KPMG

INFRASTRUCTURE, GOVERNMENT AND HEALTHCARE

Leeds City Council

Waste Management Review

September 2007

AUDIT

AUDIT ▪ TAX ▪ ADVISORY

Contents

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Glossary of terms

Defra	Department for the Environment, Food and Rural Affairs
DCLG	Department of Communities and Local Government
EA	Environment Agency
MWMS	Municipal Waste Management Strategy
EOI	Expression of Interest
OBC	Outline Business Case
PFI	Private Finance Initiative
PPP	Public Private Partnership
PPPU	Public Private Partnership Unit
LATS	Landfill Allowance Trading Scheme
EfW	Energy from Waste
MBT	Mechanical Biological Treatment
SEA	Strategic Environmental Assessment
EIA	Environmental Impact Assessment
NPV	Net Present Value
VfM	Value for Money
FRS	Financial Reporting Standard
IFRS	International Financial Reporting Standard
BVPI	Best Value Performance Indicator
PwC	PricewaterhouseCoopers

Section 1

Executive Summary

1.1 Introduction

Leeds City Council developed an Integrated Waste Strategy which was approved by the Executive Board on 18 October 2006. One of the key themes in the Municipal Waste Management Strategy (MWMS) is to ensure value is recovered from any residual waste that has not been recycled or eliminated by waste minimisation initiatives. The Authority has investigated a number of technologies which would facilitate the implementation of the strategy and reduce the volume of waste land-filled, thus avoiding significant financial penalties. Through technical and financial analysis the Authority has developed a reference project. This reference project was submitted as a benchmark model to the Department for the Environment, Food and Rural Affairs (Defra) as part of the Authority's Expression of Interest (EOI). The reference project in no way constitutes a final decision on the choice of technology by the Authority, but provides a tool to measure proposed solutions. The Authority will be neutral in terms of technology choice until the final selection of a contractor in 2010.

We have undertaken a review of the decision making framework and the way in which relevant information was generated and used in the development of the Authority's reference project. It is important to note that the content of this report reflects the Authority's position as at 20 September 2007. The fast pace at which this project is moving forwards and the high speed of technical developments in residual waste management technology means the accuracy of this report will also diminish at a fast pace. One example of this is the Authority's increase in the combined recycling and composting target from 40% as detailed in section 8.3 to 50% by 2020 as ratified by the Executive Board on 11 September 2007.

1.2 Key findings

Overall, a robust approach to the pre procurement phase of the Authority's waste management project was evidenced. The following areas of good practice were noted:

- A thorough consultation process was undertaken which stemmed from effective mapping of key stakeholders. Information was distributed through a number of channels using appropriate language with clearly defined methods of response. Evidence was available to demonstrate how the feedback gathered was used to influence the content of the MWMS. The robustness of this process will need to be demonstrated when planning permission is sought for the preferred site.
- Soft market testing was contracted to a third party and through reviewing the material gathered it was evident that best practice had been followed in respect of potential private sector operators approached and the nature of the questions asked of them.
- The environmental assessment was thoroughly undertaken. Again, a third party contractor applied recognised best practice to evaluate each of the technology choices short-listed by the Authority. The output from their reports was then assessed by stakeholders applying a Leeds specific scoring matrix linked to the objectives of the MWMS to derive the optimal local solution.

Executive Summary (continued)

1.2 Key findings (continued)

- The environmental impact assessment was thoroughly undertaken. Again, a third party contractor applied recognised best practice to evaluate each of the technology choices short-listed by the Authority. The output from their reports was then assessed by stakeholders applying a Leeds specific scoring matrix linked to the objectives of the MWMS to derive the optimal local solution.
- The environmental assessment took into account the output from national Government sponsored studies for a high level assessment of Energy from Waste (EfW). Local conditions were also taken into account but it is important to note that the environmental assessment to date has been in the absence of a site shortlist.
- The financial implications of choices in technology were assessed using the recognised Net Present Value (NPV) model to understand the income and expenditure flows over the 28 year life of the different technology choices. The Authority's technical and financial advisors both modelled the potential solutions using NPV. In both instances EfW was ranked first. The models factored all material income and expenditure flows relating to the facility itself. The associated costs of collection under each option were modelled by the Council's finance officers based on waste growth and capture rate modelling developed by the technical advisors. The accounting treatment of the reference project was also considered by the appointed financial consultants under applicable Financial Reporting Standards (FRS).
- Private Finance Initiative (PFI) was selected as the preferred method of financing the reference project's EfW facility through consideration of whether this would provide a value for money solution. The Treasury's assessment framework was used to evaluate the project in terms of its viability (defining objectives and outcomes), desirability (risk management) and achievability (resource to manage procurement and contract when signed). The method of financing the various elements of the waste solution is in line with the recommendations of the Kelly report of May 2006. The soft market testing confirmed PFI as the preferred financing route of the private sector operators consulted.
- The Authority has ensured that the MWMS which drives the Collection strategy was factored into the choice of technology. The ability to achieve minimisation in waste growth and recycling targets were included in the decision making matrix. The impact of these targets on the composition and amount of waste treated at a residual waste facility were modelled by the technical consultants on the project.
- Governance arrangements in the pre-procurement phase of the project followed recognised best practice. Roles and responsibilities of key senior officers were well defined and understood, the Authority ensured a high level of Member interaction and expertise was harnessed through representation from the Authority's Public Private Partnership Unit (PPPU) and the appointment of qualified technical and financial advisors. The pre-procurement phase was reviewed by the Scrutiny Board's Waste Management Working Group and assessed against a corporate project management methodology. The Authority has a tried and tested framework for managing the procurement phase of the project through the establishment of project boards and the involvement of the PPPU.
- Sustainability Appraisal and Strategic Environmental Assessment (SEA) was carried out on the MWMS.
- The Authority has developed a detailed project plan setting the procurement, construction and operational phases of the project. The plan details all statutory phases against a time scale largely driven by the potential financial penalties of the Landfill Allowances Treading Scheme (LATS) and landfill taxes. This plan will be submitted with the Outline Business Case (OBC) to Defra.

Executive summary (continued)

1.3 Key learning points/recommendations

If the Authority succeeds in securing PFI credits following submission of the OBC the following should be taken into consideration when entering the next phase of the project:

- The Authority should retain transparency throughout the rest of the procurement phase. Recognised consultation points should be planned with stakeholders and the market. The Authority will have to undertake a competitive dialogue process and should allow flexibility within the procurement scope to allow for innovative technological solutions to come forward whilst remaining focussed to avoid a protracted procurement process and costs associated with this.
- On selection of possible sites the Authority should conduct full sustainability appraisals to fully understand the social, economic and environmental impact of residual waste treatment facilities at each site. Site selection (planning risk) is identified in the Kelly report as critical to the deliverability of a residual waste management project. This fact was echoed by potential contractors in the soft market testing exercise conducted on behalf of the Authority.
- The financial information in the OBC should build upon that contained in the EOI. Given the uncertain nature of the majority of the cost drivers, sensitivity analysis should be used to understand the potential impact of changes to these factors. The financial model should be site specific and the wider financial impact of the choice of technology should be understood e.g. changes in collection costs, site preparation costs, infrastructure costs and so on. The Authority should take advice to ensure that the model submitted to Defra is in line with Defra's expectations.
- The Authority needs to ensure that the contract let is flexible enough to deal with the targets set out in the MWMS which are set to become more challenging for example by future increases in Government targets. This will directly influence the demand for residual waste treatment. The Authority needs to ensure that a satisfactory amount of risk is transferred to the private sector operator for an appropriate charge. Given the highly political nature of the scheme the facility should not be seen as imposing a cap on the level of recycling or limit the ambition of the Authority to reduce household waste growth.
- The Authority should seek to clarify the effects of the introduction of International Financial Reporting Standards (IFRS) on the project. These are due to be introduced in 2008/09 and it has been speculated that a number of PFI schemes will be required to be recognised on public sector organisations' balance sheets upon adoption.
- Following awarding the contract the Authority should consider the skills and level of staff required to effectively manage the PFI contract. Effective 'client side' management of the contract will help to ensure that the benefit envisaged is delivered in line with the contract. Given the number of waste management PFI projects likely to be procured in the medium term, the Authority should recognise that the skill set required to manage these often complex contracts are likely to be in high demand.

Executive summary (continued)

1.3 Key learning points/recommendations (continued)

Although there are many examples of best practice the Authority should address the following observations:

- The fact that Defra had communicated that PFI credits had been earmarked for the Authority was included the Executive Board report. Although this provides clarity in terms of the environment in which the Authority is operating it may also prejudice the Board's decision at an early stage in favour of PFI without full evaluation of other funding methods. It was also clear from the level of credits available that PFI was only potentially one element of the finance package required to facilitate the delivery of the waste facility. However, it is acknowledged that the Executive Board was not intended to ratify PFI as the financing method and officers state that further analysis of financing options will be undertaken before the OBC is submitted to Defra.
- The market sounding exercise did not gauge opinion on the term of the contract or preferences for recycling and landfill targets. A further, more focussed market sounding exercise is planned leading up to the submission of the OBC. This should also seek to identify supply side capacity to deliver the project. Due to the large number of residual waste management projects in various stages of procurement and a concentrated market for the supply of solutions the Authority will need to ensure that the market is well understood to derive the most technically and financially viable solution. The concentration of the waste management market and the potential problems this can cause is also highlighted by Kelly.

