Merseyside Waste Partnership

Waste PFI Project Outline Business Case

May 2006

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Abbreviations

The following abbreviations are used in this report:

4Ps	Public Private Partnerships Programme
BaFO	Best and Final Offer
BPEO	Best Practicable Environmental Option
BMW	Biodegradable Municipal Waste
BVPI	Best Value Performance Indicator
CD	Competitive Dialogue
CMC	Clean Merseyside Centre
Contract	PFI, PPP or any other contract
Councils	Knowsley, Liverpool, Sefton, St Helens and Wirral
DCAPs	District Council Action Plans
DEFRA	Department for Environment, Food and Rural Affairs
DPD	Draft Deposit Document
EOI	Expression of Interest
FBC	Final Business Case
HWRC	Household Waste Recycling Centre
IAA	Inter Authority Agreement
ISOP	Initial Submission of Outline Proposals
ITPD	Invitation To Participate in the Dialogue
ITSFT	Invitation To Submit Final Tenders
IVC	In Vessel Composting
JMWMS	Joint Municipal Waste Management Strategy
LATS	Landfill Allowance Trading Scheme
LAWDC	Local Authority Waste Disposal Company
LDD	Local Development Document
MRF	Materials Recycling Facility

Abbreviations

MBT	Mechanical Biological Treatment
MOU	Memorandum of Understanding
MSW	Municipal Solid Waste
MWDA	Merseyside Waste Disposal Authority
MWHL	Mersey Waste Holdings Limited
MWP	Merseyside Waste Partnership
OBC	Outline Business Case
OJEU	Official Journal of European Union
Partnership	Merseyside Waste Partnership
PFI	Private Finance Initiative
PQQ	Pre-Qualification Questionnaire
PPP	Public Private Partnership
PRG	Project Review Group
PRINCE2	Projects IN Controlled Environments – version 2
PSC	Public Sector Comparator
RDF	Residual Derived Fuel
SA	Sustainability Appraisal
SEA	Strategic Environmental Assessment
SLA	Service Level Agreement
SoPC 3	Standardisation of PFI Contracts Version 3
SOWG	Senior Officers Working Group
TUPE	Transfer of Undertakings (Protection of Employment)
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WET Act	Waste and Emissions Trading (2003) Act
WLDD	Waste Local Development Document
WMAG	Waste Management Advisory Group

Abbreviations

WTS	Waste Transfer Station

Executive Summary

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1.1 Introduction

This Outline Business Case ("OBC") is a submission from the Merseyside Waste Disposal Authority ("MWDA") for Private Finance Initiative ("PFI") credits in relation to its planned waste management project. The MWDA is responsible for the disposal of waste arising in five District Councils in Merseyside namely: Knowsley, Liverpool, Sefton, St Helens and Wirral.

1.2 Background

In 2004/5 the total waste collected by the Waste Collection Authorities ("WCAs") and delivered to MWDA was 860,000 tonnes. During this year the MWDA and the District Councils achieved a recycling rate of 13.4% and approximately 715,000 tonnes of the municipal waste delivered to MWDA was disposed of to landfill.

Continuing to rely on landfill as a primary disposal route is not sustainable and the Authority now faces greater challenges in the form of strict targets to divert Biodegradable Municipal Waste ("BMW") from landfill. Failure to do so may result in significant financial penalties and could cost Merseyside's tax payers up to £660 million over the next 25 years to purchase Landfill Allowances ("LATS") at £50 per tonne. Worst case this could be as much as almost £2 billion should the Authority have to pay fines at £150 per tonne where landfill allowances are not available to purchase.

1.3 The Waste Management Strategy for Merseyside

The Mersey Waste Partnership ("the MWP") comprising the five District Councils and MWDA has developed a Joint Municipal Waste Management Strategy ("JMWMS") outlining the way forward in terms of delivering the changes necessary to improve recycling and divert waste from landfill. In November 2005 Members of the five District Councils ratified a Memorandum of Understanding ("MOU") which established clear guidelines for joint working and decision-making in order to deliver the JMWMS.

The commitment of the District Councils and MWDA was first illustrated in September 2005 whereby the partnership agreed to change the basis on which the five councils pay the MWDA for waste disposal services. From April 2006, the District Councils are charged a tonnage-based levy for waste disposal services, which complies with the 'polluter pays' principle and provides an incentive to each District Council to encourage recycling and minimise waste arisings in their local area.

1.4 Reference Project

The MWP, together with its technical advisors, Enviros, has undertaken an appraisal of service options and developed a Reference Project to deliver the objectives of Merseyside's JMWMS. The Reference Project has also built upon a number of comprehensive studies commissioned by the Partnership since 2003 to determine the type of facilities and services required to deliver the JMWMS. These are discussed in more detail in section 4.

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Based on the previous commissions, which were subject to both stakeholder and public consultation to determine their relative importance, Enviros and MWP officers considered the technical and strategic issues highlighted in the ERM report and in late 2005 developed a short list of options to be considered for the OBC. The assessment of options indicated that the delivery of the JMWMS requires both high levels of recycling at the kerbside and the provision of treatment facilities to manage and treat residual waste. The Reference Project therefore includes facilities and services for both waste recycling and recovery, with the recovery elements comprising two Mechanical Biological Treatment Facilities ("MBT") and two thermal treatment facilities. It is envisaged that each MBT facility will be co-located with a thermal treatment facility. This solution accords with the BPEO assessment commissioned from ERM consultants in 2005 which indicated that MBT and thermal treatment technology could deliver Merseyside's JMWMS.

The overall recycling performance of the Reference Project is governed principally through the operation of the District Councils' kerbside collection schemes, and the provision of additional recycling facilities including Composting and Dry Recycling facilities coupled with investment in the Household Waste Recycling Centres (HWRCs).

Due to the time it takes to procure and commission waste treatment infrastructure the appraisal of options indicate that none of the options considered will meet the BMW diversion targets for 2009/10, despite significant planned improvements in the front-end recycling infrastructure.

However, the Reference Project aims to deliver a step change in recycling performance, a significant reduction in the volume of BMW sent to landfill and to deliver national and regional waste targets. A summary of the proposed targets are set out below:

Table 1.1 Reference Project recycling performance

Reference Project	2008	2010	2015	2020
BVPI 82a & 82b recycling & composting	29%	42%	46%	48%
Total MSW recycling & re-use	33%	44%	49%	51%

NB The assumptions underlying the above table are discussed in Section 4.8.1.

Table 1.2 BMW diversion and LATS allowances

	LATS allowances (t)	BMW sent to landfill (t)	Excess/(shortfall) in allowances (t)	BMW Diversion (t)
2009/10	310,848	398,865	(88,017)	245,301
2012/13	207,047	291,917	(84,870)	391,677
2019/20	144,877	42,303	102,574	705,187

NB The assumptions underlying the above table are discussed in Section 4.8.2.

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1.5 Procurement Strategy

MWP has adopted a multi contract procurement strategy to deliver the Reference Project consisting of a Recycling Contract, a Recovery Contract and a Landfill Contract. This Strategy was informed by a number of considerations including: project deliverability, market appetite, in house resources, and the proposed role of MWDA's Local Authority Waste Disposal Company ("LAWDC") and the views of potential financiers.

Furthermore, a key driver was the Authority's need to procure waste management services, in particular landfill and management and operation of Household waste Recycling Centres ("HWRCs"), prior to the expiry of the existing contracts in September 2008. The three contract strategy allows the potential for the Recycling and Landfill Contracts to be completed to an earlier timetable.

The separate Recycling Contract also enhances the Partnership's ability to deliver improvements in recycling performance and reduce LATS exposure in the early years, even if the residual waste treatment facilities were to be delayed. In addition, it affords greater flexibility to the District Councils as they implement their respective District Council Action Plans ("DCAP"), all of which are essential to the performance of the Reference Project.

The Partnership approach also takes on board the key areas highlighted by the Department for Environment, Food and Rural Affairs ("DEFRA") in its constructive response to the Expression of interest ("EOI") in February 2006. The Partnership considers that its Procurement Strategy will provide the most appropriate solution for Merseyside. A summary of the three contracts is shown below.

Recovery Contract

The Recovery Contract shall include the treatment of residual waste and will deliver a significant reduction in BMW sent to landfill. This contract includes the majority of the investment required in new waste management infrastructure (>90%); in the case of the Reference Project the investment comprises two co-located MBT and thermal treatment facilities. The Recovery Contract will be the PFI contract and the chosen technology for the treatment of residual waste is referred to as the "Reference Case". This OBC is the MWDA's application for PFI credits in respect of the Recovery Contract - Reference Case.

Recycling Contract

The Recycling Contract will identify a partner for the development of additional recycling and reception facilities, and the operation of the existing facilities currently operated by MWHL. This contract will provide the principal interface with the District Council residual waste and recycling collection arrangements and the MWDA's recycling infrastructure. The introduction of the Prudential Code for Local Authorities affords MWDA the freedom to explore different funding routes within the overriding requirement to demonstrate value for money and achieve the appropriate risk transfer to the private sector. This aspect will be further addressed as part of the detailed development of the Recycling Contract.

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Landfill Contract

The Landfill Contract will secure additional landfill services to ensure that sufficient landfill capacity is available to MWDA, throughout the period prior of the Recycling and Recovery Contracts to the commissioning of the Reference Case facilities. The separate procurement of landfill is one of the steps taken by the Authority to maximise bidder appetite by allowing those companies with no landfill to bid for the Recovery Contract. This approach also affords flexibility to MWDA with regard to its existing and future access to landfill (which currently exists through the assets and contracts of MWHL).

Competitive Dialogue

The MWDA with the support of the MWP will develop an Output Specification for each of the three contracts and it is anticipated that these will be consistent with the conditions established in the 4P's toolkit.

The requirements of the Recovery Contract will be performance based and describe only what performance is required, leaving the choice of delivery mechanisms open to potential contractors and subject to the refinement enabled through the Competitive Dialogue Procedure.

1.6 Planning Strategy

It is recognised by MWDA that the identification, acquisition and successful delivery of planning applications for the various facilities that respond to the needs of the Reference Project is seen as a significant risk to the overall procurement process.

The Merseyside Waste Development Plan Document ("Waste DPD") is not scheduled for adoption until 2010 with preferred options released for consultation at the end of 2007. MWDA's procurement timetable is such that the process of achieving planning consents must be commenced now in order to avoid legislative non-compliance and incurring additional penalties under the Landfill Allowance Trading Scheme ("LATS"), specifically if the Recovery Contract Reference Case (residual treatment) were delayed.

In order to mitigate the risk of planning delays, MWDA have undertaken to identify suitable sites for the Reference Case facilities, ahead of the Waste DPD process. MWDA has resolved to take forward the most suitable sites to obtain planning positions. This work will be undertaken in parallel with the overall procurement programme.

MWDA is liaising closely with the Waste DPD Steering Group to share with them the processes being undertaken by MWDA to determine the most suitable site for the Reference Case facilities (i.e. MBT and EfW facilities).

This OBC reports on the programme of site searches, as at the time of submission of this document. It is anticipated that up-dates on progress will be provided periodically to DEFRA.

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In view of the current status of the Waste DPD the Steering Group has drafted and issued an Interim Position Statement, which sets out the details of the current planning policies in the context of the new PPS10 and RSS. The purpose of this document is to provide a statement of the current planning position with respect to municipal solid waste.

Market testing with the industry and financiers indicates a positive response to the planning strategy taken by MWDA in their approach to sites selection and planning.

1.7 The role of Mersey Waste Holdings Limited

Further to analysing the options and implications of allowing MWHL to tender for any of the three contracts, the MWDA resolved that MWHL be not allowed to tender for any of the three new waste management contracts. This decision was made on the basis of a combination of the risk profile arising for the MWDA from the funding and operational implications of MWHL carrying out such contracts; from the potential negative impact on the markets that allowing MWHL to tender would give rise to and from concerns at the operational capability of MWHL to deliver such large contracts.

It is recognised by MWDA that to enable a fully competitive tendering process, the assets of MWHL would have to be made available in an appropriate form to all prospective tenderers. The consequences of these decisions will be taken forward directly with MWHL and in the preparation of the output specifications in the three contracts.

1.8 Value for money

Following the approach outlined in the HM Treasury Value for Money Assessment Guidance issued in 2004 and Supplementary Guidance issued in September 2005, a project level assessment was undertaken by the Authority in conjunction with its advisors considering both the quantitative and qualitative factors in determining whether PFI could demonstrate VfM for the procurement of residual waste treatment infrastructure via the Recovery Contract. The results of which have been interpreted in conjunction in Section 5.

The qualitative assessment produced a clear indication that in terms of viability, desirability and achievability MWDA is well positioned to deliver PFI procurement. The quantitative assessment also indicated that PFI could demonstrate value for money of approximately 18% on the base case scenario, the robustness of which has been demonstrated through sensitivity testing. Taken together these assessments verify the outcome of the programme level assessment undertaken by DEFRA as part of the Comprehensive Spending Review completed in 2004 that PFI is likely to represent value for money for waste projects.

1.9 Affordability

A summary of the estimated nominal cost of implementing the Waste Strategy (the Reference Project) and the 'Business as Usual' over a period of 25 years is set out in Table 1.3 below. .

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The financial projections in Table 1.3 below are based on the total of the three contracts that will make up the Reference Project i.e. the Recycling Contract, the Recovery Contract and Landfill Contract.

Table 1.3 Nominal cost of the Business as Usual and the Reference Project

	'Business as Usual' £'000	Reference Project £ '000
Project costs	1,639,498	2,887,002
Landfill tax	1,271,305	200,835
Landfill Allowance costs[1]	658,250	13,969
Total nominal costs	**3,569,053**	**3,101,806**
Difference	467,247	-

The estimated cost saving to the Partnership of implementing the Reference Project rather than continuing with the "Business as Usual" option could be approximately £467 million before taking into account any revenue support received from PFI credits. This saving could be as much as £1.13 billion should the cost of buying LATS reach £100 per tonne. A summary of the estimated revenue cost of the PFI Contract is shown below.

Table 1.4 Nominal cost of the three Contracts

Reference Project	£ '000
Recovery Contract (PFI-funded)	**1.765,050**
Recycling Contract	977,463
Landfill (incl Tax)	345,324
Landfill Allowances [2]	13.969
Total nominal costs	3,101,806

Figure 1.1 below presents the projected cost of the Reference Project over the life of the contract compared to the cost of "Business as Usual". Two scenarios have been illustrated reflecting different costs in terms of purchasing landfill allowances. These are shown in Table 1.5 following.

[1] The trading price of landfill allowances has been assumed to be £50 per tonne. This is a reasonably low price chosen to represent a good market for landfill allowances and to compare the cost of the reference project to a 'low cost business as usual' ensuring that the reference project is not selected based on the fear of £150 LATS penalties that, in the event, do not materialise

[2] Cost of purchasing landfill allowances in the short-term between 2008/09 and 2012/13

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Figure 1.1 Profiled Projected Costs

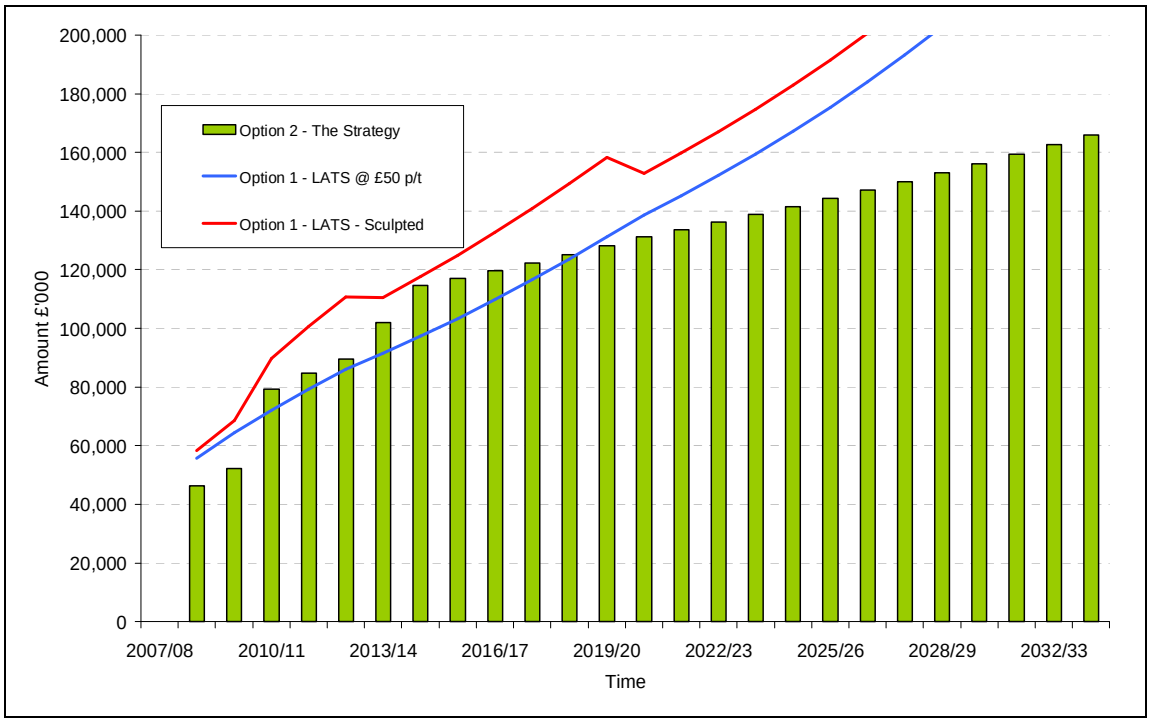

Table 1.5 LATS Allowance Cost Scenarios

	2008 - 2010	2011 – 2013	2014 - 2020	2021 – 2034
Scenario 1	£50	£50	£50	£50
Scenario 2	£70	£120	£100	£75

Figure 1.1 shows how the annual cost of the Reference Project is phased to reflect the build up in performance following the commissioning of new waste management facilities. The first step up in project costs reflects the commissioning of the MBT plants in 2010/11 and the second step up reflects the commissioning of the thermal treatment facilities in 2013/14. The graph demonstrates that on an annual basis, particularly in later years, the projected costs of the PFI option is likely to be significantly less than the 'Business as Usual' option when the costs associated with landfill allowances are taken into account.

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Calculation of the PFI credit

The total Capital Expenditure within the Recovery Contract is £276 million at 2005 prices. This equates to a nominal figure (inflated) of £356 million. The MWDA's calculations indicate a PFI credit requirement of approximately £293m[3]. Discussions with DEFRA indicate a sum of £90 million may be made available to the Merseyside project. For modelling purposes, this indicative PFI Credit figure has been used to assess the affordability of the Recovery Contract Reference Case.

For the purpose of the OBC it is assumed that the RSG will comprise two parts. The first part is to commence on the commissioning of the MBT plants and the second element to commence on the commissioning of the Thermal Treatment facilities. The split of the PFI credit between the two phases will be determined by DEFRA, however a prudent split of 50:50 has been assumed at this stage.

Affordability gap

In order to examine the affordability implications of procuring the Reference Project the existing budget "the Levy[4]" is adjusted to account for both the known changes (e.g. continuing increases in landfill tax stipulated by Central Government) and likely above average inflationary increases (when compared with Consumer Price Index ("CPI") levels) that will apply to the Levy prior to contract commencement.

The projected budgets allow for planned increases in landfill tax up to March 2009. From this point onwards it is assumed that the projected budget shall increase by 3.0% per annum. The rationale for this approach is that the MWP is committed to such increases regardless of the procurement of new waste management contracts. The table below shows the projected budgets for the period 2005/06 through to 2008/09.

The table below also shows the affordability gap for the Reference Project during the first 6 years, taking into account the difference that the PFI revenue support of approximately £7 million p.a. will make to the affordability position. As a result of the PFI revenue support the affordability gap in 2010/11 is reduced by £3.6 million from £31 million to £27 million and reducing the affordability gap by £7.6 million in 2013/14 from £49 million to £41 million.

[3] This figure represents the Net Present Value (Discount Rate of 6%) of the inflated Capital Expenditure totalling £356 million

[4] Levy – The share of MWDA disposal costs charged to District Authorities

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Table 1.6 Affordability Analysis (reference project incl. PFI Income, years 1 – 6)

	2008/09 £ '000	2009/10 £ '000	2010/11 £ '000	2011/12 £ '000	2012/13 £ '000	2013/14 £ '000	Total £ '000
Nominal Costs	44,263	47,804	78,558	82,203	85,282	101,960	3,087,837
LATS Costs*	2,130	4,401	704	2,491	4,243	0	13,969
Total Costs	46,393	52,205	79,262	84,694	89,525	101,960	3,101,806
PFI Support	0	0	3,658	3,658	3,658	7,581	162,589
Projected Budgets	45,842	47,217	48,634	50,093	51,596	53,143	1,671,366
Affordability Gap	551	4,988	26,970[5]	30,943	34,271	41,236	1,267,851

* Assumed LATS purchase costs of £50 per tonne.

Overall the revenue support contributes approximately £163 million reducing the affordability gap by 11.4% to £ 1,268 million.

Impact on the Levy

In order to manage the significant increase in costs, in particular 2010/11 where the affordability gap is £27 million, it is proposed that the Levy shall be increased on a consistent periodic basis over 6 to 7 years (2007/08 to 2013/14). Adopting a sinking fund type approach the surplus Levy revenues generated during the early years will be banked (escrow) in order to meet the increasing costs in later years.

Calculations undertaken demonstrate that the Levy needs to be increased by 15% per annum up to and including the year 20013/14, followed by an increase of 7% in 2014/15. Thereafter it shall continue to increase as a rate of 3% per annum for a period of 9 years reducing to 1.9% in 2023/24. Assuming positive balances earn interest at 4% the first full year contribution required in 2007/08 is approximately £6 million. The MWDA approved the above figures at the Authority meeting on the 12th May and has received the support and commitment of the constituent District Authorities. Letters of support can be found at Appendix 7.13.

[5] This figure is approximately £12 million less than under Option 1 where the affordability gap would be £40 million where the Authority is required to purchases landfill allowances based on a sculpted cost per tonne (£120 per tonne). The breakeven price of LATS at that time in terms of affordability would be £78 per tonne.

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1.10 Performance Management and Payment Mechanism

Section 4 of this OBC details the approach of the MWDA to monitoring and providing incentives to ensure the successful implementation and delivery of the Reference Project through each of the three Contracts.

