1.4 Cabinet has instructed that any new waste contract(s) for Warwickshire should support the diversion of waste from landfill, thereby avoiding the rising cost of landfill tax and ensuring compliance with Landfill Allowance Targets (LATs).

1.5 There are currently two possible options for the authority to pursue:

Option 1: Partnership
Investigate ways to address our disposal needs in partnership with other Waste Disposal Authorities.

Option 2: Procure a new residual waste contract
Approach the market to procure a new residual waste disposal contract. This would seek the best combination of value and flexibility, and not be restricted to any particular waste disposal technology.

This report relates to **Option 2**.

2. Market testing

2.1 In order to understand the different technology solutions currently available for waste disposal, an Industry Day was held in June 2011.

2.2 An open invitation was made to waste disposal contractors to observe presentations by County Council officers explaining Warwickshire's requirements. Contractors were then given the opportunity to explain their potential offer in a closed session. This was closely controlled with a standardised list of questions and a set time limit to ensure fairness and equal opportunity.

3. Next steps

3.1 Based on the information gathered at the Industry Day, along with further market testing and legal discussions, the County Council's waste management team will form recommendations to Cabinet on the most appropriate procurement strategy. The process will then move forward in accordance with the requirements of the Official Journal of the European Union (OJEU).

4. Role of the Task & Finish Group

4.1 To ensure the involvement of Elected Members within this process, the Communities Overview & Scrutiny Committee recommended that a Task & Finish (T&F) Group be assembled to oversee the pre-procurement phase and ensure all relevant issues and risks are being considered.

4.2 The Overview & Scrutiny Board commissioned this T&F Group, and agreed the membership as follows:

- Councillor Richard Chattaway (Chair)
- Councillor Clare Hopkinson
- Councillor Barry Lobbett
- Councillor John Whitehouse

4.3 The group's activity to date has included:

- Observing the presentations and closed sessions at the Industry Day
- Developing a Scrutiny Review Outline, to define the rationale, objectives and parameters of the review (see Appendix A)
- Holding a Select Committee to consider evidence, understand technical information and receive views of partners, stakeholders and independent bodies (see Appendices B-G)
- Reviewing relevant documentation, including the County Council's Alternative Residual Waste Treatment Plan and future waste forecasts

Note: all appendices referred to in this report can be accessed via the Warwickshire Web

4.4 Given that the contract length could potentially run to 25 years, and will therefore represent significant cumulative cost to the taxpayer, the principal objective of the T&F Group has been to ensure robust risk-management processes are applied at every stage of the procurement.

4.5 In reaching its findings and recommendations, the group has considered a range of issues, including waste forecasting, environmental and community impacts, waste disposal technologies and different contract types. A summary of these findings follows below.

5. Forecasting waste volumes

5.1 **Background**

The volume of residual waste currently anticipated for this contract is approximately 70,000 tonnes per year. However, given the drive towards waste minimisation and the county's increasing rate of recycling, it is possible that this will reduce significantly in future years.

Therefore, a key requirement of the contract terms and conditions will be the need for flexibility. Warwickshire does not want to commit to paying for waste disposal capacity it does not require.

5.2 **Evidence provided at Select Committee**

Members received a presentation on the past, present and future of Warwickshire's waste (Appendix C), which provided an overview of the factors considered in projecting future waste volumes.

5.3 **Findings**

Based on the evidence provided and the ensuing discussion, it was noted that:

- The factors that have been considered in forecasting future waste volumes include:
  - Population growth in the county
  - Population migration (particularly inward migration from Coventry)
  - Assumptions on waste volumes per household
  - Assumptions on recycling/composting rates

- Waste forecasting is not a scientific process, and many factors present a risk to the accuracy of such projections. For example:
  - Future legislative changes, such as changes to packaging and landfill restrictions
  - The success or otherwise of waste minimisation strategies
  - The accuracy of new housing forecasts
  - Changes to the recycling ceiling (i.e., the limit on the proportion of overall waste that can be recycled) as new solutions are developed. For example, the recycling of street sweepings was not possible 5 years ago, but will account for 10,000 tonnes starting in 2012
  - Decreasing waste volumes at Household Waste Recycling Centres as a result of the Government's waste prevention programme for small businesses

5.4 While Members were satisfied that Warwickshire's waste forecasting has taken account of all the relevant factors as much as reasonably possible, it was accepted that there are many variables within these and the error bars

associated with the projections are potentially very wide. There was a consensual view from Members, officers and invited representatives that in light of this, any future contract(s) should attempt to cater for changes in demand.