Section 2

Background

2.1 Introduction

Leeds City Council has developed an Integrated Waste Strategy which was approved by the Executive Board on 18 October 2006. The strategy was developed to ensure that the Authority meets national recycling and landfill diversion targets, and that the major financial threat posed to the Authority by the LATS is minimised.

LATS have been introduced by the Government as a means of reducing the amount of biodegradable waste sent to landfill. It is estimated that Leeds City Council could face cumulative penalties of £217m by 2020 if they fail to act. The Authority's need to react to these statutory charges through investment in new waste management infrastructure is therefore a business imperative.

Following a consultation period the Authority has submitted an EOI to Defra for PFI funding to support the development of an infrastructure to enable the delivery of the Integrated Waste Management Strategy.

If the Authority was successful in attracting PFI credits they would be used to meet one of the Integrated Waste Strategy's three main targets, namely 'recovery'. The Authority aims to reduce annual growth in municipal waste as a primary measure. The Authority aims to improve recycling and composting rates as a secondary measure. However, the two measures above would still lead to a significant amount of waste being disposed of in landfill sites. Following completion of the Council's appraisal of residual waste treatment technologies EfW was identified as the best performing option to treat waste which can not be dealt with further up the hierarchy. The infrastructure to support an EfW facility is estimated to require total capital funding of £129m.

In evaluating treatment technologies, the following steps were taken:

- stakeholder consultation;
- environment and health evaluation;
- financial analysis;
- evaluation of different delivery mechanisms (including PFI);
- a risk assessment;
- assessment of the impact on the waste collection service; and
- consideration of governance arrangements to deliver the project and strategy.

Section 2

Background (continued)

2.2 Objectives and scope

We have completed a review of the EOI by carrying out a desktop study of the relevant documentation supplemented by interviews with key members of staff. Our review has specifically considered:

- The appropriateness and mechanism used to consult stakeholders in the development of the strategy (section four).
- The nature of the environmental and health evaluation and the weight attached to this in the decision to select EfW as the reference residual waste treatment technology (section five).
- The robustness of the financial assumptions used to evaluate the options identified in the EOI and the extent to which the financial implications featured in the options appraisal (section six).
- The robustness of the evaluation process used to select PFI as the preferred procurement/funding solution to meet the Authority's strategic waste objectives (section seven).
- The degree to which the reference technology option is aligned with the refuse collection service strategy (section eight).
- The appropriateness of governance arrangements to deliver the Integrated Waste Strategy from development of the strategy itself through to the completion of the project when the facilities are delivered (section nine).

2.3 Audit Approach

Our review will include reviews of documentation produced by the Authority and interviews with key contacts.

2.4 Acknowledgements

We would like to acknowledge the following officers who assisted in providing information to complete this review:

- Andrew Lingham
- Helen Finister
- Neil Evans
- Richard Ellis

Section 3

Introduction – Reference Project as Submitted in EOI

3.1 Introduction

In order to effectively review the steps taken to select the choice of technology for the residual waste treatment reference project, it is necessary to briefly outline the model submitted to Defra in the hope of securing PFI credits.

3.2 Municipal Waste Strategy

The Authority's reference project for municipal waste models the development of a range of facilities for recycling, composting and energy recovery from residual waste through treatment technology. A number of transfer stations will also be required to receive waste from areas of the city which are distant from the likely site of the treatment facility.

The Authority's decision to exclude the collection, landfill operations, a materials recycling facility, in-vessel composting and green windrow composting from the main PFI contract was largely a function of a change in Defra's policy but also follows the model advocated in the Kelly report. The Kelly report was a report from the Office of Government Commerce to the Treasury published in May 2006 entitled *'Improving Competition and Capacity Planning in the Municipal Waste Market*'. Defra expect that a holistic approach to be adopted by local authorities in developing a waste strategy but due to a limited number of PFI projects which incorporating multiple elements of the waste lifecycle coming to fruition there has been a move towards disaggregating PFI projects. Table one summarises the results of the technology options appraisal.

Section 3

Introduction – Reference Project as Submitted in EOI (continued)

Table one			
Description of technology	**NPV £m**	**Benefit score**	**Risk Score**
Do nothing	530	10	47
Do minimum	518	19	38
Autoclave + advanced thermal treatment	618	64	129
Autoclave + landfill	631	33	103
Energy from waste (EfW)	**474**	**72**	**52**
MBT + advanced thermal treatment + in-vessel composting	614	57	107
MBT + landfill + in-vessel composting	585	39	88
Mechanical treatment + anaerobic digestion + landfill	617	45	101

Section 3

Introduction – Reference Project as Submitted in EOI (continued)

The long term partner that is selected will be required to design, build, finance, maintain and operate a residual waste treatment facility and the supporting transfer station(s). The transfer stations will provide a clear and consistent gate where responsibility for the waste is transferred to the contractor.

The scope of the PFI reference project submitted in the EOI is detailed in table two below:

Table two

Facility	Waste stream	Estimated municipal throughput	Estimate land take	Estimated capital cost
Energy from waste facility	Residual waste (direct delivery from the transfer facilities)	320,000 tonnes	2-5ha	£127m
Waste transfer stations (x2)	Residual waste (for transfer to the EfW facility)	100,000 tonnes (per facility)	0.5-1 ha	£4.6m

The Authority intends to develop materials recycling facilities and in-vessel composting through separate Public Private Partnership (PPP) contracts which will be drafted to maximise incentives to recycle and compost. Three of the eleven household waste sorting sites will also be developed into model recycling centres. Green windrow composting is likely to be operated through local third party operators and the Authority would retain responsibility for collection and any residual landfill.

The following sections of this report analyse how the reference project model detailed above was identified.

Section 4

Stakeholder consultation

4.1 Introduction

This section considers the mechanism used by the Authority to consult stakeholders.

4.2 Background

Early and sustained stakeholder consultation is pre-requisite for the successful procurement of a complex and highly political PFI project such as the waste treatment facility proposed by Leeds City Council.

Failure to make the consultation process transparent and to effectively gauge public and other key stakeholder opinion increases the risk that the procurement process will be hindered for example through planning objections. The Kelly report states that the 'public appear generally unaware of the benefits and drawbacks of key waste disposal methods.' Authorities should therefore tailor their consultation methods to the intended audience.

The Authority should ensure that a stakeholder mapping exercise is completed which should be used to direct the process of consultation. The results of the consultation exercise should be communicated at an appropriate level and feed into the MWMS.

The private sector operator is also a key stakeholder in the project. It is good practice to perform soft market testing or deal testing interviews with a small number of potential service providers. Consulting the market will help ensure that the assumptions used in appraisal exercise are practicable and will help the Authority gauge the level of interest and capacity available. A systematic and strategic approach to market is a core message in the Kelly report. Given the likely intense period of procurement by local authorities in the medium term, little or no co-ordination of deal flow, and the concentration of the waste management market, early engagement with potential contractors is recommended to gauge supply side capacity. The Authority should ensure that there is no distortion of competition in the tendering exercise when conducting soft market testing.

Consultees for the market testing should be focussed and based on factors such as:

- Waste management companies who have a particular geographical or other strategic interest; and
- Technology providers who are known to offer solutions consistent with the Authority's MWMS.

If there is any delay in the planning phase the Authority should revisit the soft market testing to ensure that decisions are based on up to date and relevant information.

Section 4

Stakeholder consultation (continued)

4.2 Background (continued)

Soft market testing should give potential bidders an opportunity to express their views on specific aspects of the project such as:

- preferences for the scope of the contract i.e. which services should be included/excluded from the contract;
- preferences for technology;
- preferences for type of contract (PPP, PFI etc);
- preferences for the duration of the contract;
- views on risk sharing/transfer such as planning, waste quantity and quality, technology, recyclable materials/revenue;
- views on the provision of sites; and
- preferences for recycling and landfill diversion targets.

4.3 Arrangements at Leeds CC

The Authority undertook the following measures to ensure a robust stakeholder consultation framework had been applied:

- The 'About Leeds' newspaper which is available to approximately 300,000 households detailed the Authority's current situation, the potential impact of LATs and landfill taxes and outlined in layman's terms two of the options available to divert waste from landfill, namely EfW and Mechanical Biological Treatment (MBT). The paper also makes reference to other advanced processes and signposts where additional information can be found.
- The formal consultation entitled 'What should Leeds do with its waste?' commenced on 19 December 2005 following approval of the draft MWMS by the Authority's Executive Board.
- An independent research company (QA Research) was contracted by the Authority to undertake a public consultation exercise. The consultation involved printing 40,000 leaflets which were distributed to residents on the subject of reducing, recycling and creating energy from waste. In all there were 2,340 responses. A further 611 responses were obtained from Citizens' Panels which is a demographically representative group of Leeds residents making a total of 2,951.
- QA Research concluded that: 'There was strong support (84%) amongst those surveyed in favour of an EfW facility and we suggest that, on this evidence, this should be pursued by the Council in order to accomplish a reduction in the amount of waste going to landfill.' The report also commented that 'a balance between increased recycling and a simultaneous reduction in waste would be highly desirable and this should be encouraged and enabled by Leeds City Council.'