The MWP proposes to adopt the principles of the 4Ps payment mechanism however these will need to be modified to take account of the Partnership's multi contract procurement strategy. The Project team is planning a number of procurement workshops to develop the payment mechanism detail for the Invitation to Participate in Dialogue ("ITPID"). Particular attention will be given to the need for contract flexibility in order to mitigate the interface risks between District Councils collections and the three contracts and between contracts whereby the action of one affects the other (e.g. relief and compensation mechanisms)

Other key areas of work include detailed analysis of demand risk and waste composition risk, and the development of a Diversion Bonus to provide incentive to the contractor to divert from landfill in accordance with the waste hierarchy. The existing payment mechanism will need to specifically address LATS, as responsibility for achieving the MWDA's BMW diversion targets will be shared between the District Council Collection Authorities, the Recycling Contractor and Recovery Contractor.

1.11 Market Interest and Bankability

Owing to the degree of waste procurements currently either ongoing or planned in the UK the MWDA recognises the significance of generating the market interest required for a competitive tendering process.

To this end, a series of market testing events for both the financial and waste services/technology provider sectors were held on 27 February 2006 and 2 March 2006 in London and Liverpool, in order to publicise the MWDA's intended procurement and ascertain from the market the issues that drive bidding behaviour in the UK waste market and those that are particularly relevant to this project.

The MWDA invited 39 organisations to attend the Financial Sector event (27 February 2006), and 63 organisations to the Waste Services/Waste Technology Sector event (2 March 2006) comprising a mixture of organisations including waste companies, technology companies and potential new market entrants.

A key aim was to consult with the waste market and financial sector on the deliverability and funding implications of the three contract procurement strategy prior to going to market. The event received positive feedback from potential funders and identified a number of considerations which were subject to consultation with potential bidders in order for the MWDA to assess the wider implications of a three contract approach. These areas are discussed in more detail in Section 7.

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1.12 Project Management and Decision Making

A formal project management structure is utilised to manage the procurement process. Ultimate decision making authority rests with the Executive Members of the MWDA and is informed by the Officers and Members of the MWDA. Senior Officers of the five District Councils also sit on the Procurement Group together with senior representatives of the MWDA. Section 7 provides full details of the project management and decision-making arrangements.

A high-level procurement timetable for the PFI contract is provided below. Procurement timetables for the Recycling and Landfill Contracts can be found in Section 7. The timetable below assumes that the OBC receives approval from the Project Review Group ("PRG") when it convenes in September 2006. For clarity, the Recovery Contract forms the basis of the OBC in respect of the PFI credit application approval.

Table 1.7 Recovery Contract

	Stage	Date
1	Submission of OBC to DEFRA	May 2006
2	OBC (PRG) Approval	September 2006
3	Notice in the Official Journal of European Union ("OJEU") published	October 2006
4	PQQ Evaluation	December 2006
5	Draft IPD Document	January 2007
6	Invitation to Participate in Initial Dialogue	January 2007
7	Invitation to Participate in Dialogue	May 2007
8	Clarification Dialogue	October 2007
9	Refine Requirements	April 2008
10	Invitation to Submit Final Tenders	June 2008
11	Contract Award Notice	September 2008

The MWDA intends that all three Contracts will commence upon the cessation of MWDA's waste disposal contracts with MWHL. Section 7.17 provides further detail on the procurement timetable.

Strategic context

Strategic Context Section 2

2.1 Profile of Merseyside

Merseyside is a predominantly metropolitan area in the north west of England. Since 1999, Merseyside has enjoyed significant economic growth, with unemployment falling to its lowest level for 20 years in November 2004. Currently, over £3 billion of construction and infrastructure projects are planned to coincide with Liverpool being European Capital of Culture in 2008. It is expected that this will create around 14,000 jobs and attract an extra 1.7 million tourists.

The Mersey Estuary is the cleanest it has been for 100 years. Mersey Waterfront is funding and co-ordinating 40 regeneration and environmental improvement projects along 135 km of the Merseyside and Cheshire coastline. These interconnected but diverse schemes range from collaborating on major schemes such as Liverpool's forthcoming Cruiseliner Facility to revitalising Victorian coastal resorts such as Southport.

Alongside this growth and regeneration would come the consequences of an increasing population, greater ecomomic affluence and a consumerist society where goods and resources are considered 'disposable'. For both MWDA and the District Councils on Merseyside the challenge is to tackle these issues head on and use a joint working approach to provide innovative, cost effective and environmentally acceptable solutions to waste management.

The area is divided into five Districts as follows:

- Knowsley Metropolitan Borough Council
- Liverpool City Council
- Sefton Metropolitan Borough Council
- St Helens Metropolitan Borough Council
- Wirral Metropolitan Borough Council

Merseyside has a population of approximately 1.4 million and a total number of households in excess of 612,000 as set out for each District in Table 2.1. In 2004/5 the total waste collected by the five Waste Collection Authorities ("WCAs") was 860,000 tonnes, of which 232,000 tonnes was delivered to 14 Household Waste Recycling Centres ("HWRCs") across the five council areas.

Strategic context

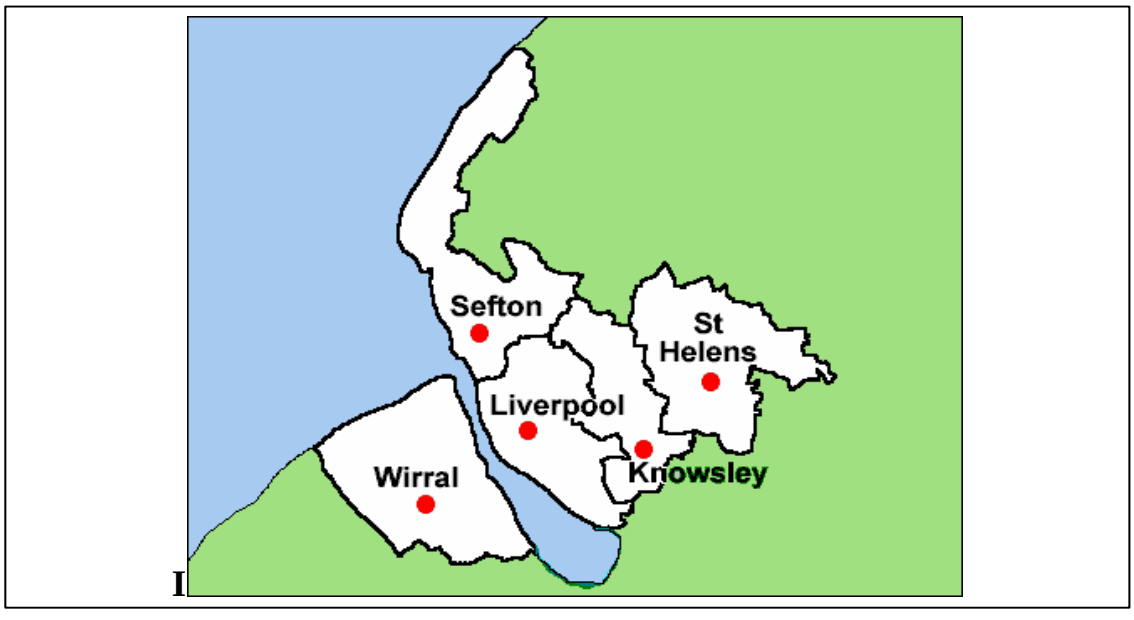
Table 2.1 Population, number of households and population density (2005 estimates)

	Knowsley	Liverpool	Sefton	St Helens	Wirral	Total
No. of households	63,550	207,166	123,100	76,067	143,016	**612,899**
Population	149,794	444,500	281,700	176,700	312,293	**1,364,987**
% of Merseyside Population	10.97	32.56	20.63	12.94	22.87	**99.97**
Population per hectare	17.89	41.00	19.78	12.99	20.45	
Hectares (k)	8369	10840	14240	13600	15270	**62319**

The geography of Merseyside is characterised by the River Mersey and the Mersey estuary it forms with the Irish Sea, which separates Wirral from the other four Districts. The limited number of crossing points between the Wirral and Liverpool has logistical implications for the location of waste reception, treatment and disposal facilities in the area.

The map below (Figure 2.1) shows the geography of Merseyside.

Figure 2.1 Map of Merseyside



The Wirral is served by the M53 motorway which runs parallel (in land) to the Mersey shoreline. Liverpool, St Helens and Knowsley are connected to each other by major A-roads and the M62 motorway, which provides access to the M6 motorway. The M57 provides a good north south link through the eastern side of Merseyside linking to the M62 in the south. South Sefton has good transport links with Liverpool and the A565 connects Southport (in the north-west of Sefton) to Liverpool.

Strategic context

2.2 Merseyside Waste Disposal Authority (MWDA)

MWDA was established in 1986 to undertake the waste disposal responsibilities of the five Waste Collection Authorities ("WCAs") of Knowsley, Liverpool, Sefton, St Helens and Wirral.

MWDA is responsible for:

- Managing the disposal of residual waste collected by the five Merseyside WCAs;
- Managing the waste delivered to 14 HWRCs by the public;
- Undertaking environmental monitoring, maintenance and restoration of seven closed landfill sites previously used by MWDA and its predecessors;
- Managing the Clean Merseyside Centre (CMC) project, which is the market development organisation for recyclable materials on Merseyside; and
- The Joint Venture with Novera Energy to utilise landfill gas to produce electricity.
- The shareholder responsibility of the LAWDC MWHL.

The Merseyside Waste Disposal Authority is the Waste Disposal Authority ("WDA") and is responsible for the disposal of waste collected by the District Councils and for the management of Household Waste Recycling Centres ("HWRCs") for the public to recycle materials and dispose of bulky wastes.

The five District Councils are the Waste Collection Authorities ("WCAs") and are responsible for the collection of residual waste from the household and for collection of recyclables (for subsequent recycling) either at the kerbside or through the provision of bring facilities.

2.3 The Merseyside Waste Partnership ("MWP")

The MWDA has been working in partnership with the five District Councils since 1996 to review the way in which household waste is managed.

The partner authorities are:

- Merseyside Waste Disposal Authority (WDA)
- Knowsley Metropolitan Borough Council (WCA)
- Liverpool City Council (WCA)
- Sefton Metropolitan Borough Council (WCA)
- St Helens Metropolitan Borough Council (WCA)
- Wirral Metropolitan Borough Council (WCA)

Strategic context

The five WCAs and the MWDA share responsibility for the effective service delivery of sustainable waste management, through the provision of effective collection, recycling and disposal services. As part of the Merseyside Strategic Agenda initiatives have been developed for practical local authority collaboration in service delivery across all areas. One of the most significant developments is the formation of the Merseyside Waste Partnership.

2.3.1 The Merseyside Waste Partnership

The Merseyside Waste Partnership ("MWP") includes representatives from the five WCAs and the MWDA, and takes the lead in both decision-making, joint working in terms of funding applications, and key developments in waste management for Merseyside. The collective approach of the MWP provides a firm foundation from which to implement the Joint Municipal Waste Management Strategy ("JMWMS"). A copy of the JMWMS and Position statement can be found in Appendix 2.1.

To accelerate progress, it has been necessary to establish a number of key groups at both officer and member level, to ensure effective communications and a consistent approach to information provision and decision-making. The work of these groups contributes to the transparency and accountability of the MWP. These groups include:

- The Waste Management Advisory Group ("WMAG") which has been set up as a Member/Officer group to advise on the strategic direction of waste management in Merseyside, including the development of the JMWMS and the joint working within it.

- The Merseyside Council Leaders/Chief Executives recommended the establishment of the Senior Officers Working Group ("SOWG") in consultation with MWDA and WMAG, to co-ordinate joint working on waste issues in Merseyside and develop recommendations for the JMWMS for Merseyside.

The development of the JMWMS is directed through the SOWG, reporting to, and taking guidance from MWDA. This includes tracking performance against the *Implementation and Action Plan* for the JMWMS, reviewing issues highlighted in the risk register and taking appropriate action to progress the JMWMS. The strategy will be subject to a comprehensive update every five years by the SOWG.

To implement the JMWMS, the MWP recognises the need for co-operation and to develop closer integration. Therefore a Memorandum of Understanding ("MOU") was developed to set out the aspirations of the Partnership, and establish clear guidelines for joint working and the development of a legally-binding Inter-Authority Agreement ("IAA"). A copy of the draft IAA and programme of ratification can be found in Appendix 2.2. The MOU was ratified by all WCAs and the MWDA in November 2005.

Strategic context

The MOU introduces a mechanism whereby collection and disposal investment plans are considered together. The benefits that such a mechanism can offer are summarised below:

- Ensures the JMWMS has support from all parties;
- The JMWMS properly reflects the aspirations of the Partnership;
- Decision-making processes are aligned to help deliver the JMWMS;
- The cost-effectiveness of joint investment plans and the optimisation of costs across the whole waste management system; and
- Maximises likelihood of delivery.

2.3.2 Local Waste Funding Arrangements

In September 2005 the five District Councils agreed to change the basis on which they pay the MWDA for waste treatment and disposal services.

From April 2006, the levy paid by each of the five District Councils will be based on the tonnage of waste they each deliver, in contrast to the current levy, which is mainly based on council tax and population.

The new tonnage-based levy complies more readily with the 'polluter pays' principle and will provide an incentive to each District Council to encourage recycling and minimise waste arisings in their local area. This policy will enhance the ability of the MWP to meet the JMWMS targets for Merseyside.

The agreement of the District Councils to the tonnage-based levy clearly demonstrates how the District Councils are taking individual responsibility for their role in the MWP.

2.4 The Merseyside "Waste Summit"

On 25 November 2005, prior to the submission of the EOI, the MWDA held its first "Waste Summit". The Waste Summit was attended by key stakeholders from each of the five Merseyside District Councils including Treasurers, Chief Executives and Members. The event provided a forum for discussion and consultation on the JMWMS, its likely financial implications and progress towards procuring a waste management solution. One of the key objectives of the summit was not only to raise awareness but inform members of the need for timely action and effective joint decision-making, to ensure that a solution is procured in a timely and cost-effective manner.

Key areas covered in presentations at the Waste Summit are shown below:

- Procurement and Partnership working - Procurement 4P's;
- The Affordability Framework - Ernst & Young;
- Waste Local Planning Document - Merseyside Environmental Advisory Service
- Decision Making Timetable - Clerk to MWDA

Strategic context

A further Waste Summit primarily aimed at Chief Executives and Leaders of the five Merseyside District Councils, will be held on 12th May 2006 in preparation for the submission of the OBC to DEFRA in May 2006.

2.5 Review of residual waste treatment

In order to develop the Joint Municipal Waste Management Strategy for Merseyside ("JMWMS"), the MWP has commissioned a number of reviews, including the following:

- *Strategic Review of Merseyside Waste Management Strategy*, AEA Technology (October, 2003);
- *Merseyside Waste Management Strategy Support (Extension) Report for* [each of] *Knowsley, Liverpool, Sefton, St Helens and Wirral,* ERM (April – May, 2005);
- *Merseyside Waste Management Strategy – Waste Modelling and BPEO Assessment Programme,* ERM (March, 2005); and
- *Review of Options for the Management of Residual Waste*, ERM (June, 2005)

The reviews commissioned have addressed both the collection and treatment issues facing Merseyside. The five *Waste Management Strategy Support (Extension)* reports produced for each District Council early in 2005, are aimed at assisting the District Councils to develop action plans and a strategy to address local waste issues and to effectively deliver the JMWMS.

The latest reports, undertaken by ERM in 2005, reviewed the existing JMWMS and also involved a Best Practicable Environmental Option ("BPEO") assessment of a number of technology options. The assessment criteria were subject to both stakeholder and public consultation to determine their relative importance.

The BPEO identified for Merseyside, a solution comprising Mechanical Biological Treatment ("MBT") facilities to treat all of the MSW arising from Merseyside. The BPEO also identified the need for thermal treatment capacity for the treatment of MBT-derived residues, to be co-located with one or both of the MBT facilities.

2.6 Public consultation

The objectives of the JMWMS, have considered the results of public consultation undertaken in February 2005. The public consultation involved residents and the public across Merseyside and included Citizens Juries, and making information available via the MWDA website and the local media. In addition, a Merseyside–wide consultation was undertaken through a questionnaire to measure public opinion on residual waste options. A copy of the questionnaire can be found in Appendix 2.3.

Residents were asked to voice opinion on a range of new waste disposal options as well as looking at rates of recycling and the type of new facilities. Feedback from the consultation indicates strong support (89% of respondents) for a strategy that aims to recycle at least 40% of waste. The most popular technology option for the treatment of residual waste was a combination of both MBT and thermal treatment, with a high level of recycling and some landfill (46% of respondents). A full copy of the results can be found in Appendix 2.4.

Strategic context

2.7 Joint Municipal Waste Management Strategy ("JMWMS")

The JMWMS has been developed by the five WCAs and the MWDA. From the results of the consultation the JMWMS, adopted in July 2005 stems from work undertaken by the MWP over a number of years, to jointly develop a sustainable waste strategy for Merseyside.

The JMWMS comprises of three elements:

- Waste Strategy and Monitoring;
- Waste Contracts Procurement; and
- Waste Planning (Waste Local Development Document).

The JMWMS for Merseyside is an evolving document to be reviewed and updated every five years. In addition, annual reviews of the Strategy will take place, taking account of legislative changes, and changes in methodologies and best practice.

The JMWMS sets out how the MWP will respond to national waste legislation, and achieve national targets to recycle more waste and divert more waste from landfill.

2.7.1 Objectives of the JMWMS for Merseyside

The JMWMS is based on short-term measures to improve performance over the next couple of years, together with a longer-term process of identifying preferred residual waste management routes and securing new waste management facilities.

In the short term, the first priority for the MWP is to meet the Landfill Directive targets, and reduce the risk of MWDA incurring large financial penalties.

To do this, the MWP must aim to increase the collection of recyclables and organic material, to remove as much Biodegradable Municipal Waste ("BMW") sent to landfill as possible.

The long-term aim of the JMWMS is to follow the principles of the waste hierarchy which requires a co-ordinated, planned approach. Therefore the MWP is working together to produce a Waste Local Development Document ("WLDD"). This is a planning framework document and is consistent with national and regional planning guidance. It will set out land use policies applying to the provision and location of the required waste management facilities.

Some of the key objectives and targets in the JMWMS are summarised below:

- To reduce the amount of waste going to landfill and to deliver the overarching targets;
- To develop optimal solutions which are environmentally and socially sustainable;
- To inform and to educate the people of Merseyside about waste management;
- MWDA and its partner District Councils will work together to realise the benefits of economies of scale and to share the risks of implementing the JMWMS;

Strategic context

- To encourage and to provide opportunity for community involvement in the JMWMS through support of the Merseyside Community Recycling Forum; and

- To promote effective joint decision making mechanisms between MWDA and the partner District Councils.

2.7.2 JMWMS Waste Reduction Targets

The JMWMS sets out how the MWP will address both the source and processing of waste arisings in Merseyside, in order to substantially reduce the high level of waste that is currently sent to landfill. This involves reducing the growth in waste arisings, improving levels of recycling and composting, and recovering more waste as set out in Table 2.2.

Table 2.2 Merseyside Waste Partnership waste targets

Merseyside Waste Partnership Targets	2005	2010	2015	2020
Waste growth	*Reduce to 2% by 2010*		*Reduce to 0% by 2020*	
Recycling and Composting	22%	33%	38%	44%
Residual waste recovery	0%	15%	46%	46%
Landfill	78%	52%	16%	10%
Landfill Allowance	55%	31%	16%	13%

(Source: JMWMS June 2005)

2.7.3 Diversion target

The JMWMS aims to increase the recovery of waste to the following levels:

- 15% by 2010
- 46% by 2015
- 46% by 2020

Residual waste treatment capacity should be secured as soon as possible and landfill is to be reduced to the levels presented in Table 2.3 below:

Table 2.3 Merseyside Waste Partnership landfill targets

JMWMS – Landfill Targets	Total landfill (% of total waste)	LATS target (% of total waste)
2010	52%	31%
2015	16%	16%
2020	10%	13%

(Source: JMWMS June 2005)

Strategic context

The MWP is confident that the JMWMS is based on the aspirations of the key partners and members of the public and it is anticipated that it will continue to get widespread support over the coming months.

2.8 Drivers for change

In order to achieve the objectives of the JMWMS and meet the aspirations of the Merseyside public there is a clear need for greater investment in the waste management infrastructure and services of Merseyside. Moreover and in addition to the aspirations of the Merseyside people, legislative drivers for change in relation to waste management have emerged in recent years further concentrating the need for greater investment. Outlined below is a brief summary of the key legislation that has shaped the strategic context within which the project has been developed

The European Union ("EU") Landfill Directive 1999 set challenging targets aimed at reducing the amount of biodegradable waste that can be sent to landfill in all member states. These European targets, as set out below, have acted as the catalyst for a series of initiatives from the UK Government.

- By 2010* to reduce Biodegradable Municipal Waste ("BMW") landfill to 75% of that produced in 1995:
- By 2013* to reduce BMW landfill to 50% of that produced in 1995; and
- By 2020* to reduce BMW landfill to 35% of that produced in 1995.

(* Includes a four-year extension for the UK)

Waste Strategy 2000 ("WS 2000"), which had the intent of achieving a sustainable and integrated approach to dealing with the European Union ("EU") Landfill Directive for England and Wales, was the first of these initiatives. Within WS 2000 the Government established national waste recovery and recycling and composting targets. These have been supplemented by statutory Best Value Performance Indicators ("BVPIs") for recycling and composting (BVPI 82a + b) for each local authority. The Strategy Unit Report 2003 ("SU 2003"), "Waste not, Want not" has also provided a framework for the development of medium term waste management targets, proposing stretch recycling and recycling targets for 2010 and 2015 of 35% and 45% respectively.

In 2003 the UK Government enacted the Waste and Emissions Trading Act ("WET Act"), which is now viewed as the key driver for change in national waste management. The Landfill Allowance Trading Scheme ("LATS"), implemented under the WET Act has set allowances for tonnes of biodegradable waste that can be sent to landfill by each WDA for every year up to 2020 based upon the challenging targets outlined in the EU Directive. Penalties for sending more tonnes of BMW to landfill than the level of allowances held will result in fines of £150 per tonne of BMW.

The current rate of landfill tax for active waste is £21 per tonne, representing a cost to the Partnership of circa £8.5 million in 2004/05. The Government has already confirmed that the rate of landfill tax will increase by £3/tonne per annum up to £35/tonne by 2011.

Strategic context

The provisions of the WET Act together with landfill tax should make options such as recycling, composting and MBT, more cost effective than landfill disposal. This is explored more fully in Section 6.