Recommendations

1 Any new residual waste contract(s) should seek to ensure maximum flexibility for the authority – for example, to allow the guaranteed minimum tonnage to be adjusted in line with decreasing waste volumes

2 When assessing bids from potential providers, at least equal weighting should be applied to contract flexibility as the initial cost per tonne

3 In recognition of the uncertainty associated with future residual waste, and in order to take advantage of potential new developments in waste disposal technology, the preference should be for a contract length of no more than 15 years

6. Environmental and community impacts

6.1 Background

As community representatives, Elected Members have a role in ensuring that any new developments or services do not adversely impact the environment or living conditions of their local residents.

Consequently, the Task & Finish Group sought to gain an understanding of how the authority will be assessing the environmental and community impact of potential bids.

6.2 Evidence provided at Select Committee

Members received a presentation about the Warwickshire Waste Core Strategy (Appendix D). This sets out the policy principles that must be applied in any new waste development, including two that relate specifically to environmental and community impact.

6.3 The presentation also outlined the process by which Warwickshire's preferred "spatial option" is being selected. Subject to consultation, this is likely to be option 5 (Appendix D, slide 11), which is a settlement hierarchy based on areas of higher population and/or existing waste management capacity. In developing the spatial options, a thorough impact assessment was undertaken, which looked at environmental and community impacts.

6.3 Findings

Based on the evidence provided and the ensuing discussion, it was noted that:

- The policy principles related to environmental and community impact could be seen to conflict with each other in terms of protecting the countryside on the one hand, but not impacting residents of built-up areas on the other
- However, it was acknowledged that planning assessments are very dependent on the individual case. All policies within the Waste Core Strategy will be considered when assessing each proposal, and a judgement will be made accordingly
- Proposals will have to comply with the preferred spatial option, which is likely to be option 5 – offering strong infrastructure links and enabling collaboration with Coventry
- Under option 5, any new waste development with capacity over 50,000 tonnes would have to be located in a 'primary' area: Nuneaton, Bedworth, Rugby, Kenilworth, Warwick, Leamington Spa or Stratford-upon-Avon
- However, if it can be justified that no suitable site is available in a primary area, it could be located in a 'secondary' area: Atherstone, Coleshill or Southam. These were selected based on their proximity to infrastructure links
- In considering the different spatial options, a Sustainability Matrix was used to assess the short-term, medium-term and long-term impacts (Appendix D, slides 9-10)

6.4 Having considered the evidence above, Members were satisfied that sufficient work has been undertaken to robustly assess the environmental and community impacts of potential waste developments.

6.5 The Waste Core Strategy has clear policies relating to these particular impacts, and the preferred spatial option (when published) will restrict new developments to built-up residential areas, rather than open green spaces.

6.6 Members raised concern about a potential conflict between policies DM1 and DM2, but were assured by officers that assessments will be judged on a case-by-case basis.

6.7 Members were assured that the work already undertaken in developing the Waste Core Strategy and the preferred spatial option will underpin the procurement of any new contract(s) – and therefore environmental and community impacts will be properly assessed.

6.8 However, given that final publication and submission of the spatial option has not yet occurred, Members were keen for continued scrutiny and oversight during the procurement process to ensure compliance with its final policies.

Recommendations

4 The Communities Overview & Scrutiny Committee should consider reconvening the Task & Finish Group when the preferred spatial option has been published to identify any potential implications it could have on the residual waste contract(s)

7. Understanding the technologies available

7.1 Background

As part of Warwickshire's 2005 Waste Strategy, an analysis was undertaken of the different treatment technologies available that support diversion from landfill. A number of different scenarios for collection and disposal within Warwickshire were also assessed. The conclusion from this analysis was as follows:

- Preferred technology: a **thermal treatment** system generating energy from a non-fossil source
- Preferred scenario: 40% recycling by 2010, **centralised energy from waste facility**, separate collection of kitchen/food waste and in-vessel composting

7.2 The 2005 Waste Strategy was scheduled to be reviewed and refreshed in 2010. However, this was delayed due to governmental changes, national waste reviews and the abandonment of Project Transform.