Section 4

Stakeholder consultation (continued)

4.3 Arrangements at Leeds CC (continued)

- Other methods of consultation included sending a leaflet containing the key messages to libraries, one stop shops, community groups, parish councils and tenant/resident associations. Local community groups were invited to participate in environmental debates. Residents were also consulted through a door knocking campaign in certain areas of the city.
- Exhibition stands were provided at various venues across the city.
- Call centre staff were briefed about the waste management strategy and the website was redesigned to incorporate information about the waste strategy, results of the consultation exercise and information about EfW.
- A media strategy with the Authority's press office was arranged which included a high profile media launch in Leeds city centre and secured local television, press and radio coverage of the key issues. Television coverage included a feature on BBC Look North and ITV Calendar. The Yorkshire Evening Post and the Metro newspaper also ran articles on Leeds City Council's waste management strategy.
- Member involvement was secured through the Scrutiny Committee. A Scrutiny Board enquiry was undertaken by elected Members into the development of a waste solution for Leeds. Members were also invited to a series of seminars to ensure the involvement and engagement in the key issues facing the Authority and site visits were arranged to view the potential technologies in operation.
- The Authority also consulted statutory consultees including The Environment Agency, Government Office for Yorkshire and the Humber, Yorkshire and Humber Regional Assembly, regional local authorities and waste contractors.
- The Authority has also consulted with environmental pressure groups. These include Friends of the Earth and local groups such as Leeds VOICE environmental forum. Initially this organisation was against the proposal for an EfW facility and recommended that the recycling effort be increased.

4.4 Key findings

Overall, stakeholder consultation was thoroughly undertaken.

The leaflet that was circulated as part of the consultation exercise was written in clear manner, avoided the use of jargon and was available in a number of languages. Reference was made to the full waste strategy as approved by the Executive Board. The leaflet summarised the key themes detailed in the waste strategy and explained that the EfW process is a method for dealing with residual waste. The technology was explained as follows: 'the energy from waste process involves burning the waste that we can't recycle under tightly controlled conditions. The heat and power produced could be used by local businesses and housing. These facilities have high-tech multi million pound systems for cleaning any emissions and most of the ash leftover at the end of the process can be recycled.' This description makes it clear to the reader that some incineration is required but also highlights the energy production as a benefit.

Section 4

Stakeholder consultation (continued)

4.4 Key findings (continued)

The integrated waste management strategy was amended following the feedback from the consultation exercise through increasing the waste minimisation targets and rewording the recycling targets so that it was clear that the EfW facility will not impose a ceiling on the recycling levels at the Authority. It should be noted that a recycling target of 50% has since been adopted by the Council.

The Authority recognises the need to undertake a structured programme of communication and consultation as the strategy is implemented. Initially this is to be performed by the Authority's waste and recycling education team. The public relations strategy is being developed to promote the benefits of and address the concerns relating to the proposed solution.

The above consultation provided over 800,000 opportunities to participate in the exercise. The Authority recognises that once site selection is communicated the level of public interest will increase. Experiences of other authorities state that planning challenges (either rejected or withdrawn planning applications) led to major delays in the delivery of facilities and in extreme cases the withdrawal of PFI credits by Defra.

Through ensuring that the standards laid out in the Authority's 'Statement of Community Involvement' are followed and transparency is maintained in the decision making process, the Authority are confident that the best possible site will be selected and the process of seeking planning permission can start. The 'Statement of Community Involvement' is a statutory framework which outlines the how the Authority will involve local people and stakeholders in decision making and planning applications. It also details the statutory consultees such as Members as required by law.

Obtaining planning permission for a waste treatment facility will be a laborious procedure given its status as a 'major' application with 'community significance' under the Town and Country Planning Order 1995. As part of the planning application the Authority will need to provide:

- Details of the consultation exercise and the different groups consulted;
- A summary of the comments made;
- Details of where comments have resulted in changes to the scheme; and
- Details of any criticism of the consultation process by the groups or individuals affected.

In order to ensure that the timescale for delivery of the facility is achieved the Authority should ensure that the process for delivery of the facility is as transparent as possible. The Authority are currently finalising an extensive site selection study facilitated by Jacobs. A shortlist of preferred sites derived through national planning guidance (PPS10) will be taken to the Executive Board for approval with the OBC in November 2007. At least one site will be in the Authority's ownership giving a clearly deliverable option as a minimum.

Section 4

Stakeholder consultation (continued)

4.5 Market Sounding

In terms of consultation with the private sector a soft market sounding exercise was undertaken by PricewaterhouseCoopers (PwC) on behalf of the Authority in February and March 2006. Responses were obtained from a number of potential partners in this project. The consultees included the following companies:

- Waste Recycling Group Ltd;
- SITA UK;
- Biffa;
- Veolia Environmental Services plc (formerly Onyx);
- Cleanaway Ltd;
- Covanta;
- Earth Tech UK;
- Global Renewables;
- Shanks Waste Services Ltd; and
- Focsa.

The above companies were selected as they are all believed to be 'key waste management companies' and represented a mix of organisations able to deliver a mix of 'fully integrated and residual technology solutions'.

The companies targeted were advised of the current waste strategy at the Authority and requested their views on the following:

- Preferences for the scope and type of the contract - specifically whether it would be preferential to include the collection service within the contract.
- Preferences for technology – consultees were asked whether they supported the Authority's identification of EfW as a preferred technology and whether they believed there were any viable alternatives;
- Views on risk sharing/transfer – consultees were asked to identify what they viewed as the key risks affecting the delivery of the project and what actions could be undertaken to minimise these risks. Overwhelmingly the key risk identified was the site acquisition and planning permission. All eight respondents highlighted the provision of an eligible site as a primary risk.

Stakeholder consultation (continued)

4.5 Market Sounding (continued)

- The commercial structure was included in the consultation questionnaire to establish the preferred vehicle to optimise risk transfer between the public sector and private sector contractor.
- Views on the provision of sites – consultees were asked whether they had views on the possible location of a treatment plant and supporting assets (waste transfer stations) within the Leeds Metropolitan area.

The consultation did not however address the following issues:

- Preferences for recycling and landfill diversion targets; or
- Preferences for the duration of the contract.

The Authority received more responses favouring EfW than all the other technologies combined. Eight suppliers favoured EfW as their preferred residual technology, seven of which were in favour of acting as prime contractor and one envisaging a design and build subcontractor arrangement. EfW was cited as the preferred option due to the likelihood of funding being received, the technology is well understood, safe, proven and reliable and can complement recycling and recovery programmes. Only two suppliers suggested alternative residual technology solutions. Shanks Wastes Services Ltd and Global Renewables were in favour of MBT as a solution. It should again be noted that, although EfW remains the Council's reference technology for its OBC, the proposed procurement will be neutral in terms of technology.

The market appetite for combining recycling and collection services with the main treatment facility in the contract was explored. Four of the respondents were in favour of the collection being excluded from the contract on the basis that separation is believed to offer better value for money. Collection arrangements were deemed better suited to shorter term flexible contracts and by separating the two elements more interest would be created in the market. The Authority states that this is consistent with the recommendations of the Treasury (via Defra) and the Kelly report that prefer the letting of two distinct contracts. End to end solutions are more complex and fewer projects of this type have been delivered.

4.6 Key findings

Overall the market testing undertaken in February/March 2006 follows the model of best practice. The list of consultees was adequate in terms of their ability to deliver the reference project and included enough organisations to gauge the market appetite accurately. However, despite giving an indication of interested parties, the potential contractor's capacity was not specifically addressed in the initial soft market testing exercise.

The Authority intends to engage with the market during the development of the OBC through interviews and remain open to emerging technologies. The Authority believes that having a strategy that does not preclude incineration means there are fewer restrictions on the range of technologies that can come forward during procurement. As EfW has gained approval at Executive Board level it is believed that any viable alternative would be supported at this level.

Stakeholder consultation (continued)

Recommendation 1

Given the pace at which technology is being developed to deliver waste management solutions the Authority should ensure that consultation leading up to the development of the OBC should allow potential suppliers to reconsider what they believe to be the optimal technology choice. The capacity of potential contractors should also be gauged through further market testing.

4.7 Competitive Dialogue Process

Market consultation is also a key characteristic of the competitive dialogue process. This is a process introduced on 31 January 2006 following consolidation of laws governing public procurement of complex projects. The process is designed to promote and encourage transparent and fair competition between contractors in EU Member states. The process codifies what was already emerging as best practice under old negotiated procedure.

A key characteristic of the competitive dialogue process is that it encourages innovation. The organisation procuring the solution will need to clearly understand at the outset of this process what they require to be delivered in output terms and the associated facilities to be provided i.e. an affordable output specification. This is arguably the most important document in the procurement of a project through PFI. The 4ps state 'a well-produced output specification allows for the introduction and development of new ideas and innovation about the design, build/installation and operation of the service. It states clearly and comprehensively what is required and the standards to be achieved.'

4.8 Key findings

Although the Authority has not yet reached the procurement phase the market sounding exercise conducted follows the main theme of the Competitive Dialogue process. In consulting the market, the Authority identified a reference project internally (aided by consultants) which will serve as a benchmark and has structured the market sounding exercise in an open way to promote innovation.