The tables below sets out the national and local waste targets for Merseyside.

Table 2.4 Waste Strategy 2000 targets

National	2005/06	2009/10	2014/15	2019/20
Recovery of MSW[6]	40%	45%	67%	67%
Household waste recycling and composting (WS2000)	25%	30%	33%	33%
Household waste recycling and composting (SU2003)	N/A	35%	45%	45%

Table 2.5 Merseyside's local waste targets

Local	2005/06	2009/10	2014/15	2019/20
Household waste recycling and composting (BV82a + BV82b)[7]	22%	33%	38%	44%
Landfill allowances (tonnes of BMW)	458,951	276,248	180,403	144,877

It is against this background of legislation and targets that Merseyside has developed its waste strategy and this business case.

2.9 Legal powers and Procurement

MWDA and the constituent councils are under a duty to demonstrate that their waste services deliver Best Value and achieve effective performance management and continuous improvement in line with their duties under the Local Government Act 1999. As a consequence, all of the waste contracts to be let by MWDA will be procured through a competitive tendering regime that complies with the EU Procurement rules as specifically now set out in the Public Contracts Regulations 2006.

More particularly, MWDA expects to follow the Competitive Dialogue procedure for the Recovery waste contract and the Recycling contract in view of the fact that these contracts are considered to be particularly complex. A full description of the three contract procurement process to be undertaken by MWDA is provided at Section 4 and at Appendix 2.5. Whilst MWDA is clear about its needs and requirements it believes that the market is best placed to propose the means best able to meet those

[6] In this context recovery includes recycling, composting, other material recovery (e.g. anaerobic digestion) and energy recovery.
[7] Targets agreed by the Merseyside Waste Partnership

Strategic context

needs and believes, therefore, that a constructive process of dialogue will provide it with the best outcome to the procurement. MWDA recognises the resource implications of conducting a competitive dialogue with a greater call on time in the earlier stages of the project. However, by virtue of the fact that it intends to conduct the dialogue in successive stages, it believes market confidence can be captured to enable firm and final tenders to be received, following which contract formalities can be tied up reasonably quickly.

In addition to meeting its obligations under procurement rules, MWDA is subject to a number of further statutory obligations which will apply to the letting of the contract:

- MWDA is a Waste Disposal Authority under section 30 of the Environmental Protection Act 1990 ("EPA") and is under a duty to make arrangements for the disposal of the controlled waste collected in its area by the waste collection authorities (see EPA section 51)
- MWDA has a duty under Section 3 of the Local Government Act 1999 to make arrangements to score best value in the manner in which its functions are exercised.
- Under Section 1 of the Local Government (Contracts) Act 1997 MWDA is empowered to enter into contracts for the purposes of or in connection with its functions. Furthermore, under section 3 of the said Act it may certify any such contract as being within its powers.

Analysis of Existing Provision

Analysis of Existing Provision Section 3

3.1 Introduction

This section provides analysis of the existing service delivery arrangements for Merseyside, including waste arising and composition, collection, disposal, recycling schemes and waste management initiatives. An overview of the existing performance of recycling and composting compared with BVPI's is presented together with analysis of trends in service costs and waste growth. In addition the section outlines the actions being taken to address waste minimisation.

3.2 Analysis of waste arising

In 2004/5 approximately 860,000 tonnes of Municipal Solid Waste (MSW) was produced in Merseyside. The half-year actual figures for 2005/6 indicate a 10% reduction in waste arising at HWRCs and a 1% reduction in waste arising from the district's collections compared with the previous year. This equates to an overall reduction of around 2%, and the current forecast for waste arisings in 2005/6 is approximately 845,000 tonnes.

The latest data on waste arising in Merseyside are encouraging. Nevertheless, the latest figures could be explained by relatively dry weather over the period, and the significant reduction in waste arising at the HWRCs could be the result of the roll-out of kerbside collection systems by the District Councils. Caution must therefore be exercised before extrapolating the results gained from short-term figures. Data gathered over a longer time period indicate that waste growth in Merseyside has been observed at around 2.9% per year on average over the last few years.

Table 3.1 Waste arising profile

Year	WCA Waste Disposed	WCA Waste Recycled	HWRC Waste Disposed	HWRC Waste Recycled	Total
2001/02	567,880	28,186	165,085	43,249	804,400
2002/03	577,998	31,402	168,140	60,316	837,856
2003/04	571,758	39,355	156,536	71,735	839,384
2004/05	566,737	61,324	149,083	84,308	861,452

3.2.1 Waste Composition

The following two tables present National figures only. The MWP has commissioned consultants Save Waste and Proper (SWAP) to carry out an analysis of municipal waste on Merseyside. This analysis will be completed in July 2006.

Analysis of Existing Provision

Table 3.2 Collected household waste composition

Material	National[8]
Paper	17.4%
Cardboard	5.3%
Garden Waste	16.5%
Kitchen Waste	22.2%
Glass	8.4%
Textiles	3.2%
Ferrous Metal	3.4%
Non-ferrous Metal	
Plastics	8.8%
Other	14.8%
Total	**100%**

[8] From "Analysis of household waste composition and factors driving waste increases", Julian Parfitt, WRAP, December 2002

Analysis of Existing Provision

Table 3.3 HWRC composition

Material	National[9]
Paper	2.5%
Cardboard	1.8%
Garden Waste	48.9%
Kitchen Waste	0.3%
Glass	1.5%
Textiles	2.0%
Metal	9.8%
Plastics	1.2%
Wood	8.8%
Rubble	11.3%
Recoverable Goods	4.6%
Other	7.3%
Total	**100%**

3.2.2 Merseyside Waste Composition analysis

MWDA is carrying out a waste composition analysis programme. The main aim of the project is to generate data on the average composition of household and municipal waste across Merseyside. This will support the current procurement programme for long term waste management services and will provide some useful data for District Council waste managers. The project has been designed to produce representative results of waste composition for Merseyside as a whole, rather than for each individual District Council.

Sampling began in November 2005 (autumn) with the final phase of sampling scheduled for June 2006 (summer). There are 2 aspects to each sampling phase:

- Residual Household waste (domestic bin waste).
- Waste delivered to HWRC's for disposal.

[9] From "Analysis of household waste composition and factors driving waste increases", Julian Parfitt, WRAP, December 2002

Analysis of Existing Provision

The project will:

- Provide figures for the average waste composition of a 'typical' Merseyside domestic refuse bin.
- Provide figures for average composition of waste delivered to Merseyside HWRC's for disposal.
- extrapolate the sampling data to provide average Merseyside figures for household and municipal waste composition.

3.2.3 Forecast waste quantities

The MWP is committed to reducing waste growth rates through promoting waste minimisation. The JMWMS sets targets for reducing waste growth from the current level of 2.9% to 2% by 2010, with a long-term target of reaching 0% waste growth by 2020. These waste growth assumptions are applied across all waste streams, including household, and commercial/retail trade wastes collected by the districts.

These assumptions form the basis of the forecast waste arising in the Reference Project which is set out in Table 3.4 below.

Table 3.4 Forecast waste arising

Year	WCA Waste Disposed	WCA Waste Recycled	HWRC Waste Disposed	HWRC Waste Recycled	Total
2005/6	553,569	81,900	115,903	93,443	844,816
2009/10	513,705	198,890	108,243	126,465	947,303
2014/15	487,476	299,288	118,570	140,566	1,045,899
2019/20	484,968	341,928	118,607	153,747	1,099,251
2029/30	485,738	349,060	119,933	155,145	1,109,876

Data from the National Statistics Census 2001 indicate that many of Merseyside's districts have experienced a decline in population over the past 10 years including Sefton (-3.4%), St Helens (-1.8%), Wirral (-6.6%) and Knowsley (-3%). Overall, data from the Office of National Statistics (ONS) for Merseyside as a whole indicate a population change of -4.4% over the period 1991-2001. Despite these declines in population the total quantity of waste arising across Merseyside has increased.

Population projections developed by the ONS forecast a continued population decline in Merseyside of -7.7% between the years 1996 and 2017. Despite this forecast for a decline in Merseyside's population, the Reference Project does not rely on there being subsequent reductions in waste arising. The historic data indicate that waste growth can be maintained despite modest declines in population.

Section 3

Analysis of Existing Provision

3.3 Merseyside District collection and contractual arrangements

The current waste collection methods and contractual arrangement of the District Councils are summarised in tables 3.5 and 3.6.

Table 3.5 Current Collection Arrangements

District	Household Residual Waste Collections	*Kerbside Dry Recyclable Collection*	Kerbside Compostable Collections
Knowsley	The Council has 97% coverage of households with 240 litre wheeled bins for the storage of residual waste. Approximately 3% of households are provided with a sack collection. Collections are made from the curtilage of the property on a weekly basis. The Council have a long standing policy that no side waste will be collected, but this is not enforced in practice.	Households are provided with a 55 litre box for dry recyclables plus a sack for textiles. The materials collected from this service are: Paper Cans Glass and Textiles The delivery point for the recyclables is the Council's bulking facility, where the materials are separated into skips before onward transportation to reprocessors.	120 litre wheeled bins are used for garden waste. The delivery point for the green waste is Mossborough Hall Farm.
Liverpool	*A majority of households use a 240 litre wheeled bin for the storage of residual household waste, with 30,000 properties using sacks. Residual waste is collected on a weekly basis.*	Recyclables are collected using a 55-litre box fortnightly to the majority of households with the others being multi-occupancy flats and apartments and are considered not to be suited to	Kerbside collections of garden waste are to 80,000 households. Collections are made using two 120 litre reusable sacks. The delivery

Analysis of Existing Provision

	All presented waste (side waste) is collected in the interests of maintaining clean streets. The delivery points for the collected residual waste are at either Gilmoss or Huyton transfer stations or the St. Helen's landfill site	kerbside provision. The materials collected are segregated in separate containers on stillage collection vehicle. Sacks are provided for paper and textiles. The materials collected from this service include: Paper, Cans, Glass and Textiles Collected materials are bulked at two sites, one to the north and one to the south of the city, in Kirby and Prince Edwin Street respectively. The sites are leased by Abitibi and the northern site is shared for Sefton collections.	point for collected materials is White Moss Horticulture in Huyton
Sefton	The Council provide a sack collection service for residual waste. The waste is collected on a weekly basis by an in-house team. Collection operatives give out like for like sacks, to reflect the number presented by households, with a maximum of two left for each household. The delivery points for the collected residual wastes are Gilmoss and Foul	A private contractor, Abitibi Consolidated Recycling Europe (ACRE), provides a weekly dry recyclable collection service on the same day as refuse collections. The service is provided to approximately 98% of all households, which is considered to be the near maximum suited to the service.	

Analysis of Existing Provision

	Lane transfer stations.	Kerbside collections are made using a 55-litre box, supplemented by a blue reusable plastic sack for paper and a consumable plastic sack for textiles. The materials are segregated at the kerbside into separate containers on a stillage vehicle. The materials collected from the service are: Paper Cans Glass and Textiles Collected materials are bulked at privately operated depot facilities at Bramley Moor Dock and North End Farm before onward transportation to reprocessors.	
St Helens	The majority of households are supplied with a 240 litre brown wheeled bin for the storage of residual waste, with approximately 1% provided with a sack collection. Collections are made from the curtilage of the property on a weekly basis. *The delivery points for the collected residual wastes are Lyme and Wood*	Households are provided with a 55 litre black micro-chipped box for cans and glass, a blue sack for paper and a clear bag for textiles. The service was expanded borough wide from October 2004 onwards. Abitibi Consolidated Recycling Europe (ACRE), are contracted to provide the service on a fortnightly basis The materials collected from this	Kerbside collections of garden waste are currently provided to 50,000 households, with a further 2,000 households to be included in the scheme in February 2006 due to high public demand. The two delivery points for the green waste are Mossborough Hall Farm and White Moss for windrow

Analysis of Existing Provision

	Pits and Huyton and Gilmoss waste transfer stations. Lea Green landfill site is currently used as a disposal point although the site is due for closure in the Kerbside Dry Recyclable Collections	service are as follows: Paper Cans Glass and Textiles	composting.
Wirral	The majority of households (135,500) are supplied with 240 litre green wheeled bin for the storage of residual waste. Approximately 500 properties are not suited to the wheeled bin service and receive a sack collection whilst a further 7,000 properties use bulk containers. A private contractor (Onyx UK Ltd) are contracted to provide the collection service on a weekly. The delivery point for the collected residual wastes is the new MRF/transfer station facility at Bidston. The Council is currently undergoing a procurement exercise for refuse, recycling and street cleansing services, which will influence and shape future service provision.	The Council currently provides two types of kerbside recycling collection. A fortnightly box collection (for paper, glass and cans) is provided to 15,000 properties. This service is provided by an in-house team using the following resources: • 2 x 7.5 tonne stillage vehicles; • One driver and two operatives per vehicle. In addition, a fortnightly, reusable blue bag paper collection is provided to 128,000 households by the Council's refuse contractor, Onyx UK Ltd. The delivery points for the recyclables are Kelvinside for paper and South End depot, Tranmere for glass and	The Council provides a fortnightly green waste collection service for 90,000 properties. The service commenced in April 2003, collecting a maximum of one 120 litre reusable woven polypropylene sack per household. The delivery point for the green waste is George Whittaker & Son, Hapsford, Cheshire.

Analysis of Existing Provision

		cans, where the materials are bulked before onward transportation to reprocessors.	

Analysis of Existing Provision

Table 3.6 Current collection contracts

WCA	Waste Collection Contractor	Contract Type	Contract Expiry	Delivery Point
Knowsley	Direct Council Services	Residual Collection	No Contract	Landfill, MRF, Transfer Station
Liverpool	Onyx	CCT Residual Collection	September 2008	Huyton and Gilmoss
	Abitibi	Dry Waste Kerbside Recycling	September 2008	Kirkby
Sefton	Direct Council Services	Residual Collection/Garden/Bulky/Commercial /Clinical	No contract	Gillmoss WTS Foul Lane WTS St.Helens Landfill
	Abitibi Consolidated Recycling Europe Ltd.	Dry Waste Kerbside and Recycling bank mgt and cleaning. Output spec to collect minimum 17,000 tonnes per annum but must offer collection service to every home every week	Dec 2008	End Users via Bramley Moor Dock and North End farm - private sector bulking facilities provided under the recycling contract.
St.Helens	Direct Council Services	a. Household refuse b. Garden waste kerbside	N/A (Continually reviewed under Best Value & CPA)	a.Lord St Helens; Lyme and Wood Pits; Huyton & Gilmoss. b.Mossborough Hall Farm
	Abitibi	Kerbside multi material	31 March 2007 (option to extend by up to 2 years subject to performance)	Various
Wirral	Onyx	Refuse Collection	August 2006	Bromborough Dock Landfill Site

Analysis of Existing Provision

3.4 MWDA contractual arrangements

In accordance with the Environmental Protection Act (1990), the MWDA established a wholly-owned Local Authority Waste Disposal Company ("LAWDC") called Mersey Waste Holdings Limited ("MWHL"). The MWDA contracts with MWHL for the provision of waste management services as follows:

- Contract 1 - The disposal of household waste collected and delivered to MWDA by the five WCAs (note that some District waste is delivered directly to landfill); and
- Contract 2 – The management and disposal of waste arising at the fourteen HWRC sites located throughout the five District Council areas.

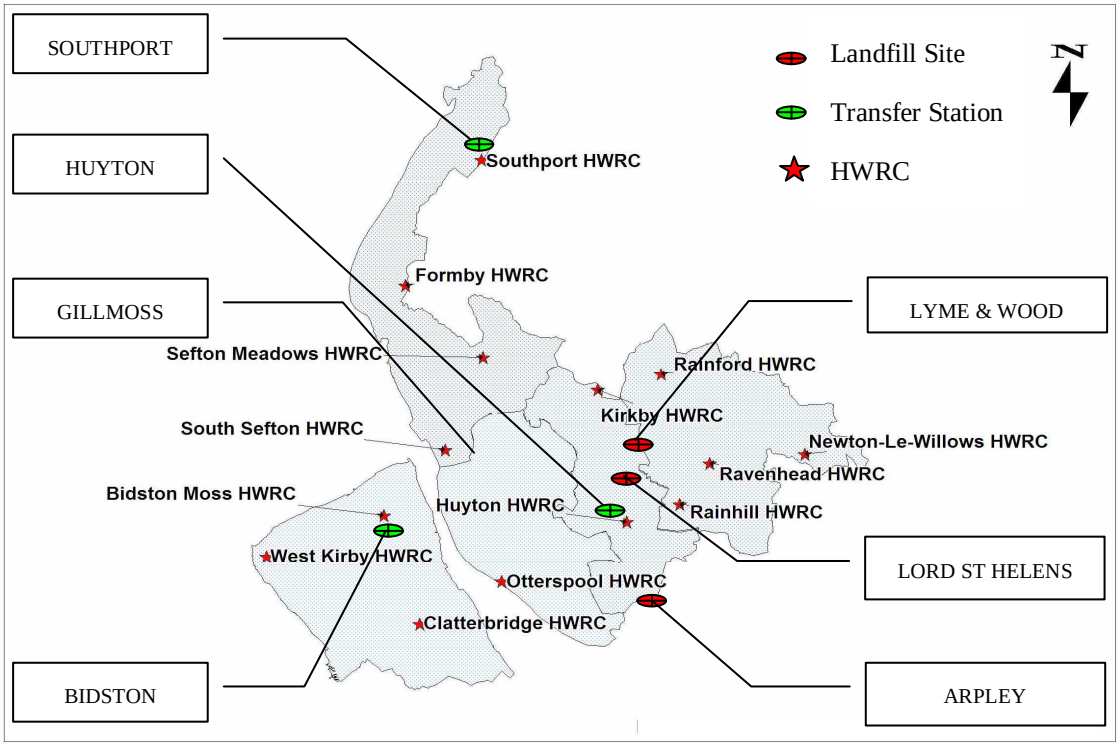
Both contracts are due to expire in September 2008, the time at which the MWDA will let a long-term waste management contract in accordance with the JMWMS.

3.4.1 Current Infrastructure

Waste collected and delivered by the public in Merseyside is disposed of via 14 HWRC sites, 4 waste transfer stations and a number of landfill facilities. The landfill facilities currently used are owned by commercial operators. The map below shows all of the waste transfer stations, HWRCs and the principal landfill sites.

Analysis of Existing Provision

Figure 3.1 waste transfer stations, HWRCs and the principal landfill sites



3.5 Trends in service costs

MWDA's current waste disposal budget figure is approximately £39m per annum (2004/05). The table below sets out MWDA's waste management budgets by service for the past 4 years.

Analysis of Existing Provision

Table 3.7 Historic budget data

	2002/03 £'000	2003/04 £'000	2004/05 £'000	2005/06 £'000
Management HWRCs	5,431	7,215	7,688	8,314
WCA residual waste disposal (incl. landfill gate fees, excl. landfill tax)	12,361	13,373	13,078	14,873
Recycling credit payments	1,008	1,451	2,198	3,342
Landfill tax	9,686	10,013	10,714	11,839
Annual budget	**28,486**	**32,052**	**33,678**	**38,368**

Budgets have increased year on year as a result of increases in landfill tax and escalation of landfill gate

3.6 Performance of existing services

3.6.1 Recycling performance

Merseyside's BVPIs for the years 2001/02 to 2004/05 (estimated) are shown in Table 3.8 below.

Table 3.8 BVPIs from 2000/01 to 2004/05

	% Recycled	% Composted	% Landfill	H'hold waste collected / head (kg)	Waste disposal cost per tonne (£)
BVPI Ref*	**82a**	**82b**	**82d**	**84**	**87**
2000/01	4.75	1.03	94.12	530	32.02
2001/02	5.01	1.63	93.28	548	33.28
2002/03	5.79	2.75	91.39	574	33.66
2003/04	6.84	3.21	89.88	570	38.19
2004/05	9.19	4.21	84.93	583	42.19

Analysis of Existing Provision

* MWDA does not currently recover energy from waste and therefore has not disclosed a performance measure in respect of BVPI 82c.

** using population figures for 2003

The recycling and composting performance of the MWP for the years 2001/2 to 2004/5 is summarised in 3.9 below.

Table 3.9 Household waste recycling performance by district (combined figures for BVPI 82a and 82b)

District	2001/2 actual	2002/3 actual	2003/4 actual	2004/5 actual
Knowsley	4.8%	5.6%	7.4%	10.9%
Liverpool	2.0%	1.9%	3.8%	7.6%
Sefton	7.5%	9.4%	11.8%	15.0%
St Helens	5.6%	5.9%	10.8%	15.5%
Wirral	6.4%	6.7%	7.0%	10.0%
MWDA (14 HWRCs)	11.5%	16.5%	19.2%	22.2%

The waste diversion performance at Merseyside HWRC sites in 2004/5 is summarised in table 3.10

Table 3.10 Summary of HWRC Sites

Site	Total waste deposited at Centre 2004/05 (tonnes)	Total waste diverted from landfill 2004/05 (tonnes)	% Diverted from landfill 2004/05
Formby	14,447	7,208	49.9%
Sefton Meadows	38,601	12,267	31.8%
Kirkby	14,422	4,187	29.0%
Rainford	4,571	1,978	43.3%
Newton le Willows	10,293	5,362	52.1%

Analysis of Existing Provision

Site	Total waste deposited at Centre 2004/05 (tonnes)	Total waste diverted from landfill 2004/05 (tonnes)	% Diverted from landfill 2004/05
Ravenhead	15,797	6,354	40.2%
Rainhill	8,269	4,247	51.4%
West Kirby	12,416	6,187	49.8%
Otterspool	21,228	6,276	29.6%
Clatterbridge	22,509	9,723	43.2%
South Sefton	388	258	66.5%
Huyton	24,250	4,371	18.0%
Southport	23,697	7,858	33.2%
Bidston	22,107	8,034	36.3%

(Source: MWDA 2004/2005 Financial Year verified tonnages)

Analysis of Existing Provision

All of the WCAs currently separate dry recyclable at the kerbside with bulking-up taking place within depots. Later this year Wirral will be changing to a commingled collection system, with sorting taking in the Bidston Material Recovery Facility (MRF). The capacity of the Bidston MRF is 30,000 tonnes per annum on a single shift operation, and is sufficient to service Wirral throughout the duration of the Reference Project.