7.3 Consequently, the preferences expressed in the 2005 strategy could be deemed out of date for a contract that is to be let in 2012 (at the earliest). In recognition of this, Warwickshire is adopting a "technology neutral" approach to procurement, and is considering everything currently available in the market.

7.4 The Industry Day in June 2011 gave opportunity for market providers to present their solutions to the authority. The following technologies were presented:

- Mechanical Biological Treatment (MBT)
- Refuse Derived Fuel (RDF)
- Advanced Thermal Treatment (ATT)
- Energy from Waste (EfW)
- Autoclave

7.5 Evidence provided at Select Committee

In order to verify the information received at the Industry Day, Members requested an independent perspective on the technologies available. This was provided at the Select Committee by an independent consultancy firm, SKM Enviros, who delivered an overview and comparison of what it sees as the main viable technologies[1] (Appendix E).

7.6 The consultant confirmed that flexibility should be the main priority for any authority seeking a new residual waste contract, due to the many uncertainties and variables ahead for the waste market – particularly with regard to changing waste volumes, composition and legislation.

7.7 The following points were noted about the different technologies:

- MBT

[1] Note: these viable technologies included Mechanical Heat Treatment (MHT), which was not presented at the Industry Day. Conversely, Autoclave was not covered by the presentation, but was presented at the Industry Day

- This is a mechanical separation and sorting process that enables recyclables to be extracted from residual waste
- The remaining residue is subjected to a biological treatment that breaks the waste down into more usable fractions and a more stable state for landfill
- A bio-drying process can be used prior to MBT to make the sorting/recycling process more effective
- MBT is only a pre-treatment option – waste requires further treatment or disposal
- An MBT plant can be partnered with an Aerobic Digestion plant, which generates a low-quality compost-like output, or an Anaerobic Digestion plant, which generates a gas that can be used to generate electricity
- MBT is a flexible solution that can adapt to increases and decreases in kerbside recycling rates
- Outputs include: recyclables, compost, compost-like output, biogas for electricity, RDF

▪ ATT
- ATT can be performed in relatively small-sized facilities, offering greater flexibility than other technologies that require a higher minimum tonnage
- There are two main types of ATT: pyrolysis and gasification
- Pyrolysis uses the least amount of oxygen and requires a heat source. Waste needs to be pre-treated via MBT. It outputs a pyrolysis oil that can be used as a fuel for generating electricity
- Gasification uses more oxygen than pyrolysis and does not require a heat source. It outputs a syngas that can be used as a fuel for generating electricity, but also some hazardous residue
- Outputs include: recyclable metals, fuel for electricity, char/ash/residue for landfilling

▪ EfW
- This requires no pre-treatment of waste
- Virtually any waste stream can be accepted
- A large-capacity facility is needed to make it efficient
- The incineration process creates bottom ash, fly ash and dirty exhaust gases
- The primary output is heat, which can be used locally (e.g., to heat a swimming pool) or to generate electricity from steam
- Outputs include: recyclable metals, heat for electricity, ash for landfilling, exhaust gas for cleaning

▪ MHT
- This is a “steam-cleaning”-like treatment, which makes it easier to recycle and process residual waste
- It requires a heat input
- It has a limited commercial presence in the UK
- Outputs include: mixed recyclables, floc or fibres for re-use or RDF, rejected material for landfilling

7.8 A representative from Friends of the Earth then delivered a presentation (Appendix F) covering the following points:

- Warwickshire is making very good progress with regard to recycling rates and waste minimisation compared with neighbouring authorities
- Despite anticipated housing growth and population increases, Warwickshire should be planning for a reduction in residual waste volumes
- Any new facility should be located in the south of the county and allow for flexible tonnages
- All options should be explored before letting a new contract, such as utilising spare capacity on the county borders (e.g., Cotesbach in Leicestershire)
- The preference should be for shorter contracts in smaller local plants to take advantage of new developments
- Spare landfill capacity should be utilised, but only with stable, non-carbon waste that does not emit methane during decomposition