Recommendation 2

The Authority should ensure that when developing the output specification they maintain clarity in the terms of the project objectives but build upon the initial work in the market sounding exercise to ensure that innovation is captured not only in respect of the technology used but also the way in which the contract is structured and financed.

Section 5

Environmental and Health Evaluation

5.1 Introduction

This section reviews the process through which the Authority considered the environmental and health effects of each of the possible choices of technology.

5.2 Evaluation of Technology Options for Leeds

The various available technology options for the long term management of residual municipal waste as detailed in table one were assessed using the following criteria to give an overall 'benefit' score.

Achieves sustainability in relation to social, economic and environmental impacts (25%).

- Provides long term and certain markets for outputs (10%).
- Provides flexibility (i.e. adapts to changes in waste volumes and composition, etc) (15%).
- Achieves landfill diversion targets (LATS) (25%).
- Achieves long term statutory and local recycling and composting targets (15%).
- Achieves impacts associated with land fill and allows self sufficiency (10%).

Each 'benefit criteria' considers directly or indirectly the environmental impact of each possible technology.

The percentage figures in brackets shows the weighting attached to each criteria.

5.2.1 Sustainability

The framework to assess the social, economic and environmental impacts of the different waste management technologies was largely based on the Department of Communities and Local Government (DCLG) guidance set out in *'Strategic Planning for Sustainable Waste Management'* (2002) and demonstrates best practice in technology options appraisal. The output from this exercise was cross-referenced other Jacobs' studies which focussed on land use assessment and the technical options appraisal.

Jacobs' social, economic and environmental impacts of each technology were assessed using a 'pre-agreed scoring system during an internal workshop involving Jacobs' Environmental Scientists, Waste Management Consultants and Waste Planners.

Each technology was then re-scored and ultimately ranked against a number of criteria which were derived from the Sustainability Appraisal objectives developed for the Authority's Local Development Framework to arrive at the technology on which to base the reference project for Leeds. In total eight objectives and nineteen indicators were used to appraise each technology in terms of the social, economic and environmental impact. These are detailed in appendix one.

Environmental and Health Evaluation (continued)

5.2.1 Sustainability (continued)

The appraisal of social, economic and environmental factors concluded that EfW performed best overall with 'consistently good performance across all the indicators'. EfW performed particularly well in respect of the amount of waste landfilled as reducing landfill impacts in a positive way on land take, volume, risks to human health and pollution including greenhouse gases. EfW also performed well in relation to the number of vehicle movements required. The workshop derived a score for EfW of 16 out of a possible 25 under the 'sustainability' criteria, and it would appear that EfW fared well under the above assessment. It was ranked second behind Autoclave with Advanced Thermal Treatment (18/25).

5.2.2 Markets for Outputs

All residual waste technology facilities short-listed have by-products as a result of the treatment. The marketability of these by products has an environmental impact as in general terms by-products which can not be sold are diverted to land fill. Calrecovery Europe Ltd (Calrecovery), a waste management and environmental consultancy, were employed as technical consultants to assess the market risk of each technology. EfW and autoclave with advanced thermal treatment both score low in terms of market risk. It can therefore be inferred that the environmental impact of these technology options in terms of the landfill take for by-products is also low.

5.2.3 Flexibility

Jacobs were employed in a technical capacity to assess the flexibility of the possible technologies available. In environmental terms, the flexibility of the facility is important as it is a measure of how well the facility will adapt to changes in waste composition and waste volume. Poor flexibility could therefore lead to increased landfill. EfW was evaluated as carrying 'significant' volume risk and 'insignificant' composition risk. In overall terms EfW was ranked as the lowest risk option in line with mechanical treatment of waste.

5.2.4 Landfill Diversion Targets

Jacobs 'Technical Waste Management Options Appraisal' report (March 2006) considered the performance of technologies in terms of their ability to meet LATS targets as well as the Authority's recycling and composting targets as detailed in 5.2.5. LATS and landfill taxes are the primary financial tools to enable Central Government to achieve its environmental objectives with respect to landfill. EfW was one of three technologies which was considered to meet the Authority's LATS targets by Jacobs, all of which involved an element of thermal treatment of waste.

5.2.5 Recycling and Composting Targets

Recycling and composting targets were also considered by Jacobs. The report shows that EfW was not the best performing option in terms of Best Value Performance Indicator (BVPI) performance with recycling at 38.7%, although it was noted that a proportion of the outputs from the process could be recycled (i.e. metals, bottom ash) with the caveat that they are not currently eligible for the BVPI figure. The MWMS adopted by the Council in 2006 included a target of 40% for recycling and composting. However, this has since been increased to 50% based on the proposed implementation of additional recycling collections and in order to meet the new statutory recycling and composting targets set out in Defra's Waste Strategy 2007. The degree to which the proposed facility is aligned with the collection strategy is detailed in section eight of this report.

Environmental and Health Evaluation (continued)

5.2.6 Land Use

The key factors considered under the land use assessment were:

- Site area/land take;
- Volume – the maximum building volume calculated for each technology;
- Maximum height of development (including the stack);
- Number of facilities;
- Hours of operation; and
- Total number of heavy goods vehicle movements.

EfW was expected to require only one facility, 2-5 hectares which would operate 24 hours seven days a week. The facility would require a stack which would be up to 80 metres high. The HGV movements are favourable under EfW than the other five technologies short-listed. The emissions relating to the EfW facility would have to meet strict regulations of the EC Waste Incineration Directive and are monitored regularly. The land use compatibility is that preference is given to sites in general industrial use or in commercial and industrial urban areas with consideration given to access by modes of transport other than road i.e. rail and water.

5.3 Further Work on Environmental and Health Effects

The Authority also employed Calrecovery to provide an overview of the 'Health/environmental Impacts of Energy from Waste Incineration' in Leeds. The report was issued 2 December 2005 before the Executive Board approved the Council's Waste Strategy and the EOI for PFI credits.

The report provided a general overview of the key issues and the current status regarding the environmental and health impacts of an EfW facility.

The report concluded that potential health/environmental effects of EfW are most likely to be associated with emissions to air rather than through solid or liquid outputs but that the health impact figures (although not specific to Leeds) were deemed to be 'so small as to be negligible.' The report highlighted that understanding local conditions was critical but 'in general…employing EfW might give rise to lower global warming potential, ozone depletion, summer smog, and human toxicity than MBT'. The report stated there was a need to perform a full environmental impact assessment for sites selected at the planning phase.

The Authority has also made available two Defra sponsored reports on its internet site. One report is focussed on the *'Impact of EfW and Recycling on UK Greenhouse Emissions'* (January 2006) and the other is entitled *'Review of Environmental and Health Effects of Waste Management: Municipal Solid Wastes and Similar Wastes'* (March 2004). These reports are both written from a national perspective and do not consider Leeds' situation specifically. These reports were referred to when developing the MWMS as they are major, nationally commissioned reports. The Authority would not have the resource to commission work on such as scale.

Environmental and Health Evaluation (continued)

5.3 Further Work on Environmental and Health Effects (continued)

The Authority commissioned Jacobs to undertake an *'Assessment of the Land-Use Requirements and the Social, Economic and Environmental Impacts of Waste Management Technology Options'* with a final version being published 5 December 2005.

5.4 Summary of Findings

In summary the process for evaluating the environmental impact of each facility was a two stage process. The technical consultants applied a recognised framework and applied this to each technology choice and was able to rank each solution. This output was then scrutinised and internally assessed by a stakeholder workshop comprising of the Authority's project team, local environmental groups, community representatives, representatives from Government Office for Yorkshire and the Humber and elected Members.

The purpose of the workshop sessions was to use the output from the technical consultants' reports to make an informed and balanced decision on the choice of technology for the Authority's reference project, and to ensure that decisions took account of the judgement of all stakeholders and not just scientific reasoning. Options were scored on a scale from zero 'very poor' to ten 'excellent'. Table one demonstrates that EfW achieved the highest score under these criteria.

Overall the environmental assessment was thorough, followed a recognised model of assessment and the output from the consultants reports were discussed and scored in an appropriate forum. The wider context was also considered through drawing upon the key messages from major nationally commissioned reports by reputable bodies.

The issues of cost and affordability, risk and market interest were assessed separately (although the issue of risk is implicit in all of the above criteria). These three issues were considered to be of such importance that they needed to be modelled independently but alongside the 'benefit' criteria.

5.5 Environmental Impact Assessment

The planning process for a waste management project has historically required a Environmental Impact Assessment (EIA). The environmental impact of each available technology should be assessed and feed into the decision making process in order to minimise consent risk. Consent risk being the risk that the facility will not gain the necessary consents and ultimately planning permission. The preferred choice of technology will need to demonstrate that key environmental considerations formed part of the planning process.

Section 6

Financial assessment

6.1 Introduction

This section reviews the financial analysis undertaken by the Authority. Financial appraisal is a key component of the overall decision making process.