The District Councils recognise that there is a need to improve existing levels of recycling and composting. All the District Councils have committed to the implementation of the JMWMS. MWDA have commissioned Gordon Mackie Associates to produce District Council Action Plans (DCAPs). These DCAPs have been derived in consultation with the districts and MWDA and indicates how the districts current position with respect to collection services will evolve to meet the JMWMS recycling targets. These DCAPs, as ratified through each District Council are included at Appendix 3.1. At the time of submission of this OBC, Knowsley Metropolitan Borough Council is in the process of ratifying their DCAP. These changes to the collection systems are nominally based around District Councils employing either a co-mingled or source segregate approach at kerbside, including: green waste, kitchen waste, recyclables (glass, paper, textiles and metal(s)) and residuals.

The four DCAP's, included at Appendix 3.1 have all been ratified by the appropriate District cabinet committees during April 2006. This shows a clear commitment from the District Councils to ensure that they meet with the JMWMS recycling targets. This commitment enhances MWDA's application for overall PFI credits as it indicates that MWDA has got a strong commitment from the MWP as a whole.

3.6.2 Waste Minimisation

As a living document, the waste minimisation strategy is subject to annual reviews in its formative years. Following a recent review of the waste minimisation strategy, which included the aims and objects for re-use, it was decided to devise a separate re-use strategy due to the need to move some initiatives from the waste minimisation strategy to a separate re-use strategy and because of the imminent transposition into UK law of the Waste Electrical and Electronic Equipment (WEEE) and the Restriction of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment Directives. Both Directives will have a significant impact on how such products and goods are collected, reused, recycled and disposed of in the near future.

The overall objective of the waste minimisation strategy will be to:

> Significantly reduce waste arisings during the lifetime of the strategy and to manage the waste that is produced in a way that is sustainable and mitigate the impacts of climate change.

In order to co-ordinate and implement the waste minimisation strategy and a separate reuse strategy, members of the Merseyside Recycling Officers Forum (MWDA and District Councils) established a number of networks in respect of differing lines of awareness campaigning. In their first full year, the networks were

able to put in place significant resources, which enabled awareness and the profile of waste minimisation to be raised. The networks are as follows

- Merseyside Compost Network
- Merseyside Waste Minimisation Education and Awareness Network
- Merseyside School Waste Audit Network

The main actions of the Waste Minimisation Strategy in the short term are:

- Promotion of home composting to all suitable households across the Merseyside region
- Support of waste minimisation education, awareness and communications programmes across the region.
- Support schools through waste auditing
- Continued support for the community recycling sector on Merseyside
- Create a culture of responsibility by the people of Merseyside when producing waste

Table 3.11 Waste minimisations deliverables

Actions	Deliverables
Home composting	Autumn 05 - 100 tonne compost Giveaway across Merseyside. 1900 of the public attended 3 compost presentations On-going subsidised compost bin schemes
Waste minimisation Education and awareness	7 awareness presentations
School waste audit	Pilot study in progress
On-going Community support	Annual £5,000 Fund (awaiting authority sign-off)
On-going research project	Junk Mail

3.6.3 Re-use

Following a review of the waste minimisation strategy, a reuse strategy and action plan is being developed and will be presented to Senior Offices within the MWP for discussion in summer 2006. With the imminent transposition of the WEEE and RoHS Directives, the strategy aims develop opportunities for re-using, selling on or giving away items such as household appliances, computers, furniture and play resources. Many of these items are disposed of via the HWRCs or collected by way of bulky waste collection services. In order to develop the re-use strategy, it will be necessary for the MWP to work with charities, community enterprises and other agencies to disseminate advice and guidance to householders on what they can do to pass on their unwanted, but serviceable goods and appliances.

Analysis of Existing Provision

At present, there are five community enterprises in Merseyside involved in the collection, repair and reuse of unwanted household items. Items collected range from fridges and freezers to furniture and computers. In addition, the Wirral Local Agenda 21 Forum have held ten *'Give and Take'* days where the general public have brought along to an event an unwanted household item and swapped it for someone else's unwanted item.

The draft objectives of the Re-Use Strategy will be:

- To optimise waste re-use where reduction is not possible
- Evaluate the level of diversion currently being achieved through re-use activity on Merseyside
- Consider the cost benefit of establishing a re-use support policy
- To encourage re-use
- To encourage repair
- To create a culture of responsibility by the people of Merseyside when producing waste

The overall objective of the Re-Use Strategy will be to:

> Significantly reduce waste arisings during the lifetime of the strategy and to manage the waste that is produced in a way that is sustainable and mitigate the impacts of climate change.

In order to co-ordinate and implement the Re-Use Strategy, a Merseyside Re-use Network has been established. In 2005, the Merseyside Real Nappy Network, originally as part of the waste minimisation strategy was established. This network is under the remit of the reuse strategy.

The actions of the Re-use Strategy in the short term will include:

- Sustain 'real' nappy awareness campaign
- Promote reuse and repair in the home and community
- Continued support for the community reuse sector on Merseyside.
- Support of re-use education, awareness and communications programmes across the region.
- Implement Best Practice operations at the Household Waste Recycling Centres and on District Collection rounds to reduce the amount of non-household waste accepted
- Create a culture of responsibility

Analysis of Existing Provision

Table 3.12 Re-use deliverables

Actions	Deliverables
Real Nappies	13 'Starbutts' coffee mornings Real nappy training kits for midwives 2 awareness presentations 29 babies using real nappies across Merseyside
On-going research project	Partnership with Surestart to establish social laundry service
Give and Take days	2 Waste Give and Take days subsidised and evaluated

3.6.4 Recycling initiatives

The MWP has been very successful in securing funding, to develop new waste management facilities and a number of recycling and awareness-raising initiatives. Between 2003 and 2006 the MWP secured a total of £5.8 million from DEFRA's National Waste Minimisation and Recycling fund, for the following facilities:

- An integrated waste management facility at Bidston (Wirral). This will include a 10,400 tonnes per year In-Vessel Composting ("IVC") facility, and a 30,000 tonnes per year Material Recycling Facility ("MRF") to process dry recyclables such as paper, cardboard, plastics, cans and glass collected by Wirral Council's kerbside collection scheme;
- An IVC facility is planned at the Gillmoss site in Liverpool, which is designed to handle 15,600 tonnes per year of household kitchen and garden waste. It is anticipated that the facility will be operational by Summer 2006. In addition, a visitor centre is planned at the same site to raise public awareness of the merits of recycling and composting of organic waste; and
- MWDA and Sefton Metropolitan Borough Council have developed a new £1 million HWRC which has now opened. This centre is anticipated to have a throughput of 18,000 tonnes per year and can achieve 70% recycling of the waste received.

MWDA is committed to improving the access of members of the public to recycling facilities and aims to have a HWRC within three miles of every Merseyside resident. To this end, the Authority has planned a three year programme of site improvements, starting with a new HWRC to be built in Liverpool during 2005/6. This will be followed by another new site, the location of which has yet to be finalised, to be completed between 2006/7 and 2008/9.

Analysis of Existing Provision

On the Wirral, a 200,000 tonnes per year Waste Transfer station ("WTS"), together with a new HWRC has been developed. These facilities became fully operational in Autumn 2005.

Refurbishment of existing HWRCs throughout Merseyside is planned to make it easier to recycle at the sites, rather than dump general waste. This is planned to take place between 2006 and 2008.

3.6.5 JMWMS actions for recycling

Some of the key actions to meet the JMWMS recycling targets are as follows:

- A full Merseyside-wide roll-out of multi-material kerbside collections;
- Increasing public awareness of schemes;
- Maximising green garden waste and paper collections across all WCAs;
- Introduce garden waste collections to all suitable properties;
- Engagement with elected Members to seek an understanding of financial and service delivery implications of alternate week waste collections;
- The development of a kitchen waste collection service; and
- Bring Bank locations across Merseyside to be expanded by each Merseyside Council to an optimum saturation rate of one per one thousand population by 2010.

Work is in progress to secure the commitment of the WCAs to providing a four stream collection system offering collections of dry recyclables, kitchen, green and residual waste. In particular, consultants are working with each District Council to develop Action Plans for achieving collection strategies. Plans are also in place, to build and improve new and existing HWRCs, to significantly increase the overall diversion rate achieved across all sites to 50% by 2008.

3.7 Conclusions

The analysis of existing service provision at both MWDA and District Council level shows gradually improving performance results in the key areas of recycling and composting of waste and diversion from landfill. All authorities recognise that performance in these key result areas is not sufficient to respond to the increased targets arising from national waste strategies and locally applied Best Value Performance Indicators.

District Councils have responded to this situation by agreeing to District Council Action Plans which set out revised waste collection and recycling schemes and the timetables for their introduction. Many District Councils are already in procurement to secure these revised services and the MWP arrangements will monitor their implementation as the MWDA Procurement Project is progressed.

Analysis of Existing Provision

For its part, MWDA also recognises the need to improve its performance on recycling, composting and diversion from landfill. It will carry through the Procurement Project to effect new waste management arrangements on Merseyside that both respond to the new collection arrangements to be put in place by District Councils, and to provide significantly higher levels of recycling, composting and diversion from landfill of the residual waste it is required to handle from these new collection arrangements.

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Options Appraisal

Options Appraisal Section 4

4.1 Introduction

MWDA has considered a wide range of technology and performance options in the development and evolution of its waste management strategies. In order to determine the reference project, a long list of options was developed, consolidated into a shorter list, and assessed against a consistent pre-defined evaluation framework, as set out below.

MWDA has developed a set of Options to be considered within the Reference Project, based on the preliminary work of AEA in, "The Strategic Review of Merseyside's Waste Management Strategy", October 2003 and the further work of ERM, " Review of Options for the Management of Residual Waste", June 2005. These reports provide for a refining of Options of treatment of residual waste, after assumptions in respect of the performance of recycling and diversion from landfill arising from HWRC and District Council collection activities, and provide a BPEO assessment of the considered Options.

Specifically, the ERM Report presents recommendations for residual waste treatment including lead technologies, their size, and the cost benefits of short listed options. The short-listed Options show that MBT with Energy from Waste, located at two larger facilities, rather than a number of small/medium sized facilities would be preferred options to best meet the weighted evaluation criteria.

4.2 Reference Project

In order to deliver the JMWMS and develop the required waste infrastructure in Merseyside MWDA has developed a Reference Project. The Reference Project encompasses all aspects of managing municipal waste including collection, transfer, recycling, composting, the treatment of residual waste and landfill disposal.

4.2.1 The Role of the Districts

In the Reference Project the collection of wastes is the responsibility of the five district councils within the MWP. Each council is working to deliver the JMWMS through the means set out in their respective District Council Action Plan (DCAP). Districts are undertaking separate procurements to develop household recycling services in their areas, and increase the levels of recycling achieved at the kerbside.

Four out of the five districts are adopting kerbside sort systems for the collection of dry recyclables. This material will be sent direct to reprocessor from the district's depots. Wirral MBC, however, is to adopt a commingled kerbside collection system for dry recyclables. This material is to be received at Bidston MRF, where sorting and bulking will take place prior to the materials being sent to the reprocessor. The MRF at Bidston has sufficient capacity to support Wirral MBC throughout the implementation of their DCAP.

Options Appraisal

4.2.3 The Role of the MWDA

Within the Reference Project the MWDA is responsible for developing waste facilities which include Household Waste Recycling Centres (HWRCs), waste transfer stations, residual waste treatment facilities and landfill disposal. In order to achieve this the MWDA has made the decision to adopt a three contract procurement strategy. These contracts are:

- The Recycling Contract;
- The PFI Recovery Contract;
- The Landfill Contract.

The Landfill Contract will secure landfill services to ensure that sufficient landfill capacity is available to the MWDA during implementation of the Reference Project. Landfill capacity is currently provided to the MWDA through contracts with Mersey Waste Holdings Limited (MWHL).

Through the Recycling Contract the MWDA will identify a partner for the development of additional recycling and reception facilities, and the operation of the existing facilities currently operated by MWHL. The existing MWHL facilities and services will be transferred into the Recycling Contract and made available to the new contractor. These include:

- Management and operation of the Bidston MRF;
- Management and operation of the HWRCs;
- Management and operation of the composting facilities;
- Management and operation of the Transfer Stations;
- Transport of all Contract Waste received at the MRF, HWRCs, composting sites and Transfer Stations.

In addition to the existing facilities and services listed above, the MWDA will develop additional facilities through the Recycling Contract. This includes the development of addition In-Vessel Composting (IVC) capacity to support the districts in implementing their DCAPs. The Recycling Contract will also be used to develop additional HWRCs, and deliver upgrades to the existing HWRCs in order that they may achieve the levels of recycling stipulated in the JMWMS.

The Recovery Contract will be used for the development and subsequent operation of residual waste treatment facilities. The Reference Project includes Mechanical Biological Treatment (MBT) for the production of Refuse Derived Fuel (RDF) and energy recovery through an Energy from Waste (EfW) plant. These technologies have been selected for inclusion in the Reference Project through the evaluation Best Practical Environmental Option (BPEO) and stakeholder consultations, as detailed in Sections 2.4 and 2.5

The Recovery Contract will provide capacity for the reception of residual wastes which will be delivered directly to the facilities by the districts, or from the HWRCs

and Transfer Stations through the operation of the Recycling Contract. Under the Recovery Contract the plant operator will be responsible for haulage and final disposal of any residues arising from the process.

The Recovery Contract is the only contract which will be procured through the use of PFI. Therefore, the Recovery Contract forms the basis of this OBC and, for the purposes of this document is termed the "Reference Case".

4.3 Role of Mersey Waste Holdings Limited (MWHL)

4.3.1 Legal Position

The Clean Neighbourhoods and Environment Act 2005 ("CNEA") repeals the requirements in the EPA for a waste disposal authority to divest itself of its waste disposal undertaking to a wholly owned Local Authority Waste Disposal Company ("LAWDC"), which MWDA did in the creation of Mersey Waste Holdings Limited ("MWHL"). Furthermore, the specific tendering requirements in Schedule 2 to the EPA have also been repealed.

The repeal gives MWDA the opportunity to reassess the role and structure of MWHL in the onward provision of waste disposal services.

4.3.2 Decision of the Authority

Merseyside Waste Disposal Authority has considered the future role of MWHL in the procurement of new waste management services. A full report considering the options and implications of allowing MWHL to tender for any of the three contracts (Landfill, Recycling and Recovery) in the Procurement Project was considered at a meeting of the Authority on 12th May 2006. The report was informed from an analysis of the issues prepared by Ernst & Young.

The Authority resolved that MWHL be not allowed to tender for any of the three new waste management contracts. This decision was made on the basis of a combination of the risk profile arising for the Authority from the funding and operational implications of MWHL carrying out such contracts; from the potential negative impact on the markets that allowing MWHL to tender would give rise to and from concerns at the operational capability of MWHL to take on such large contracts.

It was also recognised by the Authority that to enable a fully competitive tendering process, the assets of MWHL would have to be made available in an appropriate form to all prospective tenderers.

The consequences of these decisions will be taken forward directly with MWHL and in the preparation of the output specifications in the three contracts.

4.4 Project Options

Overall, the strategic evaluation concluded that there would be significant risks associated with implementing a project which did not include some sort of thermal treatment (e.g. mass burn or RDF). As a consequence, the two leading options coming forward from the AEA/ ERM modelling work, which provided for two MBT facilities, without any EFW treatment capacity were therefore discounted from further consideration following the strategic evaluation.

Options Appraisal

There are also significant risks associated with large EfW facilities in terms of planning permission, perceived health impacts, and EfW's political acceptability in Merseyside. However, The Option B, which relies solely on EfW, was not discounted from further consideration because the likely cost of this solution is lower than other options, and is included in the Option Analysis as Option 5.

MWDA officers and their technical advisors (Enviros) considered the technical and strategic issues highlighted in the ERM report and in late 2005 developed a short list of options to be considered for the OBC. These options are summarised in the table below:

Table 4.1 Short list residual waste treatment/disposal options

Option	Option ref:	Description
1	Business as usual	Continue with existing infrastructure
2	Optimise existing services	Implementation of the JMWMS, including waste minimisation, waste recycling and composting services. No residual treatment facilities. Residual waste direct to landfill.
3	2 MBT, 2 EfW (Reference Project)	Implementation of the JMWMS, including waste minimisation, waste recycling and composting services. Residual waste treatment achieved through development of two strategic facilities each utilising MBT for RDF production and energy recovery through EfW plant.
3A	2 MBT, 2 EfW (Reference Project Sensitivity A)	As for Option 2, without kitchen waste composting.
3B	2 MBT, 2 EfW (Reference Project Sensitivity B)	As for Option 2, without kitchen waste composting, and lower levels of recycling (~30%) achieved through kerbside collection. HWRC recycling remains unchanged.
4	2 MBT, 1 EfW	Implementation of the JMWMS, including waste minimisation, waste recycling and composting services. Residual waste treatment achieved through development of two strategic facilities each utilising MBT for RDF production. Energy recovery is achieved at a single EfW plant co-located with one of the MBT facilities.
5	2 EfW	Implementation of the JMWMS by the districts, including waste minimisation, waste recycling and composting services. Residual waste treatment achieved through development of two mass-fired EfW plant.

Options Appraisal

4.5 Procurement Strategy

As referred at section 4.2, MWDA has adopted a procurement strategy consisting of three contract packages:

- Recycling contract.
- Recovery Contract -
- Landfill Contract -

Packaging of contracts in this manner will allow for recycling and BMW diversion facilities being procured earlier than with a single contract approach. By separating out the recycling and landfill elements, the financial legal and contractual risks associated with the elements within the recovery contract would not be present, thus allowing the potential for landfill and recycling contracts to be completed to an earlier timetable as shown within the programme. Thus LATS exposure will be mitigated in early years, easier transition to the new services made and a reduction made in certain interface risks, in particular those with the District Council collection arrangements within the Recovery contract. By securing landfill capacity separately, this will make the overall project more attractive to the market, and is likely to increase competition and secure better value for money for the Authority.

Analysis of options carried out by the Authority in adopting the procurement strategy is detailed in Appendix 2.5

The procurement strategy adopted also recognises the greater freedom since the introduction of the Prudential Code for Local Authorities to explore different funding routes when investing in public services within the overriding requirement to demonstrate value for money and achieve the appropriate risk transfer to the private sector. This aspect will be further addressed as part of the detailed development of the Recycling Contract.

4.6 Options Appraisal Overview

A comprehensive model of all the municipal waste flows arising in Merseyside has been developed by Enviros Consulting in conjunction with MWDA and the support of the five District Councils, the analysis of which is laid out in Appendix 4.1. The model accommodates the MWDA's procurement strategy for the development of the waste management infrastructure; It is therefore divided into three separate waste flow streams to identify the required service levels which must be delivered by each of the three contracts.

Options Appraisal

Each of the short-listed residual waste recovery/disposal options for the PFI Recovery Contract has been modelled, and their contribution to the delivery of the JMWMS has been assessed. The modelling work has identified the extent to which the different options for the Recovery Contract can contribute towards both the JMWMS recycling targets and the MWDA's obligations to divert BMW from landfill. The modelling also serves as the basis on which the future disposal (Landfill Contract) capacity has been established.

The financial cost of the short listed PFI Recovery Contract options has been assessed using a series of cost assumptions which are detailed in Appendix 4.2. The outcomes of financial cost modelling, both for the Recovery Contract and all three contracts in aggregate, underpin the subsequent Value for Money and Affordability assessments of MWDA's procurement strategy.

The selection of short listed options reflects implementation of the JMWMS with the treatment of residual waste being achieved through technologies identified through the BPEO selection process (MBT and EfW). However, the inclusion of Options 3a and 3b serve as sensitivity checks to confirm the affordability of the Reference Project under scenarios which reflect different household participation rates in kerbside collection and recycling systems.

4.7 Mass Flow

Although only residual waste treatment facilities are to be procured through the PFI Recovery Contract, clearly the operation and diversion achieved by the Reference Project as a whole is important in defining the capacity required for residual waste treatment. This section provides details of the overall mass flow within the Reference Project, and those wastes that will require management under the PFI Recovery Contract.

In conducting the assessment of options the levels of material capture of recycling and composting have been specified to reflect the planned performance of each district's kerbside collection system. The future performance of the collection systems is set out in the District Council Action Plans (DCAPs). The planned performance of kerbside recycling and composting in the DCAPs is shown in table 4.2 below.

Table 4.2 District Council Action Plans for household waste recycling and composting by district (combined figures for BVPI 82a and 82b)

District	2005/6 target	2009/10 target	2014/15 target	2019/20 target*
Knowsley	11%	33%	39%	45%
Liverpool	9%	22%	39%	44%
Sefton	18%	36%	41%	44%
St Helens	24%	38%	43%	45%
Wirral	12%	28%	39%	40%

Options Appraisal

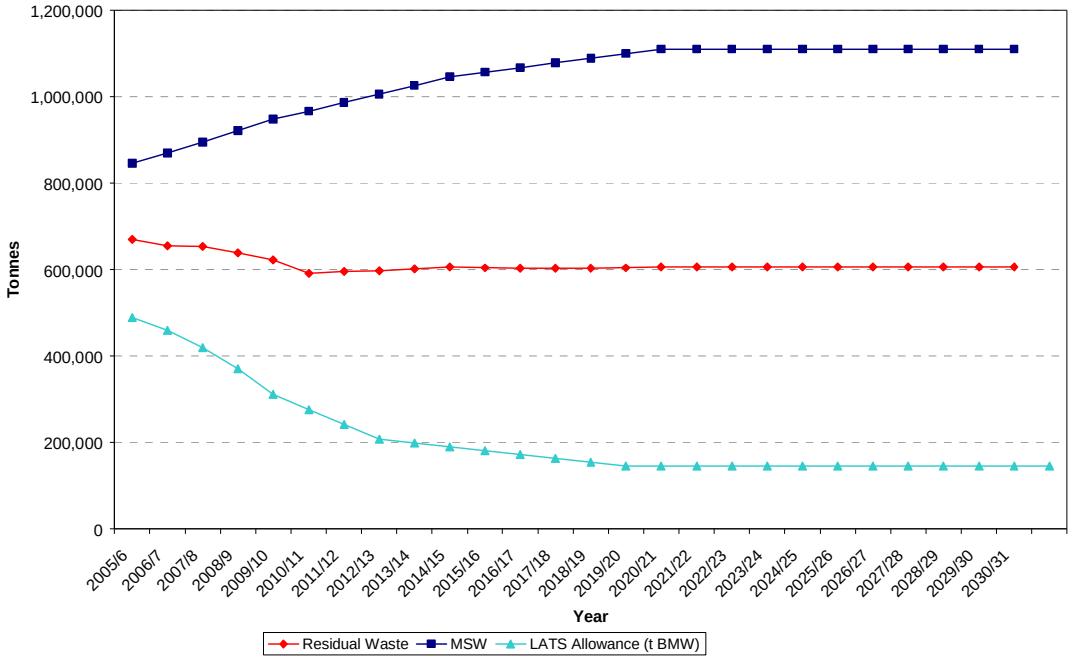
In addition to the wastes arising from kerbside collection systems, other waste arisings including trade waste, fly tipping waste, clinical wastes, and street sweepings have been assessed. With the exception of clinical and fly tipping waste, these wastes are assumed to require processing through the PFI Recovery Contract.