7.9 Findings

Based on the evidence provided and the ensuing discussion, it was noted that:

- Warwickshire is not limited to a certain size of facility. Modular technologies such as MBT and ATT can be sized according to need, while those that require a larger capacity such as EfW can be topped up with commercial waste or residual waste from neighbouring authorities
- The efficiency of the different technologies in diverting waste from landfill has been independently rated by SKM Enviros (Appendix D, slide 28), with EfW and ATT being the most efficient
- The overall efficiency of the different technologies is difficult to assess, as it depends on the value and usefulness of the outputs
- In terms of environmental impact, all technologies produce some degree of emissions. MBT produces mainly Carbon Dioxide (CO2), while ATT and EfW produce ash and CO2
- ATT and EfW are required to meet certain emissions standards as part of the Waste Incineration Directive
- There may be a tax on carbon emissions from EfW plants in future years
- Any carbon-based residue that is sent to landfill will eventually result in the release of methane
- It is difficult to evaluate technologies according to their environmental impact, as emissions are released at different stages

7.10 With consideration to the advantages and disadvantages of each technology as explained by the independent consultant, and in recognition of the uncertainty over future waste volumes, the T&F Group would make the following recommendations.

Recommendations

5 The preferences expressed within the 2005 Waste Strategy for a thermal treatment system and a centralised energy from waste facility should not be given favour when assessing bids, and the authority should maintain a "technology-neutral" approach

6	**The authority should continue its existing policy of letting multiple waste disposal contracts, but also ensure a mix of technologies is utilised. This will mitigate the risk of being constrained by technologies that become outdated or unaffordable due to new disposal innovations or future legislative changes**

8. Understanding the different types of contract

8.1 Background

From a legal perspective, if the authority is intending to procure a waste disposal contract likely to exceed the EU threshold of £156,442, it must follow EU Procurement guidelines.

8.2 These state that an advert must be published in the EU Official Journal (OJEU) and the authority must decide which procurement procedure it will use. There are four main procedures to choose from: open, restricted, negotiated or competitive dialogue. Of these, the restricted procedure and the competitive dialogue are the most suited to a residual waste disposal contract.

8.3 Evidence provided at Select Committee

A Senior Solicitor from the County Council circulated a briefing note (Appendix G) that detailed the processes and principles associated with each option, a series of key questions for the authority to consider and some initial legal advice.

8.4 Findings

Members gained a clear understanding of the two contract options. The key points of note were:

- Restricted
  - This contract type would require the authority to clearly pre-specify in detail all the requirements of the contract before inviting tenders
  - Once procurement begins, negotiations with bidders would not be allowed
  - It is a structured procedure that requires bidders to be scored against pre-set award criteria
  - Once underway, it is a faster procedure than competitive dialogue
- Competitive dialogue
  - Competitive dialogue is better suited to complex projects
  - It allows the authority to negotiate with bidders directly on technical, legal and financial matters
  - It is a more flexible procedure, with no set format for the dialogue to follow
  - Less-detailed pre-specification work is required compared to a restricted contract, so the procedure can begin earlier

Recommendations

7 Subject to final legal advice, the Competitive Dialogue procedure should be adopted so as to limit the amount of pre-specification and allow tenderers the flexibility to offer various solutions to meet the authority's needs

9. Conclusion

9.1 The T&F Group believes that there are many uncertainties in relation to future waste volumes in Warwickshire. Therefore, flexibility has to be the essential characteristic of any contract(s). These recommendations have been developed accordingly, and should ensure the authority is able to deliver best-value outcomes for residents over the long-term.

9.2 The Chair would like to thank Members of the T&F Group for their active participation; representatives from the Warwickshire Waste Partnership, SKM Enviros and Friends of the Earth who contributed to the Select Committee day; plus County Council officers for their co-operation in this valuable scrutiny review.

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10 August 2011