6.2 Background

It is imperative that the Authority has a clear understanding of project costs and appropriate budgetary approvals in place to ensure that the procurement process is efficient. A reference project based on the MWMS should be developed from an appropriate options appraisal exercise. The options appraisal should consider the financial implications of the following factors:

- **Waste flows** through various facilities over the lifetime of the project.
- **Capital expenditure** which should be phased to reflect likely construction periods. Capital costs should include the cost of new assets (including land) as well as the refurbishment of existing assets.
- **Maintenance costs** over the lifecycle of the project should be considered.
- **Operating costs** linked to the assumptions in respect of waste flows through each of the facilities should be considered.
- **Revenues** from the sale of any recyclate, energy or the use of facilities by any third party.
- **Collection costs** model the impact on collection systems, including the costs of new rounds, replacement vehicles and receptacles. There should be a holistic view to project costs even if the proposed facility excludes collection.
- **Transport costs** are becoming an increasingly important factor to consider as collections are becoming multi-material and waste management facilities are becoming increasingly focussed.
- **Landfill taxes** should be modelled based on the forecast tonnages to landfill and the anticipated prevailing rate. This should include any residues from any waste processing or treatment process which go to landfill.
- **Tradable allowances** the project may require the Authority to purchase LATS at certain times or may generate LATS to sell. The quantity of LATS should be calculated from the waste flow modelling, in line with the methodology which will be used by the Environment Agency.

Overall a prudent approach to modelling the above factors should be taken. A reasonable level of contingency should be accounted for to cater for uncertainties which are inevitable in complex project. The financial model should be calculated on an annual basis over the lifetime of the project.

Section 6

Financial assessment (continued)

6.2 Background (continued)

The primary sources of data are likely to be:

- Existing costs of delivering the service;
- Cost data obtained from other authorities who have recently procured similar services;
- Cost data bases held by advisors; and
- Publicly available information such as the environment agency.

Having understood the basic project costs, methods of funding the required capital investment need to be analysed. There are a number of options such as PFI, prudential borrowing, private sector financing.

The financial analysis should also model the risks and uncertainties associated with the project. The Treasury's 'Green Book' recommends that sensitivity analysis, and scenario planning are employed as tools to measure and evaluate uncertainties.

On completion of the financial modelling the Authority should be left with an 'affordability gap' for each potential option which is used to inform the decision making process.

The Authority will also need to consider the accounting treatment of the asset required to deliver the waste strategy. Risk transfer and the structure of the contract between the Authority and the private sector company will determine whether the asset is recognised on the Authority's balance sheet under FRS5 *'Reporting the Substance of Transactions'*. In determining whether the risks (and rights to economic benefits from the asset) of the proposed project lie with the Authority or contractor should be considered:

- Demand risk – the risk that demand for the facility falls below anticipated levels.
- The right to any revenue streams.
- Penalty risk – which party will face potential penalties from non delivery of the outputs required to be met through the project.
- Changes in relevant costs such as maintenance costs.
- Obsolescence risk – the risk that the technology choice becomes outdated over the period of the contract.
- The residual value – the risk that the facility has little or no value at the end of the contract period.

The procuring organisation will also need to consider the impact of International Financial Reporting Standards (IFRS) as these are due to replace UK Financial Reporting Standards in 2008/09.

Section 6

Financial assessment (continued)

6.3 Arrangements at Leeds

PwC and Jacobs were employed to perform the detailed financial appraisal on behalf of the Authority. The costs of each of the different technologies appraised were expressed in terms of their NPV over a theoretical 28 year contract period. The NPV basis is used to ensure consistency in the appraisal methodology and to recognise the time value of money. In other words the fact that a pound today is of greater value than a pound in one year's time.

The results of the NPV calculation for each of the technology options available to treat residual waste are shown in table one (section three).

In terms of affordability EfW is ranked first with anticipated savings of £44m over the 'Do Minimum' option.

PwC and Jacobs both modelled the available solutions using their own NPV models and both organisations ranked EfW first in terms of NPV. PwC and Jacobs used the same input data from the Authority but due to differences in assumptions contained within the model there were slight variations in the outturn NPV. The Authority has expressed satisfaction that both models ranked the technology choices in the same order despite marginal differences in the final NPV result.

The cost model used to evaluate the different technologies available is analysed in terms of capital and operating costs. Using data provided by the Authority, confidential data from other local authorities, market reports and the Environment Agency (EA). PwC and Jacobs both modelled the capital and operating costs of the potential technologies over the 28 year contract period. The model also recognised income streams and netted this revenue off costs.

Reviewing the detailed assumptions for each technology choice modelled is beyond the scope of this review. However, we have considered whether key cost and revenues have been taken into account. The key assumptions included in the PwC model and which was expressed in the EOI are detailed below:

- **Capital expenditure** – the level of capital expenditure has been modelled for all technologies under consideration. The construction of facilities is expected to completed in all cases by 2011/12. The capital costs for the main facilities are expected to range from £70m to £160m. The cost of 'Do Nothing' and 'Do Minimum' have also been modelled and include only the cost of a Household Waste Sorting Site of £1.7m. Jacobs provided the information in respect of capital costs which were agreed by Leeds City Council.
- **Operating costs** - all facilities are expected to be operational by 2012/13. Annual operating expenditure ranges from £10m for the 'Do Nothing' or 'Do Minimum' options to £30m for option one (Autoclave + Advanced Thermal Treatment) and option four (MBT + Advanced Thermal Treatment + In-Vessel Composting). The EfW solution assumes operating costs of £25m in 2012/13. Operating costs were estimated by Jacobs based on waste growth modelling and capture rate modelling. The baseline data behind this modelling was provided by the Authority.

Section 6

Financial assessment (continued)

6.3 Arrangements at Leeds (continued)

- **Revenues** – the potential third party income from each technology has been modelled based on information provided by Jacobs. A number of technology choices have the potential for generating significant income from the sale of energy and any spare capacity. There is minimal scope under the 'Do Nothing' and 'Do Minimum' choices due to the lack of facilities being constructed. The PwC model also includes the income from the sale of recyclate. However, only paper, card, glass and metals are included as the markets for other recyclates is not considered stable enough to model with any degree of accuracy.
- **Collection costs** – the assumptions regarding the costs of collection are not explicitly stated within the key assumptions. This is due to the fact that the proposed project is in respect of the residual waste treatment facility only. The collection service is excluded from the proposed PFI contract and hence its exclusion from the NPV calculation.
- **Transport costs** – the key assumptions also fail to detail the assumptions made in respect of the cost of waste transportation for example from the waste transfer station to the EfW facility. This was due to uncertainties with identifying sites for transfer stations and therefore costs could not be modelled. The financial model in the OBC will include these costs.
- **Landfill taxes** – landfill gate fee costs were provided by Jacobs. Landfill taxes are assumed to rise to a level of £35 per tonne from 2011/12 onwards. All technology options have lower landfill taxes when compared with the 'Do Nothing' and 'Do Minimum' options. Annual landfill costs for the 'Do Nothing' option are the highest rising from £17m in 2012/13 to £22m by the end of the project. The EfW option provides the lowest cost of the six possible solutions identified at £4.5m in 2012/13 to £6.4m by the end of the project.
- **Tradable allowances** – LATS are profiled according to the likely national supply capacity which will directly influence the tradable price. The price per tonne is assumed to rise from £20 to £150 between 2008/09 and 2010/11. As localised incentives start to increase the capacity and the supply of LATS increases the price per tonne falls to £100 in 2013/14 and continues on this trend to £20 per tonne by 2020/21. As the price of LATS is a key assumption and difficult to predict the PwC model has included this cost factor in a sensitivity analysis. The best case scenario and worst case scenarios have been modelled where LATS are assumed to be priced at £30 and £150 per tonne throughout the life of the project.

The NPV calculations also include a number of general economic assumptions including the rate of inflation (general and building costs), the prevailing interest rate and the discount rate which is used to recognise the time value of money.

It is noted by Jacobs that NPV is a tool for providing a like-for-like comparison of a number of projects given their technology mix. The NPV will not represent the cost 'to the Authority of procuring that technology scenario, nor will it indicate the gate fee or unitary charge that may result from procuring that technology mix.'

Financial assessment (continued)

6.3 Arrangements at Leeds (continued)

The Authority recognises the complexity of the NPV model. The model contains a large number of variables which are difficult to predict with certainty over the 28 year span of the project. This point is well illustrated by the fact that landfill taxes were assumed to rise at a rate of £3 per annum, however the rate rise has been confirmed at £8 per tonne from 2008/09. The magnitude of these rises can be appreciated by the fact that every £1 per tonne increase in landfill tax has been calculated to cost the Authority £250,000 per annum in terms of their revenue budget.

PwC and Jacobs were both employed for their expertise adding credibility to the assumptions on which the model was based and the robustness of the mechanics of the financial model used.

The Authority recognises the need to undertake further cost modelling for inclusion within the OBC. Again, it is the Authority's intention to employ the expertise of third parties to facilitate this process. It will be important to understand the key assumptions which Defra are expecting to see being modelled without over complicating the model and losing clarity of vision.

The NPV model submitted in the OBC should include an element of sensitivity factors such as:

- Changes in landfill tax rates;
- Changes in LATS prices;
- Changes in energy prices;
- Potential costs of waste minimisation i.e. lower levels of waste treated at an EfW facility; and
- Changes in the delivery timescale i.e. the financial impact of the technology being on stream later than anticipated.