The recycling performance of the HWRCs in the Reference Project is based upon the current forecast for achieving, and exceeding, the targets contained within the JMWMS. These plans are reflected in the MWDA's existing capital works programme for both upgrading existing facilities and building new HWRCs over the forthcoming years. The management of HWRCs and the recyclable and compostable materials arising at these facilities is to be achieved under the MWDA's Recycling Contract. However, HWRC residual wastes require treatment via the facilities which will be procured through the PFI Recovery Contract.

For all options considered (other than the business as usual) it has been assumed that the targets for waste minimisation contained within the JMWMS are achieved. Despite recent figures indicating a reduction in waste arising, a 2.9% waste growth has been modelled until the first JMWMS target year of 2010, thereafter waste minimisation reduces growth progressively to eventually reach 0% by 2020. Under the business as usual option current waste growth rates are assumed to be maintained throughout the lifetime of the project.

The predicted quantity of MSW arising, and residual waste requiring treatment after implementation of the JMWMS is shown in Figure 4.1 below.

Figure 4.1 Chart of MSW arisings and residual waste tonnages requiring treatment in the Reference Project.



Options Appraisal

Figure 4.1 shows that despite assumptions of continued waste growth to the year 2020 resulting in MSW arisings from around 845,000 to 1,100,000 tonnes per year, the tonnage of residual waste requiring treatment reduces over the duration of the Reference Project. This is due to increases in the provision of front-end waste recycling and composting services offsetting waste growth. The final quantity of residual waste requiring treatment via facilities delivered through the PFI Recovery Contract is around 600,000 tonnes per year. MWDA's LATS allowances are presented in figure 4.1 to demonstrate the scale of the issue (although, for clarification, the LATS allowance figures are in terms of BMW tonnage as opposed to the Residual waste and MSW figures which are presented as total waste tonnage).

4.8 Performance of Various Options

4.8.1 Recycling Performance

The overall recycling performance of the Reference Project is governed principally through the operation of the district's kerbside collection schemes, and the provision of additional facilities to be procured through the MWDA's Recycling Contract. The treatment facilities to be procured through the PFI Recovery Contract make a lesser contribution to recycling.

Options 3, 4, and 5, which are based on the implementation of the DCAPs with the provision of both recycling and residual waste recovery facilities, indicate that overall re-use, recycling and composting rates for MSW of over 50% could be achieved. The performance of the different options is shown in Table 4.3 below.

Table 4.3 Total MSW recycling and re-use performance of the shortlist options

Year	Option 1 Business as Usual	Option 2 optimise existing services	Option 3 2 MBT 2 EfW	Option 3a 2 MBT 2 EfW no KW	Option 3b 2 MBT 2 EfW no KW 30%	Option 4 2 MBT 1 EfW	Option 5 2 EfW
2008	19%	29%	33%	28%	28%	33%	33%
2010	19%	34%	44%	38%	37%	44%	42%
2015	19%	35%	49%	39%	37%	49%	49%
2020	19%	35%	51%	41%	37%	51%	49%

Note: All figures are for MSW, and include recycling of rubble, metals recovery at EfW plant and 3rd Party re-use tonnages

The data provided in the table above are for overall MSW recycling do not rely on achieving the recycling of bottom ash from any EfW plant. However, these data do include the recycling of materials such as rubble at HWRCs, the re-use of materials by existing community groups, and metal recycling from the bottom ash of EfWs; Therefore, they are not representative of the final BVPI performance of the Reference Project for the recycling and composting of household waste.

Data on the household waste recycling and composting performance of the Reference Project, which reflects BVPI performance, is provided in Table 4.4 below.

Options Appraisal

Table 4.4 Household waste recycling and composting performance of the shortlist options (BVPI 82a and b)

Year	Option 1 Business as Usual	Option 2 optimise existing services	Option 3 2 MBT 2 EfW	Option 3a 2 MBT 2 EfW no KW	Option 3b 2 MBT 2 EfW no KW 30%	Option 4 2 MBT 1 EfW	Option 5 2 EfW
2008	18%	25%	29%	25%	23%	29%	29%
2010	18%	30%	42%	34%	32%	43%	38%
2015	18%	31%	46%	36%	32%	46%	43%
2020	18%	32%	48%	37%	32%	48%	45%

Note: All figures exclude recycling of rubble, metals recovery at EfW plant and 3rd Party re-use tonnages

Options Appraisal

The data on recycling and recovery rates achieved through Option 2 (optimise existing services) indicate that without the provision of additional facilities, such as In-Vessel Composting, it would not be possible for Merseyside to achieve the targets contained in the WS2000 of 33% recycling by 2015. It is recognised, however, that the additional recycling infrastructure is to be procured outside the PFI Recovery Contract.

The data for Options 3, 4 and 5 suggest that implementation of the DCAPs supported with the necessary investment in additional waste facilities will enable household waste recycling and composting rates to reach 48%.

Options 3 and 4, which utilise MBT, perform slightly better on recycling than Option 5 which relies on EfW for residual waste treatment. This is due to metal recycling at the MBT facility counting towards BVPI targets, whereas metal recycling from bottom ash residues following EfW treatment does not.

The data for recycling indicate that those options in which kitchen waste is not collected (options 3a and 3b) fail to meeting the 44% recycling target for 2020 contained within the JMWMS. Option 3b, in which no kitchen waste is collected and a 30% kerbside recycling rate is assumed, performs little better than that which is possible through the optimisation of existing facilities, assuming high participation rates, at least with regards to recycling and composting rates. This serves only to reflect the importance of service delivery in the district's kerbside collection systems. Nevertheless, the affordability of the PFI Recovery Contract under these scenarios has been modelled and, in particular, the overall BMW diversion performance has also been assessed.

4.8.2 BMW Diversion Performance

The performance of the different options has also been assessed against the final LATS allowances issued by DEFRA in February 2005, as set out in Table 4.5 below.

Options Appraisal

Table 4.5 Landfill diversion performance

Year	LATS allowance	Option 1 Business as Usual	Option 2 optimise existing services	Option 3 2 MBT 2 EfW	Option 3a 2 MBT 2 EfW no KW	Option 3b 2 MBT 2 EfW no KW 30%	Option 4 2 MBT 1 EfW	Option 5 2 EfW
Tonnes of BMW landfilled in excess of (figures presented in brackets) or below LATS allowance								
2008/9	370,089	(129,430)	(55,767)	(42,600)	(72,826)	(72,948)	(42,600)	(42,600)
2009/10	**310,848**	**(203,573)**	**(111,329)**	**(88,017)**	**(128,223)**	**(129,275)**	**(88,017)**	**(88,017)**
2010/11	276,248	(252,946)	(137,307)	(14,074)	(31,362)	(32,181)	(14,074)	(105,076)
2011/12	241,647	(303,330)	(178,783)	(49,828)	(71,258)	(72,093)	(49,828)	(140,528)
2012/13	**207,047**	**(354,189)**	**(220,743)**	**(84,870)**	**(110,205)**	**(112,215)**	**(84,870)**	**(175,241)**
2013/14	198,166	(379,813)	(237,431)	155,549	139,259	139,218	155,549	194,191
2014/15	189,284	(405,938)	(254,968)	146,439	129,243	129,156	146,439	185,154
2019/20	**144,877**	**(541,806)**	**(316,228)**	**102,574**	**82,667**	**81,674**	**102,574**	**140,165**

Note: Landfill Directive target years are shown in bold

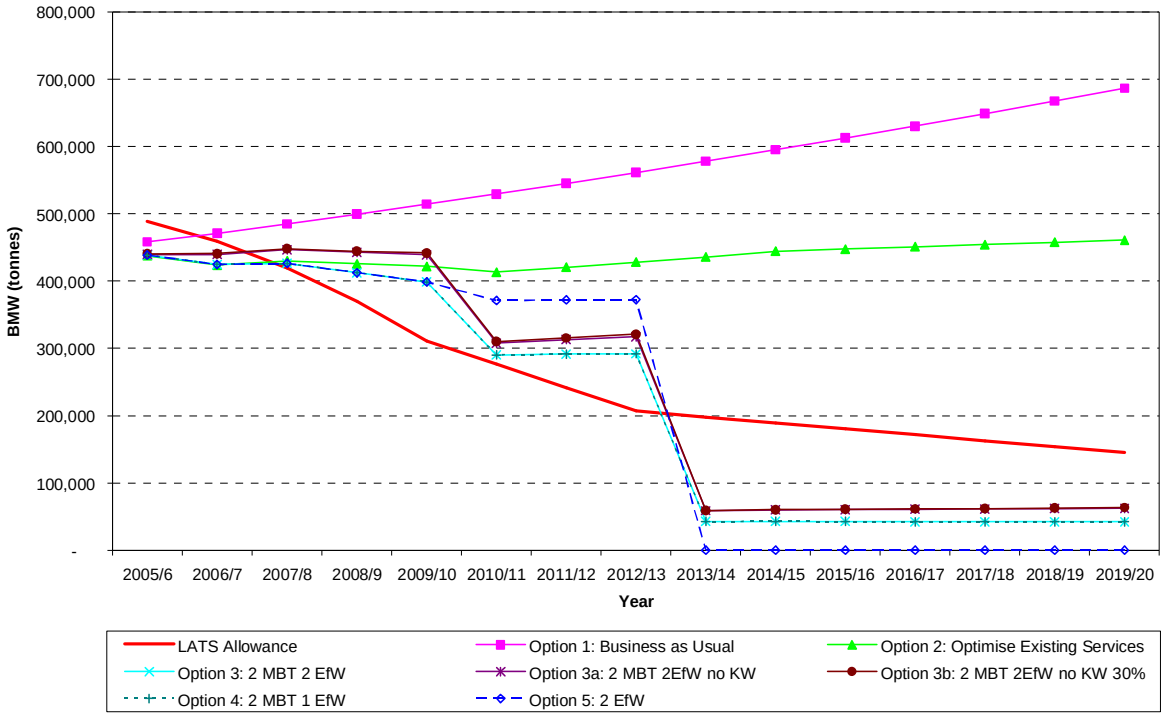
The assessment shows that no option would be capable of meeting the BMW diversion targets for 2009/10, despite significant planned improvements in the front-end recycling infrastructure. This is due to assumed increases in waste growth and, crucially, as it is not anticipated that residual waste treatment infrastructure will be operational until after this date.

The assessment also indicates that achieving LATS compliance is not achieved in any year through optimising collection existing services (Option 2), i.e. implementation of the JMWMS without the development of residual waste treatment facilities through the PFI Recovery Contract.

The BMW diversion performance of each option against LATS targets is shown in Figure 4.2 below.

Options Appraisal

Figure 4.2 Graph of maximum achievable BMW landfill performance by year



The assessment indicates that LATS compliance could be achieved by the options involving PFI support for the development of residual waste treatment facilities (Options 3, 3a, 3b, 4, and 5); however, compliance is not achieved until 2013/14 when it is predicted that EfW facilities will become operational. Thereafter, each of these options significantly exceeds BMW diversion targets, and a LATS surplus is achieved.

The options which include MBT pre-treatment (Options 3, 3a, 3b, and 4) show improved landfill diversion over the period 2010-13 when compared with relying solely on EfW technology for residual treatment (Option 5). This is due to MBT facilities being modelled as becoming operational in 2010/11, and partial stabilisation of the wastes being achieved during MBT treatment prior to eventual landfilling of the material.

Although it has been assumed that a 3rd Party outlet for RDF from MBT processes will not be secured until the EfW facilities become operational, those options which adopt MBT are significantly closer to achieving the targets for BMW diversion in the years preceding 2013. The adoption of MBT processes are predicted to reduce the LATS deficit by around 90,000 tonnes per year in these years, leaving a need to secure between 14,000 and 85,000 tonnes of LATS certificates through the MWDA's trading strategy, including borrowing and purchasing as appropriate.

Options Appraisal

4.9 Financial Evaluation

The cost of the different options has been assessed using the cost inputs included in Appendix 4.3. This analysis was undertaken at a Public Sector Comparator ("PSC") level, excluding private sector margins, financing costs, dividends and taxation. A project duration of 25 years from 1 April 2008 was used for this analysis. All costs are expressed as a nominal cost and as a net present cost ("NPC"), using a nominal discount rate of 6.0875% an analysis of which can be found in Appendix 4.3.

The combined costs of all three contracts in the MWDA's procurement strategy are listed in Table 4.6 below.

Table 4.6 Nominal costs and Net Present Costs for all three contracts (£millions)

Year	Option 1 Business as Usual	Option 2 optimise existing services	Option 3 2 MBT 2 EfW	Option 3a 2 MBT 2 EfW no KW	Option 3b 2 MBT 2 EfW no KW 30%	Option 4 2 MBT 1 EfW	Option 5 2 EfW
Capital Costs	24.3	10.0	380.3	414.5	493.5	339.2	403.2
Land Acquisition	3.4	1.9	6.4	6.5	8.2	6.4	4.7
Life Cycle Costs	0*	0*	85.9	100.0	117.3	85.9	96.8
Operating Costs	1,781.0	1,985.7	2,809.6	2,669.4	2,840.4	2,827.0	2,514.3
Revenue Income	(212,.0)	(270.0)	(591.0)	(619.3)	(608.1)	(591.1)	(584.0
Landfill Costs	1,088.1	646.8	335.5	394.5	456.0	335,.5	408.5
Landfill Tax	1,859.9	1,104.6	300.8	346.2	435.2	300.8	167.9
LATS	1,004.5	535.6	(170.9)	(124.2)	(121.1)	(170.9)	(216.2
Total Nominal Cost	**5,549.1**	**4,014.7**	**3,156.6**	**3,187.6**	**3,621.5**	**3,132.9**	**2,795.2**
Net Present Cost	**2,086.7**	**1,580.5**	**1,405.4**	**1,436.8**	**1,612.5**	**1,382.9**	**1,273.9**

*Note: * The Recycling Contract has been priced on a Gate Fee basis, therefore the Life Cycle costs for recycling and transfer facilities are incorporated in the operating costs*

Options Appraisal

The data on nominal costs for all three contracts shows the significant reductions in cost achievable through the development of waste facilities in Merseyside. Those options without residual waste treatment (Options 1 and 2) incur significant costs for landfilling, landfill tax and LATS certificates, and these outweigh the capital costs of developing residual waste treatment plant.

The cost assessment of Options 3a and 3b indicates that the costs of waste management in Merseyside can be reduced through achievement of the recycling targets in the JMWMS, and that lower householder participation in the kerbside collection schemes, leading to greater reliance on residual waste treatment facilities, increases the overall costs.

4.9.1 Analysis of Reference Case options

The costs associated with the Recovery Contract are shown in Table 4.7 below. It should be noted that the costs quoted are for the Reference Case options alone and caution must be exercised in interpreting these costs in isolation from the remaining Reference Project costs. The investment in residual waste treatment offsets significant costs which would otherwise be incurred through the Landfill Contract, and through the need to secure LATS certificates. Therefore, the figures in table 4.7 must be viewed in conjunction with the overall cost assessment for all three contracts displayed previously in Table 4.6.

Table 4.7 Nominal costs and Net Present Costs for the Recovery Contract (£millions)

Year	Option 1 Business as Usual	Option 2 optimise existing services	Option 3 2 MBT 2 EfW	Option 3a 2 MBT 2 EfW no KW	Option 3b 2 MBT 2 EfW no KW 30%	Option 4 2 MBT 1 EfW	Option 5 2 EfW
Capital Costs	na	na	355.4	404.7	483.7	314.3	378.3
Revenue Income	na	na	(288.6)	(322.3)	(342.7)	(288.6)	(281.6)
Operating Costs	na	na	1,238.8	1,417.6	1,745,.1	1,213.4	901.1
Life Cycle Costs	na	na	133.5	155.5	183.2	133.5	152.6
Land Acquisition Costs	na	na	3.8	4.6	6.3	3.8	2.7
Total Nominal Costs	**na**	**na**	**1,443.0**	**1,660.1**	**2,075.7**	**1,376.5**	**1,152.5**
Net Present Cost	**na**	**na**	**704.8**	**805.6**	**973.7**	**667.5**	**596.1**

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The higher revenues forecast in options 3a & 3b are due to increased material and energy recovery possible through managing higher tonnages of residual waste in the Recovery Contract. In options 3, 4, and 5 these revenues are generated through higher levels of recycling at the kerbside and through the Recycling Contract, where there would be greater revenues generated and this is reflected in the cost assessment of all three contracts.

Overall, the financial assessment indicates that the options of business as usual and maximising existing services are the most expensive in nominal terms.

Option 3b indicates that investment in residual waste facilities and achieving lower levels of recycling has a higher NPC than maximising existing services. However, this is due to long-term savings in landfill and LATS costs in future years being more heavily discounted than the capital costs of treatment plant, which occur in the first few years of the project. Option 3b therefore has a lower nominal cost in the overall assessment.

Option 5, which relies solely on EfW, is the cheapest option in both nominal and NPC terms.

Options 3 and 4 have similar costs compared with each other; Option 3 having slightly lower capital costs through achieving economies of scale in the construction of single larger EfW plant to accommodate all of the RDF. However, Option 3 would incur additional haulage costs to transfer the RDF from one of the MBT facilities to the EfW plant. These haulage costs are reflected in higher operation cost of the overall project in Table 4.7 as waste transfer and haulage costs are allocated into the Recycling Contract, and this partially offsets the savings in capital costs achieved through constructing a single EfW plant under the Recovery Contract.

4.10 Conclusion

The assessment of options has indicated that delivery of the JMWMS requires both high levels of recycling at the kerbside and the provision of residual waste treatment facilities. Those options without high recycling rates (Option 3a and 3b) and those without residual waste treatment facilities (Option 1 and 2) not only do not meet the strategy targets, but also incur financial additional costs when compared to the other options.

Although Option 5 represents the cheapest option, Options 3 and 4 are more consistent with and the outcomes of the public consultation exercises undertaken by the MWDA as part of the development of the JMWMS. Consequently, Options 3 and 4 are considered to be more deliverable in Merseyside.

The assessment has highlighted that both Options 3 and 4 have the potential to achieve greater BMW landfill diversion prior to the development of EfW facilities. Options 3 and 4 also have the potential to contribute to higher levels of recycling performance, and achievement of the recycling targets in the JMWMS. It is recognised, however, that meeting long-term BMW diversion targets through Options 3 and 4 remains dependant on the development of EfW plant as an outlet for RDF.

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Options 3 and 4 are comparable in terms of cost, with Option 4 likely to be only marginally cheaper. However, as Option 4 relies on a single EfW plant it will require substantial quantities of RDF to be double handled throughout the project, increasing vehicle movements, and subsequently the haulage costs are increased over Option 3. The double handling or RDF, and additional transport miles incurred therein, make Option 4 less attractive on environmental grounds when compared with co-locating the EfW plant with the MBT plant. Reliance on a single larger EfW plant would also increase the risks to delivery through the planning system.

For these reasons Option 3, incorporating 2 MBT plant co-located with 2 EfW plant, has been defined as the Reference Project.

Value for Money

Value for Money Section 5

5.1 Introduction

Having defined the reference case, the next step is to establish the procurement route that represents the best value for money for the people of Merseyside. The approach taken here is consistent with that outlined in the HM Treasury Value for Money Assessment Guidance issued in August 2004 and in the HM Treasury Supplementary Value for Money Guidance for Waste PFIs issued in September 2005 ("Guidance").

Therefore, this OBC assumes that DEFRA has already undertaken a Stage 1 programme level assessment for waste PFI projects as part of the Comprehensive Spending Review completed in 2004 demonstrating that waste, as an investment programme, is likely to achieve value for money under PFI. This OBC details the Stage 2 project level assessment aimed at verifying whether this initial decision to use PFI is valid for Merseyside.

The project level assessment has considered both quantitative and a qualitative factors the results of which have been interpreted in conjunction. The quantitative analysis uses a prescribed methodology and electronic spreadsheet provided by Treasury to determine whether PFI represents indicative value for money when compared to a PSC.

This section outlines the results of both the qualitative and quantitative assessment followed by a conclusion to the project level assessment for Merseyside.

5.2 Qualitative assessment

The Guidance states that PFI deals should generally be for large projects that are critical to the delivery of public services. PFI projects commit the Procuring Authority, to use the Guidance terminology, to a particular provider for some years ahead and whether the projects are successful will not just depend on cost, but also on qualitative factors that need to be considered, alongside quantitative factors, in coming to a decision on the most appropriate procurement route.

The three qualitative factors identified by the Guidance are as follows:

- **Viability** involves assessing whether there are efficiency or accountability of equity issues which demand that services are provided by Government directly rather than through PFI and the extent to which service requirements can be adequately captured in a contract-based approach with a clear specification in output terms;
- **Desirability** involves assessing the relative benefits of different procurement routes, such as incentives and risk transfer in PFI versus the Government's lower cost of borrowing in conventional procurement and the relative advantages and disadvantages associated with a long term contractual relationship between the public and private sectors; and
- **Achievability** involves gauging the level of likely market interest and whether the public sector client would have sufficient capability to manage

the complex processes involved, as this is key to both the procurement of the services and their ongoing management and performance.

At this Stage 2 the MWP has completed a project level assessment of these qualitative factors consisting of due consideration to a series of questions designed to verify decision for proceeding with PFI. The below table summarises the Partnership's responses for each of the three qualitative factors, the full list of questions and responses is included in Appendix 5.1.

Table 5.1 Qualitative assessment summary

Qualitative factor	Summary question from the Guidance	Merseyside Partnership's considered response
Viability	Is the accounting officer satisfied that an operable contract with built in flexibility can be constructed, and that strategic and regulatory issues can be overcome?	The Authority has adopted a multi contract procurement strategy in order to provide greater flexibility in respect of managing its waste streams. The Authority is satisfied that this structure will facilitate: • Meeting the targets set out in the JMWMS; • Promoting Partnership working with the District Authorities in terms of front end Recycling and provision Infrastructure; and • Deliver the project in accordance with the prescribed Output Specification.

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Qualitative factor	Summary question from the Guidance	Merseyside Partnership's considered response
Desirability	Overall, is the accounting officer satisfied that PFI would bring sufficient benefits that would outweigh the expected higher cost of capital?	The Authority is satisfied that the benefits of PFI outweigh the expected higher cost of capital by: • Delivering whole life cycle benefits by combining asset design, construction, delivery and operation of facilities providing a central point of accountability. This is not provided by the letting of separate construction and operation contracts, a route which may be more appropriate for less complex facilities such as HWRC's and Composting Facilities. • The combination of asset delivery and provision of finance by the private sector provides greater incentive to perform and deliver the contract specification. • Long term performance risk is taken by the contractor, which, in a worst case scenario may result in contract termination. Therefore, it is the private sector investment at stake not the tax payers. • Under a PB option this additional protection may not afforded to the Authority as it is retaining lending risk and therefore the risk that the asset may not perform. Additional protection will need to be required that will have a cost impact e.g. Performance Bonds.

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Qualitative factor	Summary question from the Guidance	Merseyside Partnership's considered response
Achievability	Overall is the accounting officer satisfied that a PFI procurement programme is achievable, given client side capability and the attractiveness of the proposals to the market?	In consideration of the points above, the Authority is satisfied the procurement programme is achievable, given that : • The right level of internal and external resource and expertise has been committed to the project including a specialist advisor from the 4ps and a dedicated Procurement Director; • The project has a dedicated project management team that will following the principles of PRINCE 2 with all staff being appropriately trained; • Soft market testing undertaken with potential bidders and funders provided positive feedback with regards to the Authority's proposed procurement strategy; and • The project seeks a product and a risk sharing framework with which the private sector is familiar.

Based on the qualitative project level assessment, the Partnership believes that their waste project meets the viability, desirability and achievability requirements of the Guidance confirming the initial programme level assessment decision that PFI offers value for money. Next, the results of the quantitative assessment are discussed.

5.3 Quantitative assessment

The quantitative assessment considers how quantifiable costs and benefits of using PFI as the procurement route are likely to compare with conventional procurement through a Public Sector Comparator (PSC). This involves estimating values for the capital and operating costs attached to the project and adjusting these for any inherent optimism bias and/or specific risks as well as expected transaction costs. For the PFI option, it calculates the cost of the project if it were to be funded through private finance, adjusting relevant factors accordingly. A generic spreadsheet has been developed by Treasury to capture the values and enable sensitivity testing that, according to the Guidance, must be used as part of the project level assessment. Within the Guidance, the two procurement methods are defined as:

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1. The PSC Option – Procurement through conventional approaches that use public funding (for example, letting a design and build contract for the construction of an asset, and then letting annual operating and maintenance contracts for the ongoing operation and maintenance of that asset); and
2. The PFI Option – Procurement under the PFI which is a specific procurement methodology through which the public sector lets a DBFO contract to the private sector for the construction and whole life maintenance of an asset and/or associated service.

This section outlines the key input assumptions that have been made in using the Treasury spreadsheet, the indicative value for money results and the outcome of sensitivity analysis performed.

5.3.1 Key input assumptions

The Treasury spreadsheet contains some assumptions that have been hard wired and therefore cannot be altered, for example employment cost per employee for the PSC option is fixed to equal the amount input for the PFI option. There are, however, many project specific input assumptions to be made. A summary of the key financial input assumptions is provided below with a full listing detailed in Appendix 5.2.

All price data is real as at the planned financial close date of the project (1 April 2008).

Table 5.2 Key input assumptions

Variable	Description	MWP input assumption
Timings	The contract period is restricted to intervals between 6 and 40 years	The contract period for this project is modelled at 25 years.
Capital Expenditure ("CapEx")	Expenditure incurred in procuring the asset. It does not cover expenditure required to maintain the asset	The initial CapEx of the project totals £276.5m over a 5 year period. The CapEx costs have been increased by 10% for the PFI, to reflect the cost of the risks borne by the private sector under a PFI transaction.
Operating Expenditure ("OpEx")	Represents the costs incurred by the Partnership in operating the asset and or running the services that are included within the scope. Expenditure which falls outside of the scope, for example, clinical staff costs, are excluded.	The annual OpEx cost (non-employment) for the project was calculated as £14.8m. The employment costs were calculated as £2.3m. For the PFI option, the OpEx costs were increased by 5% to reflect the cost of the risks borne by the private sector.

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Variable	Description	MWP input assumption
Transaction costs	These represent the costs incurred by the private sector and the public sector, in reaching contractual agreement.	The transaction costs have been assumed at £1.0m under the PSC and £5.0m under PFI, based on the size and complexity of the procurement and costs incurred on other waste PFI projects.
Gearing	This represents the share of the total financing requirement which is funded by debt under the PFI option.	The level of senior debt as a percentage of the total project funding is 85%, based on a prudent level of gearing acceptable to the current market.

The Treasury spreadsheet accounts for the impact of uncertainty over project costs through input assumptions for Optimism Bias. Optimism Bias relates to the demonstrated and systematic tendency for project appraisers to be overly optimistic when considering project benefits and costs.

The Guidance states that there is currently little, if any, evidence to suggest that either conventional or PFI style procurement methods deal any more or less efficiently with Optimism Bias, however there is evidence that the allocation of risks achieved under a PFI contract reduces the impact of any Optimism Bias on the Procuring Authority as compared to the contractual arrangements typically resulting from a PSC option.

The Guidance explains that in accounting for Optimism Bias the Treasury spreadsheet differentiates between two key stages of the investment decision process, namely pre-Full Business Case ("FBC") and post-FBC. FBC in this instance represents the date of contract award. The pre-FBC Optimism Bias factor represents the increase in estimated costs or shortfall in estimated income between the OBC and the FBC stage. Post-FBC Optimism Bias factor represents the increase in costs or the shortfall in income between the date of contract award and the completion of the associated asset(s).

Fundamental to the internal operation of the spreadsheet is the assumption that the impact of post-FBC Optimism Bias will be greater under the PSC option.

The Treasury spreadsheet requires inputs for both pre and post-FBC Optimism Bias percentages for CapEx, Lifecycle costs, OpEx, transaction costs and third party income. These inputs are detailed in the table overleaf. Details of how the inputs were derived are provided in Appendix 5.3.

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Table 5.3 Optimism Bias input assumptions

Cost Centre	Overall Optimism Bias (%)	Pre-FBC Optimism Bias (%)	Post-FBC Optimism Bias (%)
CapEx	69.5	17.4	52.1
Lifecycle	50.0	10.0	40.0
OpEx (non employment)	25.0	5.0	20.0
Transaction	50.0	10.0	40.0
3rd Party Revenue	20.0	10.0	10.0

For example, the overall level of Optimism Bias relating to capital expenditure is 69.5%. The pre-FBC Optimism Bias of 17.4% represents the increase in costs up to the point of contract award and the post-FBC Optimism Bias of 52.1% represents the potential cost increases after contract award. As stated above, the impact of the post-FBC Optimism Bias for the Procuring Authority will be reduced by a PFI contractual structure.

5.3.2 Indicative PFI value for money results

The key outputs from the Treasury spreadsheet are the PSC NPC of the project, the PFI equivalent and the indicative PFI value for money percentage representing the percentage difference between the two. If the indicative PFI value for money percentage is positive then this indicates that the project supports the programme level assessment that value for money can be achieved through PFI. If negative, the PSC is deemed to offer better value for money.

For the base case scenario the indicative PFI value for money percentage was generated using a pre-tax Internal Rate of Return ("IRR") for the private sector of 13%. This produced an indicative PFI value for money percentage of 18.4% confirming PFI as offering the potential to deliver value for money for the project. The base case scenario results are summarised thus:

Table 5.4 Indicative PFI value for money results

	PSC NPC £M's	PFI NPC £M's
Base Case Scenario (13% pre-tax IRR)	912	744
Indicative PFI value for money %		18.4

5.3.3 Sensitivity analysis

The Treasury spreadsheet uses Indifference Points to demonstrate the level of change required in the value of individual inputs to erode the difference between the PSC and PFI NPCs to zero thus making the Procuring Authority indifferent between the two procurement routes. The table below sets out the Indifference Points for capital and operating expenditure for the PSC option and for the unitary charge for the PFI option.

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Table 5.5 Indifference analysis

Procurement option	Variable	Indifference points
PSC	CapEx	(29.2%)
PSC	OpEx	(59.3%)
PFI	Unitary Charge	25.5%

The analysis demonstrates that, *ceteris paribus*, the CapEx under the PSC would have to decrease by 29.2% in order for Merseyside to be indifferent between the two options. Similarly, OpEx would have to decrease by 59.3% under the PSC. Both of these are considered to be within comfortable distance of the Guidance benchmark of 5%.

Affordability constraints aside, the Unitary Charge would have to rise by 25.5% for Merseyside to be indifferent between the two procurement options. Again, this is within comfortable distance of the Guidance benchmark of 3%.

In addition to the above, additional sensitivity analysis was conducted by generating different scenarios using different input assumptions from the base case scenario to assess the impact on the indicative PFI value for money percentage. The following scenarios were assessed:

- Scenario 2 assumed a target pre-tax IRR of 18%, reflecting the potential demand for higher private sector returns.
- Scenario 3 assumes that Optimism Bias will only be applied to OpEx (employment and non-employment) costs.
- Scenario 4 assumes that Optimism Bias will only be applied to CapEx costs.

The following table illustrates the results of the indicative PFI value for money analysis for the different scenarios outlined above.

Table 5.6 Scenario analysis

Results:	Base case scenario	Scenario 2 IRR of 18 %	Scenario 3 OpEx only	Scenario 4 CapEx only
"PSC" NPC (£m)	(912)	(912)	(663)	(863)
"PFI" NPC (£m)	(745)	(796)	(727)	(714)
PFI Value for Money (%)	18.4	12.7	(9.7)	17.3
Unitary Charge (£m)	52.8	57.0	51.4	50.4

Scenario 2 simply demonstrates the relationship between higher private sector returns and PFI value for money percentage; as the PFI cost increases the PFI value for money percentage decreases. The results of scenario 3 indicate the decrease in the PFI value for money percentage resulting from the removal of uncertainty regarding the capital expenditure costing; a negative percentage value (9.7%) value for money percentage indicates the significance of Optimism Bias relating to operating expenditure within a waste PFI project. The results of scenario 4, however, demonstrate that the Optimism Bias relating to capital expenditure is still of sufficient quantum to justify the value for money of the PFI in isolation by generating an indicative PFI value for money percentage of 17.3%.

To conclude, the results of the quantitative assessment, following the prescribed methodology provided by Treasury, verify the programme level assessment that PFI can offer value for money for this project. The sensitivity analysis conducted has provided indifference points within comfortable distance of the benchmarks as outlined in the Guidance and a look at varying scenarios has further illustrated the robust nature of the positive indicative PFI value for money percentage.

5.4 Project level assessment conclusion

The qualitative assessment produced a clear indication that in terms of viability, desirability and achievability the Partnership is well positioned to deliver PFI procurement. The quantitative assessment has produced a high indicative PFI value for money percentage of 18.4% on the base case scenario, the robustness of which has been demonstrated through sensitivity testing. Taken together these assessments have provided a clear indication that verifies the outcome of the programme level assessment that PFI can deliver value for money for Merseyside's waste project.

The Partnership notes the requirements of Stage 3 procurement level assessment, in particular those relating to market failure. Details of how the Partnership has begun to mitigate this risk through both the promotion and tailoring of the project are contained within section 7.

Reference Project - Affordability

Affordability Section 6

6.1 Introduction

Further to defining the reference project and identification of the preferred procurement route, this section examines the following:

- The cost of the Reference Project compared with the 'Business as Usual' option including the impact of implementing a landfill allowance purchasing strategy;
- How projected budgets have been calculated over the contract period;
- The revenue support contribution of the PFI credit;
- The 'affordability gap' between the cost of the Reference Project and the existing budgets over the 25 years; and
- The effect on the affordability position of sensitivities carried out on key cost assumptions.

The shadow tariff financial model that supports the Reference Case Recovery Contract is included at Appendix 6.1 and the supporting assumptions are included at Appendix 6.2

6.2 Estimated Whole Life Costs

A summary of the estimated nominal cost of implementing the Waste Strategy (the Reference Project) and the 'Business as Usual' over a period of 25 years is set out in table 6.1 below. The trading price of landfill allowances has been assumed to be £50 per tonne. This is a reasonably low price chosen to represent a good market for landfill allowances and to compare the cost of the reference project to a 'low cost business as usual' ensuring that the reference project is not selected based on the fear of £150 LATS penalties that, in the event, do not materialise.

The financial projections in Table 6.1 below are based on the total of the three contracts that will make up the Reference Project i.e. the Recycling Contract, the Recovery Contract and Landfill Contract.

Reference Project - Affordability

Table 6.1: Nominal cost of the Business as Usual and the Reference Project

	'Business as Usual' Option 1 £'000	Reference Project Option 3 £ '000
Project costs	1,639,498	2,887,002
Landfill tax	1,271,305	200,835
Landfill Allowance costs	658,250	13,969
Total nominal costs	3,569,053	3,101,806
Difference	467,247	-

The above table demonstrates that the estimated cost saving to the Authority of implementing the Reference Project rather continuing with the "Business as Usual" option could be approximately £467 million before taking into account any revenue support received from PFI credits. This saving could be as much as £1.13 billion should the cost of buying LATS reach £100 p tonne. Excluding the impact of LATS, implementation of the Reference Project is likely to cost only 6% (Pre PFI) more than Business as Usual in nominal terms.

A summary of the estimated revenue cost of the PFI Contract is shown below.

Table 6.2: Nominal cost of the three Contracts

	Reference Project £ '000
Recovery Contract (The PFI Project)	**1.765,050**
Recycling Contract	977,463
Landfill (incl Tax)	345,324
Landfill Allowances [10]	13.969
Total nominal costs	3,101,806

Shown below is the projected cost of the Reference Project (Option 3) over the life of the contract compared to the cost of Business as Usual (Option 1). Two scenarios have been illustrated reflecting different costs in terms of purchasing landfill allowances when establishing the cost of Option 1. These are shown in Table 6.3 following.

[10] Cost of purchasing landfill allowances in the short-term between 2008/09 and 2012/13

Reference Project - Affordability

Figure 6.1: Profiled Projected Costs

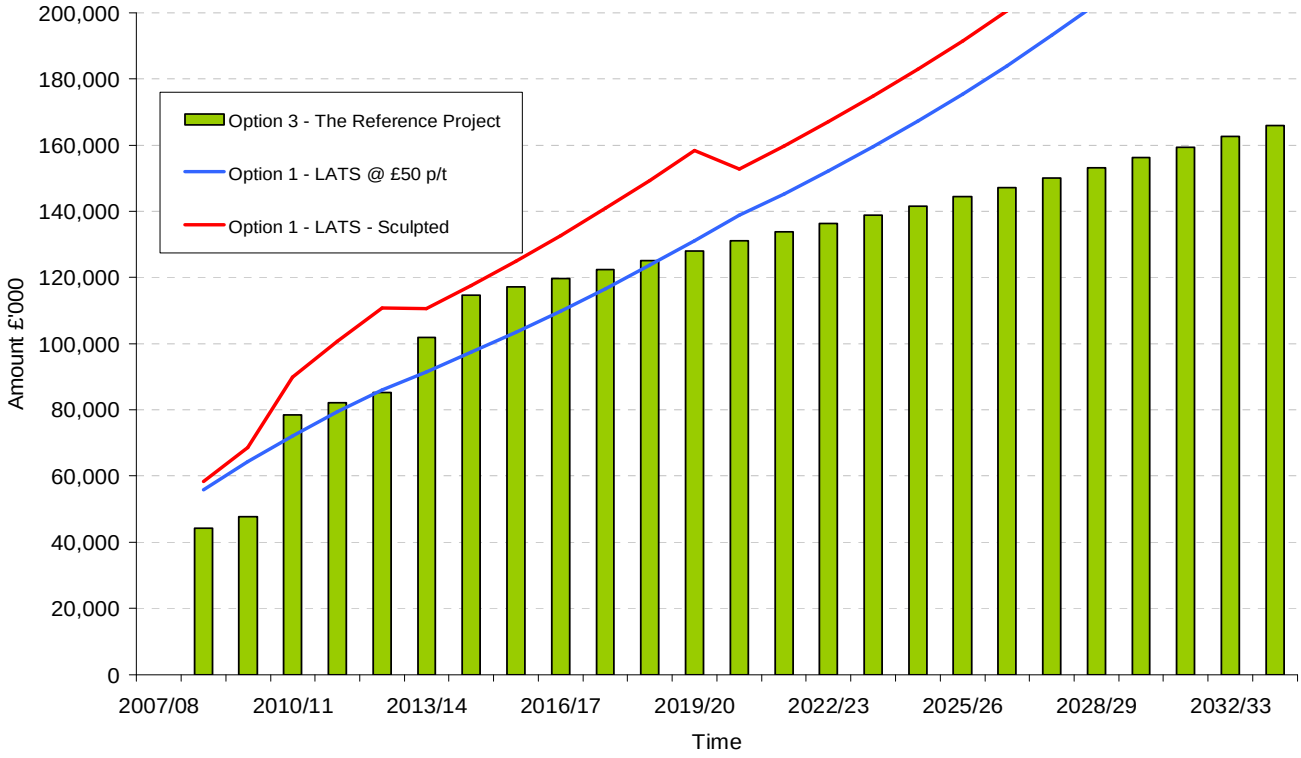


Table 6.3: LATS Allowance Cost Scenarios

	2008 - 2010	2011 – 2013	2014 - 2020	2021 – 2034
Scenario 1	£50	£50	£50	£50
Scenario 2	£70	£120	£100	£75

Whilst the EU Landfill Directive and WET Act set BMW Diversion targets up to 2020 it is assumed for the purpose of the OBC that such targets will continue to be in force throughout the contract period up to 2033.

Figure 6.1 shows how the annual cost of the Reference Project is phased to reflect the build up in performance following the commissioning of new waste management facilities. The first step up in project costs reflects the commissioning of the MBT plants in 2010/11 and the second step up reflects the commissioning of the thermal treatment facilities in 2013/14. The graph demonstrates that on an annual basis, particularly in later years, the projected costs of the PFI option is likely to be significantly less than the

Reference Project - Affordability

'Business as Usual' option when the costs associated with landfill allowances are taken into account.

6.3 Projected Budgets

As the proposal is for the MWDA to transfer the provision of waste management services to the waste management contractor, there will be an existing budget that is available to help fund the costs payable to the private sector contractor/s.

In order to examine the affordability implications of procuring the Reference Project the existing budget "the Levy[11]" is adjusted to account for both the known changes (e.g. continuing increases in landfill tax stipulated by Central Government) and likely above average inflationary increases (when compared with Consumer Price Index ("CPI") levels) that will apply to the Levy prior to contract commencement.

The projected budgets allow for planned increases in landfill tax up to March 2009. From this point onwards it is assumed that the projected budget shall increase by 3.0% per annum. The rationale for this approach is that the MWP is committed to such increases regardless of the procurement of new waste management contracts. The table below shows the projected budgets for the period 2005/06 through to 2008/09.

Table 6.4: Projected budgets

	2005/06 £ '000 Forecast	2006/07 £ '000 Projected	2007/08 £ '000 Projected	2008/09 £ '000 Projected
Non landfill tax costs	23,705	26,313	26,990	28,213
Landfill tax *	12,001	13,675	15,659	17,629
Projected budgets	35,706	39,988	42,649	45,842

* Increases in landfill tax of £3 per tonne equating to approx £2.1m p.a.

These projected budgets are used below to calculate the affordability gap of Option 3 (Reference Project).

6.4 Calculation of the PFI credit

Within the OBC the PFI Credit is to be calculated by the identification of the capital investment elements of the Reference Project included within the proposed Recovery Contract. The total of the CapEx within the reference project is £276 million at 2005 prices. This equates to a nominal figure (inflated) of £356 million. The Authority's calculations indicate a PFI credit requirement of approximately £293m[12]. However, DEFRA PFI criteria published in November 2003 provided for a cap on the level of support available at £40 million. Discussions with DEFRA indicate a sum of £90 million may be made available to the Merseyside project. For modelling purposes, this

[11] Levy – The share of MWDA disposal costs charged to District Authorities

[12] This figure represents the Net Present Value (Discount Rate of 6%) of the inflated Capital Expenditure totalling £356 million

Reference Project - Affordability

indicative PFI Credit figure has been used to assess the affordability of Option 3 (Reference Project).

The calculation of the Revenue Support Grant ("RSG") generated by the PFI Credit has been calculated in accordance with the Local Authority PFI Grant Reform that came into force in April 2005 and is shown at Appendix 6.3. The guidance prescribes that the RSG should be paid on an annuity basis using an interest rate which is fixed for the term of the support, currently 6.0%. Grant payment should commence on the basis that relevant permanent assets become available and be payable over the term of the contract remaining thereafter.

For the purpose of the OBC it is assumed that the RSG will comprise two parts. The first part is to commence on the commissioning of the MBT plants and the second element to commence on the commissioning of the Thermal Treatment facilities. The split of the PFI credit between the two phases will be determined by DEFRA, however a prudent split of 50:50 has been assumed at this stage.

6.5 Affordability Gap

The effect of the funding from the Levy compared with the cost of Option 3 (Reference Project) is shown in the table below.

Table 6.5: Affordability Analysis (Reference Project years 1-6)

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
Nominal Costs	44,263	47,804	78,558	82,203	85,282	101,960	3,087,837
LATS Costs*	2,130	4,401	704	2,491	4,243	0	13,969
Total Costs	46,393	52,205	79,262	84,694	89,525	101,960	3,101,806
Projected Budgets	45,842	47,217	48,634	50,093	51,596	53,143	1,671,366
Gap	551	4,988	30,628	34,601	37,929	48,817	1,430,440

** Assumed LATS purchase costs of £50 per tonne.*

There is an affordability gap during 2008/09 and 2009/10 of approximately £5 million resulting primarily from the purchase 130,618 landfill allowances at an assumed cost of £50 per tonne. The affordability gap increases significantly in 2010/11 following the build up in performance after the commissioning of new MBT facilities. The affordability gap in 2010/11 is approximately £31 million reflecting the increase in the annual Unitary Charge under the PFI project (Recovery Contract). This figure increases to nearer £49 million in 2013/14 reflecting the commissioning of the thermal treatment facilities.