Other costs such as the cost of acquiring the site will also need to be factored into the model. The Authority had incorporated a sum of £13m into the asset management plan to enable site acquisition. Good practice from the Treasury Green book should also be incorporated into the OBC NPV model such as optimism bias.

The Authority is aware of the application of Financial Reporting Standard (FRS) 5 and the impact this could have on the balance sheet of the Authority. The Authority will consult PwC to ensure that the contract is structured in a way that gives the desired accounting treatment under the assessment framework advocated under FRS5. The payment mechanism will have an integrated factor for indexation and the Authority believes there are opportunities for third party capacity meaning the contractor will take a large element of the third party income risk.

The introduction of International Financial Reporting Standards (IFRS) in 2008/09 and the effect on the accounting treatment of leases and PFI schemes in particular could have material implications for the Authority.

Whilst the International Accounting Standards Board has issued guidance on accounting for PFI, that guidance only applies to the operators of PFI rather than to the public sector partner. It will be necessary to develop additional guidance for the public sector but most commentators agree that under international standards most PFI schemes are likely to come onto the balance sheet of authorities. The practical financial implications of such a change will need to be considered by the Authority.

Section 6

Financial assessment (continued)

6.4 Key findings

The financial analysis undertaken was appropriate to help determine the technology modelled in the reference project submitted as part of the EO I to Defra. The NPV calculation modelled a number of key costs and revenue streams which would determine the affordability of each of the short listed technologies. It was not clear from the information reviewed whether costs of collection and transport had been modelled under each option. The Authority had made arrangements to receive advice on the accounting treatment of the favoured PFI scheme under current financial reporting standards.

Recommendation 3

Leading up to the submission of the OBC the Authority should ensure that the financial implications of the reference project are modelled in a holistic way i.e. including collection and transport costs. The appointed financial consultants should advise on the construction of the OBC NPV model.

Recommendation 4

The Authority needs to ensure that the potential impact of the introduction of IFRS' are included in the accounting treatment analysis provided by PwC.

Section 7

PFI as the preferred procurement route

7.1 Introduction

This section of the report considers the framework which was used by the Authority to assess whether PFI funding is appropriate as the preferred procurement route.

7.2 Background

In assessing whether PFI is appropriate, the approach is based on its commitment to efficiency, equity and accountability. PFI is only used where it can meet these requirements and deliver clear value for money without sacrificing the terms and conditions of staff.

The Treasury provide a Value for Money (VfM) Assessment Guide which outlines a process through which procuring authorities should form a decision as to whether PFI is an appropriate way to finance a project. The process has three stages. Stages one and two must be completed as part of the OBC. The Authority's PFI team should undertake and quantitative and qualitative analysis under each stage. Where stage one and two conclude that PFI will deliver VfM stage three will be undertaken which will take the project up to financial close.

The treasury emphasise the following as important factors in the assessments:

- **Evidence** – the assessment should be based as far as possible on detailed evidence and previous experience. Data should be collected on all projects and used to aid future developments.
- **Early assessment** - it is important that appraisals are started early, and are undertaken prior to the engagement with the market. Late changes to a project once procured are likely to erode VfM.
- **Sufficient resourcing and planning** – to ensure VfM is achieved procurement needs to be well planned, managed, executed and transparent.

The Kelly report also advocates a model for funding the various elements of waste management facilities. Small scale facilities such as transfer stations, municipal recycling facilities are recommended to be operated through design, build and operate contracts financed through prudential borrowing with the assets remaining under the Authority's control. Large scale facilities treating municipal waste are advised to use PFI funding with the assets reverting to Authority ownership at the end of the contract. Leeds' proposal follows these recommendations with Defra offering at least fifty percent PFI credits (which could increase following the Government's Comprehensive Spending Review 2007) for the EfW facility with other support infrastructure being financed through separate PPP contracts.

Section 7

PFI as the preferred procurement route (continued)

7.3 Arrangements at Leeds

The Authority has considered the following three main options to achieve VfM in financing the delivery of an EfW facility:

- A conventional design and build contract supported by prudential borrowing;
- A design, build, finance and operate PPP contract but with no PFI funding; and
- A PFI contract with PFI funding.

A number of alternatives were also highlighted in the Executive Board report of 18 October 2006 including procuring elements of the solution through conventional long-term contracts, forming a joint-venture company with another partner (most likely a landowner) but these were deemed to be more complex in terms of contract negotiation and management.

The conventional design and build contract was advantageous in terms of the timescale for bringing the facility online and offered lower cost finance than the PFI option. However there was deemed inadequate transfer of risk under this option. The Authority would have to manage many of the risks of construction and operating the residual waste treatment facility when constructed. The potential cost of performance failure to the Authority having inadequate knowledge of operating the facility was considered greater than the timing and financial gains.

The design, build, finance and operate option without the PFI funding was believed to offer no advantages over using PFI funding. The market sounding exercise demonstrated that the contractors liked the familiarity of PFI terms and conditions.

On balance the PFI route was deemed best suited to the delivery of the facility. Although more expensive than using prudential borrowing the risk transfer was considered to more than compensate for these additional costs and extended timescale.

The Executive Board report of 18 October 2006 indicated that there were £30m of PFI credits available for the Authority on 1 June 2006. By including this information it could be argued that the Executive Board would be drawn to ratify the proposal to apply for these credits to part finance the facility. Officers state that this was not the purpose of this report and that financing options will continue to be reviewed up to submission of the OBC.

The Authority provided a stage one assessment of PFI as a possible tool to finance the project using the Treasury's model outlined above. The assessment was included in the EOI when submitted to Defra. The Authority assessed the project under the following themes:

Viability – the Authority considered whether the project's objectives and outcomes were translatable into outputs which can be contracted for, measured and agreed.

PFI as the preferred procurement route (continued)

7.3 Arrangements at Leeds (continued)

In conclusion the Authority considers that 'overall…the PFI project is viable as a value for money option which is in line with its strategic requirements, offering the right balance of flexibility with risk transfer and no regularity issues to PFI.'

Specific issues which were addressed included measurement of the contract outputs, flexibility and the trade off between cost and the level of flexibility in the contract with specific reference being made to the level of waste expected to be treated i.e. minimum tonnages, any legal or regulatory issues and any potential transfer of staff as a result of the contract being let.

Desirability – the Authority considered risk management around the project. Generally by integrating the life-cycle and operation costs with design and construction, PFI can provide better risk management and incentives to develop innovative approaches to output delivery. The quality of the service delivery is generally higher when arranged through performance and payments mechanism. However, risk transfer will be priced into the contract. The desirability of the PFI project is considered to be the value and cost of the output versus the flexibility of the contract.

The Authority considered a number of factors such as the purchase of the capital asset involved, the scope for innovation in delivery of the solution which is key to ensure that the Authority obtain the latest technology offerings, the ability to provide a clear measure of outcomes or outputs of the investment programme such as best value performance indicators which can be linked to the payment mechanism and the ability to deliver a project which includes design, build, finance and operational aspects.

Overall the Authority believes that PFI offers the best way to manage risk and offers an integrated capital and operating contract which will lead to private sector efficiencies being passed on.

Achievability – the Authority considered the achievability of the project. Under the Treasury framework this recognises the significant costs and time involved in procuring a complex project as well as ongoing monitoring once the facility is delivered. The perceptions of the capability will also affect the level of market interest in a project. In order to deliver a project which represents VfM the Authority should ensure that there is significant market appetite. Failure to attract significant market appetite should impact on PFI as the choice of procurement route. As detailed in Section 4.5, the capacity of potential suppliers also needs to be taken into account when considering the method of financing delivery.

The Authority considered their capability to manage the procurement process, evidence which demonstrated that the private sector was capable of delivering the required outcome, the level of likely market interest given the level of risk that the Authority intends to transfer and concluded that the project was achievable given the in-house expertise and the number of suppliers bidding to secure the contract.

Section 7

PFI as the preferred procurement route (continued)

7.4 Key findings

The Authority demonstrated that best practice as outlined by the Treasury had been followed in determining whether PFI represented a VfM solution to financing the reference project. In terms of the 'achievability' of the project the Authority has yet to consider the skill set and capacity required to manage the PFI contract when let. Effective contract management is required to maximise the benefit of any PFI contract. As the lead time for operational phase of the facility is approximately four years from the date when the contract is awarded and the level of monitoring of key performance indicators is dependent upon the nature detail of the contract, the Authority has adequate time to consider the mix and level of staff necessary.

Recommendation 5

Following awarding the contract the Authority should consider the skills and level of staff required to effectively manage the PFI contract. Effective 'client side' management of the contract will help to ensure that the benefit envisaged is delivered is in line with the contract. Given the number of waste management PFI projects likely to be procured in the medium term the Authority should recognise that the skill set required to manage these often complex contracts are likely to be in high demand.

Recommendation 6

The Authority should review the potential methods of financing the residual waste treatment facility up to the submission of the OBC to Defra. Consideration should be given to the impact on decision making by the Executive Board by highlighting the fact that PFI credits have been earmarked by Defra for the Authority.

Section 8

Alignment with the Waste Collection Strategy

8.1 Introduction

This sections reviews the process through which the Authority aimed to ensure that the prospective residual waste solutions were aligned with the MWMS.