Reference Project - Affordability

The table below shows the difference that the PFI revenue support of approximately £7 million p.a. will make to the affordability position. As a result of the PFI revenue support the affordability gap in 2010/11 is reduced by £3.6 million from £31 million to £27 million and reducing the affordability gap by £7.6 million in 2013/14 from £49 million to £41 million.

Table 6.6: Affordability Analysis (reference project incl. PFI Income, years 1 – 6)

	2008/09 £ '000	2009/10 £ '000	2010/11 £ '000	2011/12 £ '000	2012/13 £ '000	2013/14 £ '000	Total £ '000
Nominal Costs	44,263	47,804	78,558	82,203	85,282	101,960	3,087,837
LATS Costs*	2,130	4,401	704	2,491	4,243	0	13,969
Total Costs	46,393	52,205	79,262	84,694	89,525	101,960	3,101,806
PFI Support	0	0	3,658	3,658	3,658	7,581	162,589
Projected Budgets	45,842	47,217	48,634	50,093	51,596	53,143	1,671,366
Affordability Gap	551	4,988	26,970 [13]	30,943	34,271	41,236	1,267,851

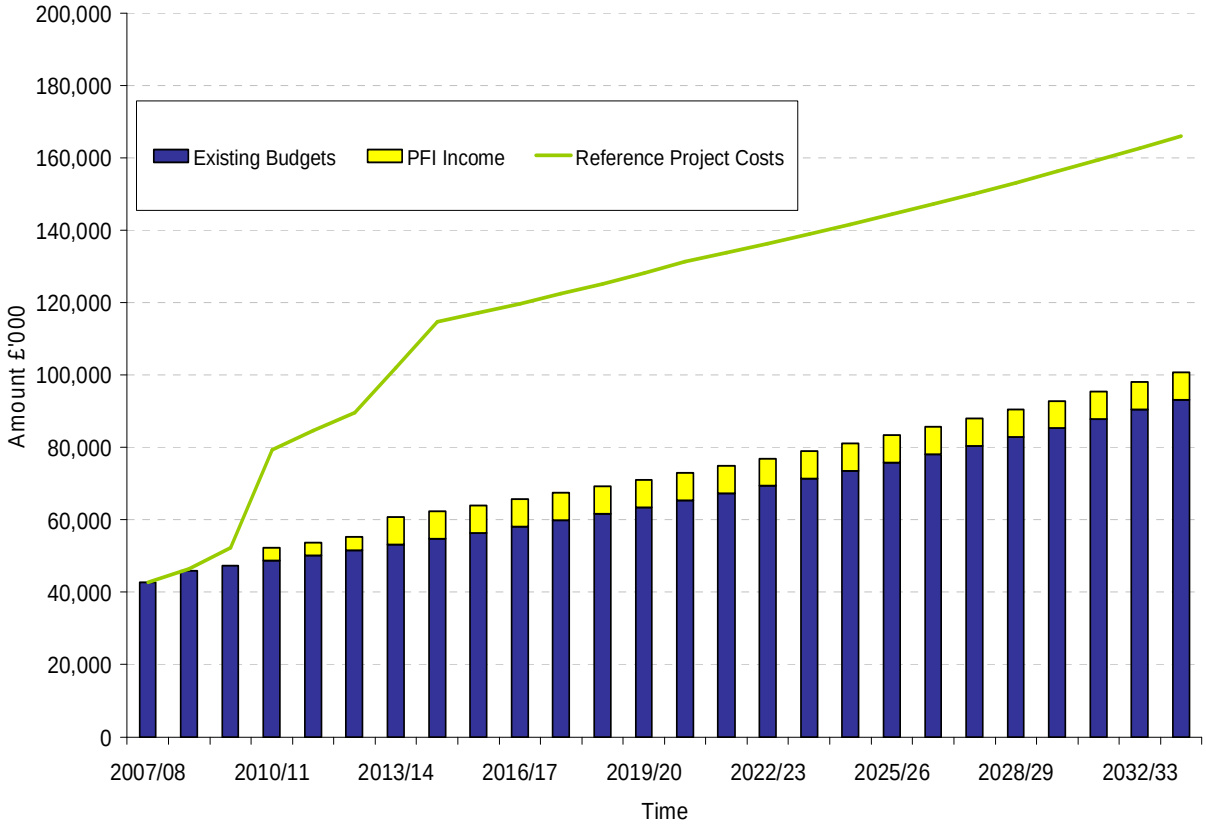
* *Assumed LATS purchase costs of £50 per tonne.*

The affordability gap over the life of the project is shown in figure 6.2 below.

[13] This figure is approximately £12 million less than under Option 1 where the affordability gap would be £40 million where the Authority is required to purchases landfill allowances based on a sculpted cost per tonne (£120 per tonne). The breakeven price of LATS at that time in terms of affordability would be £78 per tonne.

Reference Project - Affordability

Figure 6.2: Affordability Analysis (project Life) including PFI Income



* The timing of revenue support is discussed above in 4.1.

** Existing budgets calculated in figure 3 above.

Overall the revenue support contributes approximately £163 million reducing the affordability gap by 11.4% to £ 1,268 million.

6.6 Impact on the Levy

As highlighted above in Table 6.6 there is an affordability gap of £27 million in 2010/2011. This increase in costs "the cliff face" represents an increase of 58% on the prior year Levy of £47,804 million. Given that such an increase is neither practical nor deliverable in terms of local authority resources and associated impact on Council Tax it is necessary to provide for such increases from 2007/08.

It is proposed that the Levy shall be increased on a consistent periodic basis over 6 to 7 years (2007/08 to 2013/14). The surplus Levy revenues generated during the early years will be banked (escrow) in order to meet the increasing costs in later years. A sinking fund calculation has been developed to establish the appropriate contribution required and subsequent impact on the Levy.

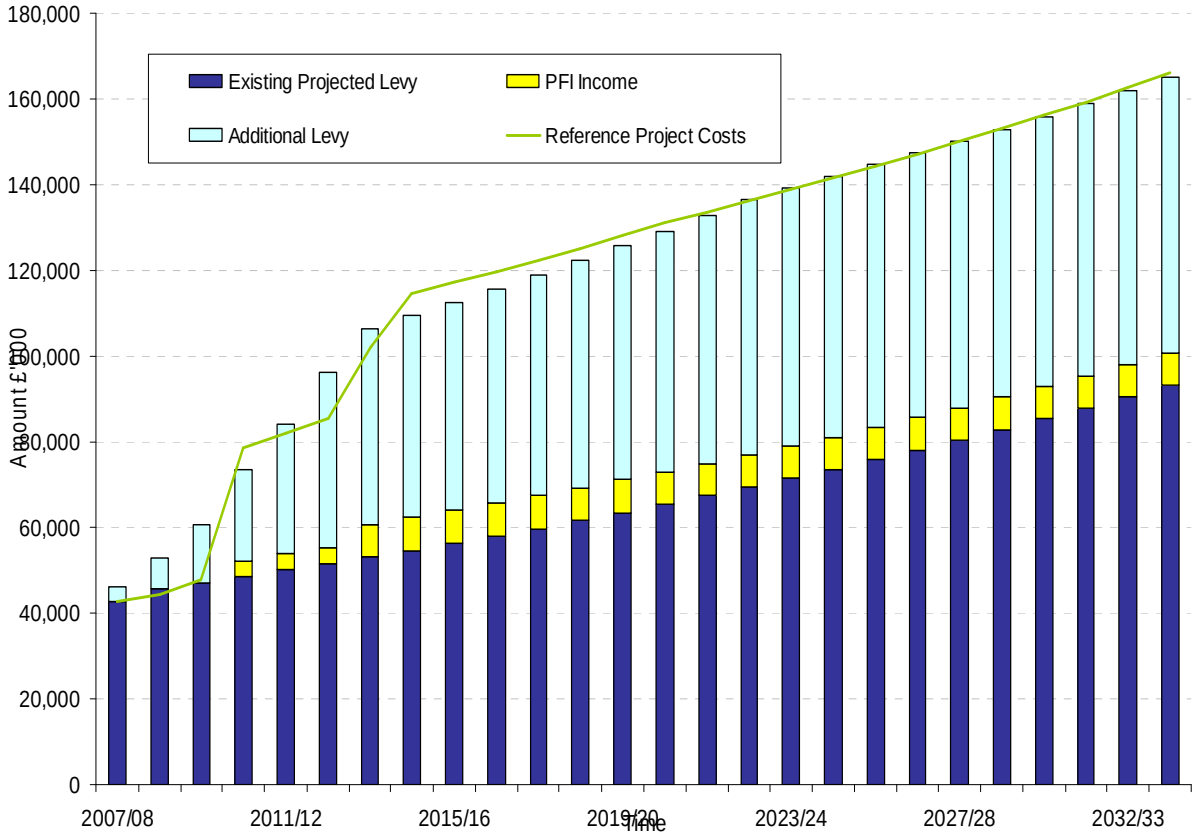
Reference Project - Affordability

It is proposed that the Levy shall be increased by 15% per annum up to and including the year 20013/14, followed by an increase of 7% in 2014/15. Thereafter it shall continue to increase as a rate of 3% per annum for a period of 9 years reducing to 1.9% in 2023/24.

The balance in the sinking fund is assumed to earn interest at 4%. The first full year contribution required in 2007/08 is £6 million (representing a 15% increase on the previous year Levy of £39,988 million). As at 2013/14 the sinking fund will have accumulated approximately £30 million of reserves that together with the Levy in place at that time will be sufficient to meet on going contract costs. A profile of the Levy increases over the contract period, compared against the cost of Option 3 Reference Project is shown below.

Reference Project - Affordability

Figure 6.3: Impact on Levy Arrangements



The increases in Levy over the short-term combined with the revenue support generated by the PFI credit is shown in the table below.

Table 6.7: Short Term Levy Projections

	Year 1 2007/08 £ '000	Year 2 2008/09 £ '000	Year 3 2009/10 £ '000	Year 4 2010/11 £ '000	Year 5 2011/12 £ '000	Year 6 2012/13 £ '000	Year 7 2013/14 £ '000
Levy	45,986	52,884	60,817	69,939	80,430	92,495	98,969
PFI Support	-	-	-	3,658	3,658	3,658	7,581
Total Income	45,986	52,884	60,817	73,597	84,088	96,153	106,550
Total Costs	42,649	46,393	52,205	79,262	84,694	89,525	101,960

Reference Project - Affordability

6.7 Sensitivity analysis

The following sensitivities have been performed on the shadow tariff model to demonstrate their impact on affordability of the PFI Project over the 25 year contract period:

- CapEx costs are 10% higher than projected;
- OpEx costs are 5% higher than projected; and
- Recycling Income is 50% lower than projected.

The effect of these sensitivities on affordability is compared in table 6.8 to the affordability impact of the Authority pursuing the 'Business as Usual' option.

Table 6.8: 25 year summary of Option 1 and Reference Project sensitivities

	Business as Usual	Reference Project	1. CapEx sensitivity	2. OpEx sensitivity	3. Recycling income sensitivity
		£ '000	£ '000	£ '000	£ '000
Total Nominal Costs	3,569,053	3,101,806	3,206,770	3,137,020	3,239,767
PFI Support	-	162,589	162,589	162,589	162,589
Projected Budgets	1,671,366	1,671,366	1,671,366	1,671,366	1,671,366
Affordability Gap	**1,897,687**	**1,267,851**	**1,372,815**	**1,303,065**	**1,405,812**

The results show that despite the increased cost of the sensitivities enlarging the overall affordability gap, the gap remains significantly less than the 'do nothing' alternative over the duration of the contract.

6.8 Conclusion

Whilst the predicted costs of the PFI reference project shown in Table 6.9 below exceed projected waste management budgets by £1,268 million, the cost of the Reference Project is approximately £630 million less than the cost of the 'Business as Usual' option based on the Authority purchasing landfill allowances for £50 per tonne.

Reference Project - Affordability

Table 6.9: Summary of Business as Usual and the Reference Project

	Business as Usual Option 1 £'000	Reference project Option 3 £ '000
Project costs	1,639,498	2,887,002
Landfill tax	1,271,305	200,835
Landfill allowance costs	658,250	13,969
Total nominal costs	**3,569,053**	3,101,806
PFI support	-	162,589
Projected budgets	1,671,366	1,671,366
Affordability gap	**1,897,687**	**1,267,851**
Difference	**629,834**	

The MWP is committed to finding the required additional resources to make the project affordable over the life of the contract.

Delivering the project

7 Delivering the project

7.1 Introduction

In keeping with the approach of the revised value for money guidance, the MWDA has been proactive in seeking to identify and address the qualitative factors that will eventually determine the successful delivery of this project. Work has commenced in developing some of the commercial and delivery mechanisms that will underpin the project, and where possible the Public Private Partnerships Programme ("4ps") guidance has been utilised albeit tailored for Merseyside's unique characteristics.

The MWDA has also been concentrating on the key risk areas that can threaten a successful waste PFI procurement, for example there has been a focus on generating market interest of sufficient quantity and quality and additional efforts have been channelled into the issue of site availability. In addition, the MWDA has considered the internal demands of the procurement with regard to formulating decision making arrangements and the availability of resource.

This section provides details of the above work carried out to date, and also the further work that will be performed, within an appropriate timetable, to ensure that every effort is made toward the successful delivery of the project.

7.2 Output Specification

7.2.1 Development of the Output Specification

As part of the preparatory work on the Reference Project, the MWDA with support from the MWP will develop an Output Specification for each of the three contracts required in the MWDA's procurement strategy. It is anticipated that the specifications will be broadly consistent with the conditions established in the 4P's toolkit.

The requirements of the residual waste contract (the PFI, Recovery Contract) will be performance based, however, and describe only what performance is required, leaving the choice of delivery mechanisms open to potential contractors, and subject to the refinement enabled through the Competitive Dialogue Procedure.

The provision of services through the Recovery Contract will require performance against the following outputs:

- Receiving residual waste delivered by WCAs, or delivered from HWRCs, or Transfer Stations in accordance with specified requirements;
- Processing residual waste to achieve specified levels of recycling and recovery, contract waste landfill diversion and BMW landfill diversion;
- Marketing any recyclables, compost, energy or other recovered product arising from the processing of residual waste, including transportation of the same;
- Disposal of residual waste which is not treated; and
- Transport and dispose of waste residues from any treatment process.

Delivering the project

In delivering the outputs listed above potential contractors will be required to demonstrate the application of the Best Available Techniques (BAT) in waste treatment.

The requirements of the Recovery Contract will be developed into an Output Specification which is in line with the objectives of the JMWMS as follows:

- To reduce the amount of waste going to landfill and to deliver the overarching targets.
- To develop optimal solutions which are environmentally and socially sustainable.
- A draft version of the Output Specification will be provided to short-listed bidders at the Pre-Qualification Questionnaire ("PQQ") stage, and bidders will be invited and encouraged to comment on the draft. Where appropriate, bidders' comments may be

7.2.2 Residual waste management

- Receiving Residual Waste delivered by WCAs, or arising from HWRCs, at Residual Waste Delivery Points, in accordance with specified requirements;
- Directing the flow of and transporting Contract Waste to treatment or to Landfill Sites, as required;
- Processing Residual Waste to achieve specified levels of Recycling and Composting, Contract Waste Landfill Diversion and BMW Landfill Diversion;
- Marketing any Recyclables, Compost, Energy or other Recovered product arising from the processing of Residual Waste, including transportation of the same;
- Dispose of Residual Waste which is not treated; and
- Transport and dispose of Waste Residues from any treatment process.

The project requirements that will be developed into the Output Specification are derived from the objectives of the JMWMS as follows:

- Reduce the amount of waste landfilled;
- Increase the amount of re-use, recycling and composting of waste;
- Deal with waste as close as possible to its source and within the boundary of Merseyside;
- Minimise the impact of Merseyside's waste on Merseyside's environment;
- Minimise the risks to health in the way waste is treated;
- Minimise the cost to Council Tax payers;
- Choose the options that are practical and low risk to service delivery; and

- Minimise the inconvenience to householders.

Given the semi-integrated nature of the project, the Output Specification will also need to define the obligations of WCAs in terms of kerbside recycling, quantity and composition assumptions regarding collection of organic wastes by WCAs, and delivery arrangements for residual waste.

It is also expected that the solution will exceed statutory recycling and composting BVPIs and will reduce the amount of BMW sent to landfill below that defined by LATS. In order to meet the aspirations of the HWMS and DEFRA's conditions for the approval of PFI waste schemes, the MWDA is also seeking for the service to achieve a minimum of 44% recycling and composting rate for the contract waste by 2020.

A draft version of the Output Specification will be provided to short-listed bidders at the Pre-Qualification Questionnaire ("PQQ") stage, and bidders will be invited and encouraged to comment on the draft. Where appropriate, bidders' comments on the Output Specification will be incorporated into the final version of the Output Specification.

7.2.3 Key Performance Indicators

Key Performance Indicators ("KPIs") for the project will be defined to reflect those aspects of the Recovery Contract which the contractor is expected to deliver. These are likely to include:

- Availability for Contract Waste delivery;
- Turnaround times for WCA's and/or other contractors delivering Contract Waste;
- Availability of waste treatment processes;
- Recycling and recovery performance of waste treatment processes;
- Landfill diversion performance (MSW and BMW) achieved at treatment facilities;
- Environment, Health and Safety Performance; and
- Compliance with the Service Delivery Plan ("SDP");

KPIs will be structured in such a manner than they manage those aspects which will remain fundamental to the success of the project for its duration, whilst allowing flexibility (via the SDP) to adapt to changes in the service over the life of the contract.

7.3 Payment mechanism

The payment mechanism is both a method for payment and a method of measuring a Contractors performance and providing sufficient incentives to achieve high performance. The payment mechanism needs to be linked to the service outputs defined in the output specification and as such deductions will be applied when output specification standards are not achieved. It is also important that a good performance monitoring system is in place to ensure performance is up to standard.

Payment will be made monthly in arrears and reflect the performance for the previous month. The broad principles of the payment mechanism are as follows:

- Payment for services only when availability and performance is achieved;
- Transfers risk to the contractor in line with their obligations; and
- Provides a financial incentive for the contractor to perform in accordance with the output specification.

7.3.1 4ps payment mechanism

The MWDA proposes to adopt the principles of the 4ps payment mechanism as a basis for its waste management project. The project team is planning a number of internal procurement workshops to develop the payment mechanism in detail for the Invitation to Participate in Dialogue stage ("ITPID") and has recognised the following as areas for development:

- The payment mechanism needs to be tailored to reflect the scope of contract to be procured (i.e. Landfill is to be procured separately and Recycling and Composting facilities required to treat kerbside collected materials will be procured under the proposed Recycling Contract;
- Given the multi contract procurement strategy the PFI contract will need to provide sufficient flexibility in order to mitigate any interface risks between the District collections and the other contracts (two key areas for further detailed analysis will be demand risk and composition risk). Management of these factors will also depend on the nature and flexibility of solutions put forward during the Competitive Dialogue. Tonnage adjustments specific to individual waste management processes likely to be included in the contract;
- The development of a Diversion Bonus to provide incentive to the contractor to divert from landfill in accordance with the waste hierarchy taking into account the mutually exclusive nature of Landfill Costs and Tax and Landfill Allowances. The existing payment mechanism will need to be developed in more detail to specifically address LATS, in particular as responsibility for achieving the Authority's BMW diversion targets will be shared between the Collection Authorities, the Recycling Contractor and the PFI provider under the PFI project;
- A performance bonus and deduction system that is based on an equitable share of upside and downside risk. The aim is to ensure that the deduction system reflects any additional costs incurred by the Authority via the Recycling and/or Landfill Contract; and
- An excess profit share mechanism that differentiates between profits derived through performance of the contract and those resulting from market economics, e.g. windfall gains from Renewable Obligation Certificates.

The rest of this section summarises the main elements of the payment mechanism in line with the 4ps draft.

7.3.2 Calculation of Unitary Payment

The Unitary Charge will be modular, albeit that as much of the costs as possible will be contained within the main element; the unadjusted unitary charge. It is not possible to include all elements in a unified whole without either reducing value for money as bidders have to price in uncertainties, or creating the wrong incentives such as not exceeding recycling targets. The elements of the payment are set out below:

UC = An +/- V + L + R + E +/- C - EP

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Table 7.1 Elements of the Unitary Charge Calculation

Symbol	Description	Comments
An	Unadjusted Unitary Charge	This will be a fixed sum that takes account of the full costs of service provision. It is envisaged that the Unitary Charge will include a series of step ups to reflect improvements in service provision as and when facilities come on line, It will not vary according to volume, but will be re-based every five years to allow for volume changes.
V	Tonnage adjustment	This will allow only the marginal costs of additional waste to be covered, or savings to accrue where volumes are lower. In order to prevent unnecessary administration it is likely that thresholds will be agreed within which there will be no change to the Unitary Charge.
L	Landfill payment	Landfill will be procured separately; however the Recovery Contractor may be responsible for managing the disposal of residues (such as Bottom Ash and Fly Ash) from thermal treatment facilities). As such, this could take the form of a pass through cost up to the targeted level of diversion since the Contractor will be responsible for knock on impact of landfill should they fail to achieve contract targets.
R	Recycling bonus	A separate payment incentivises the exceeding of recycling targets. As the PFI project focuses on the treatment and management of Residual Waste, Recycling may be limited to that achieved via an MBT process or similar technology. This will be very much dependent on the nature of solutions put forward by bidders.
E	Energy recovery bonus	A separate payment incentive for exceeding any recovery targets
C	Compensation payment	Where WCAs have failed to deliver their obligations, the Contractor must be compensated for any deductions it has incurred for failures under the

Symbol	Description	Comments
		Output Specification
EP	Excess profit share (a negative number, ie income)	Should bidders be unwilling to guarantee much 3rd party income in a volatile market (Recyclables or Electricity Income), the sharing mechanism becomes very important and should be based on auditable financial information

7.3.3 Performance management

The primary method of performance management will be exercised through (L) the Landfill payment of the payment mechanism where direct deductions will apply where the failure of the contractor to meet a performance standard exposes the MWDA to additional cost. An example of this is where failure to meet the required diversion targets causes the MWDA to incur additional landfill gate fees and landfill tax. In this instance the payment to the contractor will be adjusted to compensate the MWDA for the additional costs incurred. The Contract should contain sufficient incentives for the Contractor to rectify the fault, but where appropriate, substandard performance for a prolonged period could trigger a termination event.

7.3.4 Performance deductions

It is considered that deductions do not need to apply to the whole Unitary Payment since the incentives of many activities are best achieved through the modular payment build up, and a number of the payments (eg L, R, and E) are already contingent on performance. Nonetheless, performance and availability standards are best encouraged through a deduction regime, linked to the KPIs which will be developed.