8.2 Background

The waste collection strategy is an integral part of any Authority's overall MWMS. There are a number of key factors associated with the waste collection strategy which will directly or indirectly affect a residual waste treatment facility such as EfW.

- Changes in the composition of input wastes due to increasing or changing source segregation. Source segregation is directly linked to the Authority's kerbside collection strategy which in turn is driven by statutory targets such as European recycling targets. Other factors such as seasonality i.e. the absence of green garden waste over the winter period and consumer (and producer) reaction to the call for reduced packaging on goods mean that the composition of the waste treated by the Authority will change over the term of the contract.
- This composition of waste over a 28 year period is extremely difficult to predict as there is a lack of empirical evidence on which to base assumptions for future periods. This is also an area where the Authority will be looking to transfer the composition risk to the operator. The operator may be reluctant to accept this risk as certain technologies require a degree of certainty around the composition of feedstock such as calorific value, organic content and so on.
- Reduction in waste growth and increased recycling collections could lead to the reduction of residual waste collection cycles. This is likely to affect the throughput of waste to any potential treatment facility.
- The potential letting of a contract for a private sector organisation to operate the collection function on behalf of the Authority could impact on the perceived risk profile of the project by the facility operator.

In order for the optimal choice in terms of the treatment of residual waste to be adopted the procuring Authority needs to ensure that the waste collection strategy ties in with the output specification of the residual waste treatment facility. Whilst collection services might not be included in the scope of the PFI project and the message from the soft market testing exercise suggests that keeping these services distinct is preferable, the collection services role is a critical part of the overall solution. A successful residual waste treatment facility will complement the collection service and help an authority to achieve its long-term recycling targets.

Section 8

Alignment with the Waste Collection Strategy (continued)

8.3 Arrangements at Leeds

To deal with the 366,000 tonnes (2005/06) of municipal waste the Authority operates a weekly collection of residual waste, and a four weekly collection of co-mingled, dry recyclables such as paper, card, cans and plastics to which over 90% of households have access. Pilots of fortnightly collections of dry recyclables and kerbside collections of garden waste are being undertaken in some areas of the City.

The collection strategy is driven by the overall Integrated Waste Strategy for Leeds. The ultimate vision is for Leeds to become a 'zero waste' city through the hierarchy of:

- Reduce - annual growth in household waste to 0.5% by 2010 and eliminate growth by 2020;
- Recycle – a minimum of 50% (recently increased from 40%) of household waste to be recycled/composted by 2020 (in line with European targets); and
- Recover - value from 90% of all household waste by 2020.

Through consultation with its technical advisors the Authority has modelled the projected profile of the Authority's municipal waste in line with the above targets from the Integrated Waste Management Strategy.

The model developed for the Expression of Interest assumed that all targets, waste levels, capacity estimates and cost projections are based on the introduction of initiatives to achieve the targets set out in the Integrated Waste Strategy. These included initiatives such as:

- garden waste collection;
- glass collection;
- revised collection frequencies;
- textiles collections;
- increased range of plastics, paper and card collected in kerbside recycling bins;
- increased recycling collections; and
- enhanced participation in recycling through education schemes.

However, the Council has now adopted a 50% recycling target based on the introduction of the following kerbside collections:

- increased frequency of collections of dry recyclables;
- introduction of garden waste collections;
- introduction of glass collections; and
- introduction of weekly food waste collections and, where these are introduced, reduction of residual waste collections to fortnightly.

Section 8

Alignment with the Waste Collection Strategy (continued)

8.3 Arrangements at Leeds (continued)

Achievement of the targets set out in the MWMS and modelled by Jacobs requires the provision of modern recycling and composting facilities. A materials recycling facility would be required to separate the co-mingled, dry recyclables from the kerbside collections and a combination of windrow and in-vessel composting/anaerobic digestion facilities to deal with the organic waste.

The waste flow model prepared by Jacobs states that an overall recycling rate of 70% would be required to meet the LATS targets through recycling and composting alone. Therefore the reference project's residual waste treatment facility would complement the waste minimisation and recycling strategy as part of the overall Integrated Waste Strategy.

8.4 Key findings

Overall the Authority has ensured that the waste flow model prepared by Jacobs included aspirations in respect of waste growth and recycling levels as outlined in the Integrated Waste Strategy. These factors have a significant effect on the collection strategy and in terms of the frequency and variety of types of collections, the cost of the delivery of this function including whether it is better to retain this function in-house.

The alignment of the overall strategy has also been secured through the weighting given to the achievement of recycling targets in the benefit criteria when assessing the different technology options available (15%).

The transfer of the demand risk of the facility directly related to the recycling and waste reduction initiatives is likely to be a key feature of contract negotiation.

Section 9

Governance Arrangements

9.1 Introduction

This section of the report considers both pre and post procurement project governance arrangements.

9.2 Background

Given the size and complexity of delivering the reference project's residual waste treatment facility good governance arrangements are essential. The failure to deliver this part of the waste management strategy in the planned timescale would be costly to the Authority in financial and reputational terms.

Between 1997/98 and 2003/04 nine waste projects reached contract award stage nationally. The number of waste authorities now engaged at different stages in Waste PFI and PPP projects is in excess of 260. The scale of activity in this sector has led to the development of detailed good practice in project management to deliver complex waste solutions. Leeds City Council has experience of managing a number of complex projects including PFI contracts procured through their PPPU.

The following governance structure is advocated to ensure that decision making is streamlined and the procurement process is efficient:

- The establishment of a Project Board. This should be delegated powers from the Executive Board to make key decisions at various stages of the deal negotiation.
- The Project Board is likely to be led by the Project Sponsor. The Project Sponsor is likely to be the chief officer responsible for waste management and should be supported by high level representation from finance and legal officers.
- There should also be Member involvement in the Project Board comprising the portfolio holder for waste management. Cross party support should also be taken into account to ensure political neutrality.
- A Project Director should be appointed who is the lead negotiator of behalf of the Authority and has delegated powers to 'do the deal'. This role requires support from a dedicated project manager who will have responsibility for coordinating project delivery and reporting to the Project Board.
- The Project Manager will require support from the finance officers (those responsible for monitoring the waste management budget), legal, procurement support, insurance and officers who have had experience in procuring large PFI scheme to ensure that the Authority's past experience is captured.
- Scrutiny arrangements are recommended with internal audit overseeing the role and activities of the project team.

Section 9

Governance Arrangements (continued)

9.2 Background (continued)

It is likely that authorities will also require specialist external advice in the following areas:

- Legal – to provide support on the management of risks associated with the procurement process and preparing contract documentation.
- Financial – preparing financial models, developing value for money commercial solutions and ensuring that accounting treatment requirements are met.
- Technical – to provide specialist input on waste specific issues such as design and construction of facilities, environmental impact of different technologies, site selection advice, waste flow and cost modelling.
- Insurance – specialist advice of insurance provisions for major waste facilities.

Strong governance arrangements as detailed above are a key factor in the Authority meeting its project timescale. The minimum time required deliver an operational new facility is believed to be approximately four years. This could be significantly longer given the variations in the complexity and scale of waste management projects.

9.3 Arrangements at Leeds CC

The above framework provides a model of best practice which can be used to assess the governance arrangements that have been developed at Leeds City Council.

The PPPU is a team within the Authority responsible for delivering projects once the PFI credits have been secured. They will have a key role in the project team through the procurement stage to delivery of the asset.

As the project is at the EOI phase at the moment this structure has not been implemented in full although key roles and individuals have been identified. The current arrangements are as such:

- The Council has an approved governance protocol for PFI/PPP projects and the residual waste treatment project will be managed in accordance with these agreed arrangements.
- At the highest level the Authority's cross-party Executive Board approved the integrated Waste Strategy for Leeds for 2005-2035. The strategy includes the reference technology to treat residual waste using EfW technology and the interest in using PFI as a solution to financing this facility.
- The Authority has secured further member involvement through commissioning a full Scrutiny inquiry into the Waste Solution Project by its Environment and Community Safety Scrutiny Board.

KPMG

Section 9

Governance Arrangements (continued)

9.3 Arrangements at Leeds CC (continued)

- The Scrutiny Board established a working group comprising six members including Councillor Anderson (Chair of Scrutiny Board (City Services) and attended by key City Services officers. Proposals for a Leaders' Working Group have also been approved by the Executive Board. Its primary term of reference is to monitor, review and challenge progress on the implementation of the waste strategy and associated action plan as approved by the Executive Board in October 2006. The members of this working group consist of the Leaders (or their nominee) from each of the political groups represented at the Authority. Meetings are scheduled to occur on a quarterly basis, minuted and available to the public.
- To date the proposed project has been managed within the City Services directorate, with a team comprising of the Director of City Services ('Project Director' in the framework detailed above), Chief Officer Street Scene, Recycling and Waste manager and a Waste Solution Project Manager. However, as part of the Council's 'Change Programme', the Recycling and Waste Team moved under the new Director of Environment and Neighbourhoods, who has become the Project Sponsor. The Recycling and Waste Manager has now been nominated as the Project Director.
- External support has also been secured through the appointment of advisors such as PwC as financial advisors, Jacobs as technical specialists advising on waste flow modelling and the design and operation of potential facilities. Calrecovery were appointed to review the environmental impact of possible solutions to dealing with residual waste.
- The project team in Environment and Neighbourhoods is supported by key officers employed by the Authority in finance, planning and development and the PPPU. To date there has been minimal legal involvement but the Authority has a framework contract through PPPU with lawyers DLA Piper.
- The Authority proposes to establish two project boards to implement the waste strategy for Leeds. A Residual Waste Treatment Project Board chaired by the Deputy Chief Executive and a Waste Solution Programme Board chaired by the Director of Environment and Neighbourhoods. Both projects will be supported by project teams to undertake the day to day management of the overall policy. The Project Board will be responsible for the delivery of the residual waste treatment facility. The board will consist of Directors (or nominees) from Legal and Democratic, Corporate Services, Development and Environment and Neighbourhoods. The head of the PPPU and key Project Team Members will also be invited to attend. Quorum is three of the above.
- The Project Board has delegated powers to develop and submit an OBC for PFI credits, agree the land use strategy and approve all elements of the procurement process.
- The Programme Board has responsibility for the development and delivery of the other key elements of the waste solution for Leeds (ie collections, non-PFI procurements) reporting developments to the Executive Board. The Waste Solution Programme Board members include the lead officers/project managers for each of the projects within the programme.

Section 9

Governance Arrangements (continued)

9.3 Arrangements at Leeds CC (continued)

- The role of Programme Director will be undertaken by the Director of Environment and Neighbourhoods with devolved powers to take decisions on behalf of the Authority in all matters relating to funding and contractual arrangements to deliver the Waste Infrastructure and Waste Strategy Plan and advise the Chief Executive on matters relating to the progress of the programme.

The Authority has ensured that best practice from other projects has been employed on the waste management project through applying the corporate project management methodology 'Delivering Successful Change' developed by a team under the Chief Officer Audit and Risk. A member of the team has been formally involved in the Project Team since the project's inception. The Risk Management Unit which also sits under the Chief Officer Audit and Risk facilitated the development of a project risk register.

9.4 Key Findings

In summary, the governance structure follows best practice. The Scrutiny Board for City Services and the Leaders' Working Group provide the opportunity for cross party involvement and achieving cross party buy-in to proposals.

The team leading on the project have well defined roles and responsibilities and are led by the Director of Environment and Neighbourhoods supported by a dedicated project manager. The project team is supported by individuals within other functions at the Authority and by the appointment of reputable external technical, financial and legal advisors. Once the project has reached the EOI acceptance phase two distinct boards will be responsible for the delivery of the residual waste treatment facility and the strategy more widely.

The Authority has ensured that responsible officers have been briefed on the progression of the waste strategy through the departmental restructuring and shift in responsibilities. Application of corporate best practice has also been ensured through inclusion in the 'Delivering Successful Change' programme.

Appendix 1

Sustainability Objectives used in Technology Options Appraisal

Objective	Indicator
Maintain or improve good quality employment opportunities and the conditions which have enabled business success, economic growth and investment.	Additional number of staff employed by technology during operation
To minimise the risks to human health deriving from waste management	What is the potential for litter and vermin?
	The potential impact of emissions of dioxins/furans from the combined technologies.
	Maximum noise level of technology
	What is the potential for dust?
	What is the potential for odour?
Increase participation, awareness and education in relation to waste issues	Sending the right educational messages
Conserve and enhance the natural and built environment	The maximum landtake
	Maximum volume of combined technologies including landfill
	Maximum height of built development (including the stack)
Improve access to services and facilities whilst reducing motorised journeys	Is there potential for co-location with existing waste management facilities?
	Number of HGV movements
Reduce the growth in waste generated and landfilled in Leeds	Waste recycled / composted tpa*
	Waste recovery tpa*
	Waste landfilled tpa*
Reduce pollution levels and improve cleanliness and reduce greenhouse gas emissions	Potential of air emissions including greenhouse gases
	Bio-degradable waste landfilled tpa*
	Potential for water pollution
Increase the efficient use of energy and natural resources and sustainable design	Amount of energy generated kw/h**

Appendix 2

Recommendations and action plan

Ref	Recommendation	Management response	Responsibility and timescale
1	Given the pace at which technology is being developed to deliver waste management solutions the Authority should ensure that consultation leading up to the development of the OBC should allow potential suppliers to reconsider what they believe to be the optimal technology choice. The capacity of potential contractors should also be gauged through further market testing.	In preparing the Outline Business Case for PFI credits, which sets out a formal request for a specific level of credits that has been agreed with DEFRA, the Council is required to establish a reference project and technology against which costs can be evaluated. However, when procurement commences, bidders will be requested to submit a range of alternative solutions that meet the Council's output and performance specification. The proposed approach to procurement agreed by the Executive Board in November 2007 will be that the Council adopts the principle of a neutral stance on both technology and sites, in order to encourage competition. All bids received will be evaluated on the basis of environmental, technical and commercial considerations. The evaluation of bids received for the project will be carried out using an evaluation model which is neutral on technology alternatives but seeks to use proven technology solutions. The Council conducted market soundings in August 2007 to gauge the capacity of potential contractors, and is planning to carry out further soundings prior to issuing the OJEU notice.	Pippa Milne June 2008
2	The Authority should ensure that when developing the output specification they maintain clarity in terms of the project objectives but build upon the initial work in the market sounding exercise to ensure that innovation is captured not only in respect of the technology used but also the way in which the contract is structured and financed.	The Council's Executive Board have agreed that the output specification and other contract documentation will be drafted to ensure that the procurement allows for a range of technical solutions to come forward, thus providing scope for innovation provided that solutions are proven and deliverable. The Council has established its affordability position at the Executive Board on 14th November and this PFI project, in common with all PFI schemes, must have contract terms that comply with SoPC4, HM Treasury's standard contract form. Within these limitations the contract terms and financing can be varied to be appropriate to the requirements of a particular bid, and terms proposed by bidders will be reviewed by the Residual Waste Treatment Project Board. In addition should a bid be received that is attractive to the Council but does not qualify for PFI Credits the Council's evaluation methodology will be drawn up sufficiently widely to consider such a bid alongside others received.	Pippa Milne June 2008

Appendix 2

Recommendations and action plan (continued)

Ref	Recommendation	Management response	Responsibility and timescale
3	Leading up to the submission of the OBC the Authority should ensure that the financial implications of the reference project are modelled in a holistic way i.e. including collection and transport costs. The appointed financial consultants should advise on the construction of the OBC NPV model.	The financial implications of the reference project have been modelled in a holistic way to consider the costs of both the residual waste treatment facility and the wider waste solution (i.e. including collection, transport, landfill costs, etc.), and were presented to the Executive Board on 14th November 2007. PwC, the Council's financial advisers, have developed the NPV model for the OBC.	Richard Ellis complete
4	The Authority needs to ensure that the potential impact of the introduction of IFRS' are included in the accounting treatment analysis provided by PwC.	The advice received by the Council from PwC is currently being reviewed by the Council's External Auditor, KPMG. The Government has announced its intention to adopt International Financial Reporting Standards (IFRS) in the public sector with effect from 2008/09. The Financial Reporting Advisory Board (FRAB) is currently considering the status of the Technical Note and the impact of the adoption of IFRS by the public sector, it is expected that additional guidance will be issued by FRAB and the Treasury within the Financial Reporting Manual as there is currently no IFRS that provides specific accounting guidance on the treatment of PFI transactions from the perspective of the public sector. Any such guidance will be considered by the Council's External Auditor, including any specific guidance provided by the Audit Commission. The Accounting Treatment for this Project will be re-assessed towards the Preferred Bidder stage of the procurement.	Fintan Bloomer complete

Appendix 2

Recommendations and action plan (continued)

Ref	Recommendation	Management response	Responsibility and timescale
5	Following awarding the contract the Authority should consider the skills and level of staff required to effectively manage the PFI contract. Effective 'client side' management of the contract will help to ensure that the benefit envisaged is delivered is in line with the contract. Given the number of waste management PFI projects likely to be procured in the medium term the Authority should recognise that the skill set required to manage these often complex contracts are likely to be in high demand.	The Council's has a dedicated PPP Unit with significant experience in the successful delivery of PFI projects. In addition to the dedicated Project Team and Project Board now established, the Council's Recycling and Waste team also has a contracts team who will be supporting the delivery of the project on the client side. However, the significance of the resource requirements for the project is not underestimated, and an analysis of the full resource requirements of both the Residual Waste Treatment project and the wider Waste Solution is currently being undertaken as a part of the development of a formal Project Initiation Document (PID).	Pippa Milne February 2008
6	The Authority should review the potential methods of financing the residual waste treatment facility up to the submission of the OBC to Defra. Consideration should be given to the impact on decision making by the Executive Board by highlighting the fact that PFI credits have been earmarked by Defra for the Authority.	A review of procurement and financing options was completed by the Council in developing the OBC. As stated, the Council remains open to other procurement options, and these options will be continuously reviewed by the Residual Waste Treatment Project Board. However, it is essential that the Council pursues the opportunity of PFI credits so that the range of available funding options might be maximised. The report considered by the Council's Executive Board on 14th November 2007, whilst referring to the level of PFI credits potentially available, set out a holistic analysis of the financial implications of the reference project, providing both a comparison to 'status quo' options, and a range of sensitivities around landfill costs.	Neil Evans complete