7.3.5 Performance monitoring

Unless there is an effective system of monitoring in place it will not be possible to know how well the Contractor is performing or to know if payments and deductions are justified. It is important for the contract to be self-monitoring as far as possible so as to reduce the burden on the MWDA. MWDA staff should be simply responsible for confirming the monitoring reports derived by the Contractor. This will include incidents of failure, which the Contractor should be obligated to highlight against itself, including incidents that relate to deductions.

7.4 Project Agreement

The contract to be developed for the ITN will adopt the Standardisation of PFI Contracts version 3 (“SoPC 3”) and the contractual terms contained within the 4ps Toolkit, in particular with respect to planning and termination. Project-specific issues will, of course, need to be addressed in their own right and incorporated into the draft project agreement. Employment drafting will take account of the recently issued model clauses prepared by the Office of Government Commerce (“OGC”) and the 4ps. The contract will need to take into account the ongoing work of DEFRA and the 4ps in relation to SOPC 3 derogations.

7.5 Indexation

It is recognised that the contractor will wish to protect itself against inflation over the life of the project, and to prevent operating cost increases through inflation undermining the bankability of the project. It is envisaged that the Unitary Charge will, in part, be subject to indexation. It is also envisaged that bidders will propose the proportion of the Unitary Charge subject to indexation; however the MWDA expects that the proportion will reflect the underlying cost structure of the project.

7.6 Balance Sheet treatment and deliverability of specification

An initial assessment of the balance sheet treatment prepared by the MWDA's financial advisors Ernst & Young has been provided in Appendix 7.1 to this OBC. [It concluded that the transaction could/not achieve off balance sheet treatment for the public sector under the Treasury Guidance Note "Private Finance Technical Note 1 (Revised)."

7.7 Approach to key risk areas

The MWDA fully appreciates the significance of identifying and seeking to mitigate the risks associated with both the reference project and the wider procurement. Consequently a risk workshop was held on February 2005 with representation from Council members of the SOWG and both the financial and technical external advisers. This provided a forum for collating input from a range of experience regarding the risks, both pre contract and post contract, to the project. A full risk register has been prepared and can be found in Appendix 7.2.

7.7.1 Market interest

Owing to the degree of waste procurements currently either ongoing or planned in the UK the MWDA recognises the significance of generating the market interest required for a competitive tendering process.

To this end, a series of soft market testing events for both the financial and waste services/technology provider sectors were held on 27 February 2006 and 2 March 2006 in London and Liverpool, in order to publicise the MWDA's intended procurement and ascertain from the market the issues that drive bidding behaviour in the UK waste market and those that are particularly relevant to this project. On both days, the Authority's proposed three contract procurement strategy, its commitment to proceed to acquire suitable sites and its resolve to proceed with planning applications for new facilities on these sites was set out. It was also explained that the Authority's JMWMS was predicated on the delivery of two facilities with MBT and Energy from waste Plants co-located at each site.

The MWDA invited 39 organisations to attend the Financial Sector event (27 February 2006), and 63 organisations to the Waste Services/Waste Technology Sector event (2 March 2006). Invitees to the two events were chosen to represent a mixture of individuals from the financial and funding sector, waste companies, technology companies and potential new market entrants.

The waste companies included a mixture of local players and those that do not have a significant local presence but may be interested in this project if the MWDA is able to provide a level playing field. The companies in attendance at both events were as follows:

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Financial Sector Market Testing Day – London, 27 February 2006

- Barclays Bank plc
- Bank of Ireland
- Dexia Public Finance Bank
- Fortis Bank
- Lloyds TSB
- Macquarie Bank
- Norddeutsche Landesbank Girozentrale
- NIBC Bank
- PKF (UK) LLP
- Pricewaterhouse Coopers LLP
- RBC Capital Markets
- Royal Bank of Scotland
- SMBC Europe Limited
- Societe Generale
- The Bank of Tokyo-Mitsubishi UFJ Ltd

Waste Services/Waste Technology/Other Providers Market Sector Market Testing Day – Liverpool, 2 March 2006

- AMEC
- AMEY Ventures Ltd
- Bedminster International (UK) Ltd
- Biffa Waste Services Ltd
- Bioganix Limited
- Clarke Energy
- Compact Power Ltd
- Cory Environmental
- Cory Environmental
- Costain Limited
- Covanta Energy
- Edmund Nuttall Limited
- Environmental Waste Controls plc
- Focsa Services (UK)
- Focsa Services (UK)
- Genesyst United Kingdom & Ireland Ltd
- Global Renewables Ltd
- Global Renewables Ltd
- Grosvenor Waste Management
- H.J. Banks & Co Ltd
- Herhof Environmental Ltd
- MHP Environmental Tec UK
- New Earth Solutions

- Novera Energy Limited
- Oaktech Environmental
- Orchid Environmental Limited
- Peel Environmental Limited
- Plastic Omnium Urban Systems Ltd
- Purac Ltd
- Reuse Ltd
- Shanks
- Shanks
- Shepherd Construction Ltd
- SITA UK
- SITA UK
- Sterecycle
- United Utilities
- United Utilities
- Veolia Environmental Services Plc
- Waste Recycling Group Ltd
- White Moss Horticulture Limited

7.7.2 Summary of responses

A summary of the main points brought up by the respondents of the Financial Sector market testing exercise are as follows. These were gained via a general discussion session and individual one to one session with organisations:

Financing

- Are different types of funding envisaged for each contract?
- Risk / profit share – what will be the approach of MWDA?
- How the Payment Mechanism will be structured such that performance / interface issues are fairly addressed

- Degree to which bidders may include third party income in their proposals – management of commercial wastes
- Separate recycling contract may ameliorate bank concerns with regard to recyclate income rates and markets – therefore reduce their risk in a project-financed solution

Commercial / Contractual

- Interface risks between the three Contracts – particularly the Recycling and Recovery Contracts
- How will MWDA manage/approach one bidder tendering for both the Recycling and Recovery Contracts?
- How many bidders to be taken through at key stages of process?
- Does the opportunity/possibility remain for one bidder to bid ALL three contracts – ie, provide integrated solution?

Commercial / Technical

- Concern regarding waste volume growth – leading, for example to the over/under-sizing of the facilities
- Is EfW-only solution still being considered? What is MWDA view on this?
- Planning issues – how does MWDA propose to address planning risks / site and land requirements
- MBT technology – concerns with regard to performance in respect of changing waste composition

A summary of the main points brought up by the respondents of the Waste Services/Waste Technology/Other Services Sector market testing exercise are as follows. These were gained via a general discussion session and individual one to one session with organisations.

- Many participants are very interested and actively involved in bidding fro PFI work generally.
- Prepared to do integrated tenders, but prefers MBT/EfW
- Already engaged in bidding for waste contracts, eg at Greater Manchester Waste Disposal Authority as technology provider. Interests straddle the recycling and recovery contracts. Would work within a consortium. Not interested in landfill. Particular reference to maximising use of the waterways.
- Very interested in Recovery contract and indicated that the procurement strategy and our approach to sites interests them.
- Focussing attention on waste market. GMWDA contract came to early for them.
- Not interested in landfill or collection.

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- Looking for technology and operational partners however.
- Commented that the site selection and planning proposals were a good idea.
- Pointed out interface issues between recycling and treatment contracts
- reputation and interest in recycling and recovery contracts
- limited experience – would be lead bidder and looking for partners
- Impact on cost of going PFI – more interest as a combined contract
- Likes idea of planning ahead of procurement
- Encouraged by presentation in building up capabilities in waste – involved in PFIs.
- For a waste management contract that requires significant investment in new infrastructure, we believe that a minimum contract term of 25 years is required in order to deliver affordable solutions for local authorities in the short term.
- As a minimum, sites proposed/delivered by the Authority should be well located and adequately sized for their intended use. As far as possible proposed sites should be in accordance with local and regional land use policies for the type of development proposed and this should be evidenced by the results of the sieve analysis used to identify potential development sites. If possible, and if time-scales permit, the ideal position would be for the Authority to secure a planning permission on the proposed site(s) prior to the waste management procurement process concluding.
- Need for a clear project scope
- Need for robust waste characterisation and waste arising data
- The Authority taking the lead for site acquisition and planning
- No fixed requirement for EfW
- Landfilling contracted separately
- Strong, empowered and resourced Client Project Team
- Realistic timetable and adherence to timetable
- Believe that Local Authorities, in general, are best place to provide the most suitable sites for this type of project, thus would expect that MWDA would want to take the lead on this activity. In addition, leaving site provision to individual Contractors is likely to lead to a sub-optimal solution for the Council as the most appropriate sites for the project may not be provided by the Contractor with the most appropriate solution for the Council.
- applauds the Authority's approach to securing sites and facilitating planning applications. The project would be further enhanced by the Authority taking responsibility for securing the necessary consents.

- understands how important planning is for this type of project and would like to stress the importance of technology selection in securing planning quickly and effectively. Sees the key is to take a partnership approach to planning, with the planning applications being prepared and submitted in the period between preferred bidder and financial close. Additionally, a partnership approach with appropriate risk sharing can enable detailed design work to commence whilst planning approval is being secured, thus reducing the time from financial close to construction commencement.

- Believe best value is achieved by tendering landfill separately from collection and treatment. Separating out treatment from landfill also provides for a more competitive tendering process by attracting more processing companies, ultimately resulting in a better technology outcome for the Local Authority. In addition, separating collection, treatment and disposal provides the Local Authority with greater flexibility than a single integrated or semi-integrated contract. This flexibility comes from the ability to adapt collection methods and residual disposal options (compost, RDF or landfill) as the need arises.

Some full written responses were submitted by the aforementioned organisations at the Waste Services/Waste Technology/Other Services Sector market testing exercise after the event. These were based on a pre-circulated list of questions and issues. These are provided in Appendix 7.3. A full written response was received from one organisation following the Financial Services Day in London. This is provided in Appendix 7.4.

7.7.3 Markets for process outputs

The MWDA recognises the current concerns regarding the availability of secure markets for MBT process outputs. In relation to the RDF fraction which may be produced, the MWDA has recognised that owing to the number of other local authorities planning to procure facilities which will generate RDF and the limited existing capacity for utilising RDF, it is likely that the net amount being produced may be in excess of short term UK capacity. Therefore the MWDA has approved a reference project which identifies the need for the construction of new thermal treatment capacity to dispose of any RDF produced within Merseyside.

7.8 Waste Development Planning Document (DPD) and Alignment

The production of a Waste DPD will be a process of joint working between Merseyside Planning Authorities and will be compliant with the requirements of the Planning and Compulsory Purchase Act (2004) and other ODPM guidance. It will involve needs assessments, technical site appraisals, development and refinement of waste planning policy options resulting in the preferred options and strategy. Sustainability Appraisal and Strategic Environmental Assessment are a mandatory part of the process. Extensive public consultation is designed to recognise and manage the tensions between potential planning constraints and the clear need for waste treatment facilities.

It is intended to produce the joint Waste DPD for Merseyside over the next four years with the Preferred Options report subject to consultation November 2007 with final adoption in 2010 following an Examination in Public. This timescale has now been formally approved by each of the Districts and will be submitted as part of each of the

District's Local Development Schemes. The Waste DPD will not therefore be adopted until late in the MWDA procurement timetable.

By working in partnership with the five Local Planning Authorities, MWDA is therefore putting in place practical measures to reduce planning risk to the procurement timetable. These include:

- An Interim Position Statement (IPS) on Planning which is an agreed approach to the consideration of planning applications prior to adoption of the Waste DPD. This includes information required to support any planning applications, consultation and policy context. The IPS will support the OBC thereby reducing planning risk

- An agreed joint approach to the consideration of planning applications prior to adoption of the Waste DPD in terms of planning application consultation, policy context and information required to support applications such as Environmental Impact Assessment

- Ensuring that the Waste DPD reaches critical milestones such as Issues and Options (end of 2006) and Preferred Options (end of 2007) which will tie in with the proposed MWDA Procurement and Planning Strategy timescale

7.9 Planning Strategy

7.9.1 Sites and Planning Risk

The Joint Municipal Waste Management Strategy (JMWMS) requires a significant increase in the number and range of suitable new sustainable waste management facilities across Merseyside, although the final configuration and location of these facilities are to be determined. In addition to municipal waste requirements, it is essential also to address the requirements of the private sector in relation to industrial and commercial wastes.

Due to the controversial nature of waste management facilities and the principles described in the National Waste Strategy (such as sustainability appraisals, regional self-sufficiency and the waste hierarchy), it has been concluded that there will be significant efficiency and equability in terms of cost distribution and the application of sustainable development principles in developing a Waste DPD on a Merseyside-wide basis.

There are already a number of sites under Local Authority ownership throughout Merseyside which may be suitable locations for waste management facilities and help to deliver sustainable waste management across Merseyside. The final preferred option and the appropriate sites remain to be determined through on-going work and delivery of the Reference Project.

The MWDA's aim however, is to make sites available to all bidders. This may require the acquisition of additional sites from the private sector, either by securing options, long term leases or purchasing land provided that potential sites have been identified as preferred sites through the application of the full site selection screening criteria MWDA will be actively pursuing its sites acquisition strategy within the MWDA framework, thus ensuring that all Partners have a clear understanding and commitment to the securing of appropriate sites and in the developing response of MWDA to the market's assessment of the sites risk.

In the same manner, in responding to the market assessment of risk, the MWDA's agreed approach to mitigating planning risk will be to seek appropriate planning permissions for facilities. As outlined above these facilities will have to be secured within the current planning framework and a full analysis of the MWDA policy approach to planning risk is being prepared which will address both the differential risks arising to be dealt with in strategic and non-strategic facilities, and the manner in which developing policy framework from the Waste DPD preparation can be utilised. An Interim Planning Position Statement has been prepared by the MWDA to help mitigate planning risk during the procurement and Waste DPD preparation processes. The approach taken will also be guided by the outcomes of the site search, market views and preferences, and the final decisions made by the MWDA.

7.9.2 Site Selection and Methodology

As part of the Waste DPD process a *Broad Site Search* has already been completed, together with an *Initial Needs Assessment* (both undertaken by SLR Consulting and Land Use Consultants in 2005 on behalf of St Helens Council as lead authority for the Waste DPD). Both of these reports are being used as the initial evidence base to develop the WDPD and include an agreed method and criteria for the identification and screening of potential sites. Work is currently on-going regarding the filling of priority evidence gaps as one of the initial priorities for the WDPD.

7.10 Current Position

7.10.1 Securing the Sites

It is proposed that a Planning Strategy is developed by the Merseyside Waste MWDA to deliver facilities to meet legislative and commercial targets. The Strategy will require the development of a range of sites that will need to be procured ahead of the Waste DPD. Therefore, there will not be an adopted Waste DPD (subjected to an Examination in Public) in place to support the Merseyside planning authorities' decision making process. This represents a significant risk to the MSW procurement process and needs addressing.

To support the development of the Planning Strategy for MSW, MWDA has developed the following key documents (which are attached to this OBC as Appendices):

- MWDA Planning Documents Route Map (Summary of the MWDA Planning Strategy Documents with Interfaces)
- Draft MWDA Planning Strategy for the Treatment of MSW (Scene Setting)
- Interim Position Statement (IPS) on Planning developed by the WDPD Steering Group
- Approved Criteria Based Site Screening Methodology Statement
- Potential Sites which fall within Opportunity Areas Identified in the Broad Site Search Report
- Draft Sites Deliverability Assessment (The next stage of identification of final preferred sites, including non-criteria based selection methodology).
- Draft Approved Programme for taking forward final site selection
- Agreed Communications Protocol and Communications Programme (Alignment to WDPD Process)

7.10.2 Proposed Process

The procurement timetable for the treatment and disposal of municipal waste requires that the process of achieving planning consents must start in 2006 to avoid legislative non-compliance and additional costs.

In order to meet this need, a planning framework needs to be established in the interim that aligns itself to existing national, regional, sub-regional and local planning policies.

7.10.3 MWDA Planning Documents Route Map

A summary document attached as Appendix 7.5 to this OBC has been produced identifying the main linkages between the other supporting documents highlighted below which form the MWDA Planning Strategy. This is to ensure that there is continuity in the process and to provide additional support to District Councils in determining planning applications submitted by MWDA.

7.10.4 Draft MWDA Planning Strategy

The MWDA Planning Strategy demonstrates the clear and immediate need for a planning policy framework. The Strategy identifies the key legislative and commercial drivers within the planning framework. The associated Programme for the implementation of the strategy facilitates the planning process for the infrastructure identified in the Reference Project. A copy of the MWDA Planning Strategy is included in Appendix 7.6.

7.10.5 Interim Position Statement (IPS)

The objective of the IPS provided in Appendix 7.7 is to set out how the Merseyside Local Planning Authorities will deal with any early planning applications for municipal solid waste management facilities submitted prior to adoption of the Waste DPD:

- To provide the Merseyside Waste Disposal Authority (MWDA) and the Merseyside Waste Partnership with a factual statement of joint working and progress with the Merseyside joint Waste DPD.
- To assist MWDA in their Outline Business Case submission to DEFRA by providing information on waste planning in Merseyside.
- To outline a strategy for dealing with planning applications for MSW management facilities in advance of the Waste DPD.
- To provide early opportunity to discuss sustainable waste management principles that will support the development of the Issues and Options stage of the Waste DPD.
- As an early opportunity for targeted consultation on sustainable waste management issues.

7.10.6 Approved Criteria Based Site Screening Methodology Statement

The MSW site selection study is a screening process whereby sites which have the potential to be used in the delivery the MSW "Reference Project" are reviewed through levels of screening which consider various aspects of the site and their ability to be delivered in terms of engineering, planning and other deliverability considerations. The potential sites have been derived from a data set extracted from the Waste DPD Broad Site Search (BSS) report that includes existing licensed, exempt, PPC permitted, reprocessing sites, Waste Planning Authority planned sites, old landfill sites and those landfill sites currently undergoing restoration and potential new sites.

The methodology for screening of sites detailed in the Broad Site Search report was modified to better reflect appropriate screening considerations. This revised methodology was discussed and approved by the Waste DPD Steering Group. As a consequence, the Criteria Based Screening Methodology, which is the first phase of the sites screening process, has received the full approval of the Waste DPD Steering Group. The needs of the Reference Project will be determined through this methodology to reduce the long list of sites (BSS and other potential sites) to a preferred list of sites for each waste management activity/technology type. Details of the Approved Criteria Based Site Screening Methodology is provided in Appendix 7.8.

7.10.7 Commentary & Maps of Sites resulting from the Criteria Based Screening

The information regarding sites included in this OBC application is based on the information currently available at the time of the document submission. The identification of sites for the facilities to manage the municipal solid waste in Merseyside is on-going and expected to be concluded shortly. The information contained in Appendix 7.8 is based on the outcome of the "Criteria Based Screening"

process. This process applies the methodology for screening of sites according to their assessment against various planning and basic engineering requirements. The approved screening methodology has been discussed and approved by the Waste DPD Steering Group.

The histograms in the Appendix 7.9 show the results of the criteria based assessment of sites for various sizes of sites necessary for the facility types proposed. There are four histograms given in the Appendix. Three of these histograms show sites which are either Figure 1, Area greater or equal to 0.72 hectares (assumed minimum size for IVC). Figure 2, Area greater or equal to 4.05 hectares (assumed minimum size for single MBT or EfW) Figure 3, Area greater or equal to 8 hectares (assumed minimum size for combined MBT & EfW) The fourth histogram, Figure 4, shows the ranking of sites where the area of the site is not currently known. These sites without area information have been considered through the same criteria based screening process. The area information for this group of sites will be obtained from the Land Registry for those sites which have scored high enough to be considered further.

As can be seen for the histograms contained in Appendix 7.8 there is a reasonable distribution of scoring results for the various areas being considered based on the facility type proposed. For the sites greater than 8 hectares (Figure 3) there are 185 potential sites with 59 scoring 4.75 and above. For the sites greater than 4.05 hectares (Figure 2) there are 439 sites shown on the histogram, with 62 scoring 4.75 and above. For sites greater than 0.72 hectares (Figure 1) there are 1329 sites of which 211 score 4.75 and above. In addition to this there is a further 185 sites indicated in Figure 4 where the area information is not known of which 59 score 4.75 and above. As can be seen from these histograms a limited number of sites can be taken forward into the Sites Deliverability Assessment process.

The current phase of the process for identifying sites is to obtain information from the Land Registry on the highest scoring sites for each type of facility proposed. This will confirm details such as land ownership and boundaries. With this information the Sites Deliverability Assessment work will be undertaken on the sites selected out of the criteria based screening process to identify those that are the most suitable for the development of specific facilities as identified in the “Reference Project”. This work is expected to be completed shortly and discussions with the land owners and local Planning Officers will commence.

7.10.8 Draft Sites Deliverability Assessment

This document provided in Appendix 7.10 takes the output from the Approved Criteria Based Site Screening Methodology and reviews/considers the largely qualitative aspects of the site selection process such as a sites strategic location, site ownership, existing use, likely visual impact of the proposed technology and other potential effects on the surrounding environs. Such items are naturally more subjective and therefore the application of a scoring system such as that used in the Approved Criteria Based Site Screening Methodology Statement is not likely to be appropriate for some of the items. Therefore, the items under review in the Sites Deliverability Assessment will be marked according to a “Red, Amber and Green” system. This system allows the assessor to mark a site as either receiving a positive result (green) for a particular issue relative to the process being considered, or a negative result (red). Where the result cannot be determined, the assessor can mark the site as amber. In this way, the portfolio of sites under consideration can be reviewed by these qualitative issues.

7.10.9 Draft Programme for taking forward final site selection and Planning Process

The process of site selection is currently on-going. As the time of preparation of this OBC submission the Criteria Based Screening of sites taken from the Broad Site Search report has been completed and the resulting high scoring sites will be taken forward through the Sites Deliverability Assessment to confirm which sites are the most suitable for use in taking forward applications for planning.

The details contained in Appendix 7.11 show the planned timeline for the continuation of the sites selection and planning process and also how the strategy of MWDA links to the Waste DPD development. Activities highlighted in bold in the schedule given in the Appendix are those activities which show liaison or integration with the Waste DPD processes.

In addition to the programme for the identification of sites MWDA has determined the timescales necessary for the acquisition of sites to suit the overall needs of the procurement programme. Details of these timescales can be found under Section 7.16.

7.10.10 Sites Communications/ Information Protocol

Due to the potentially controversial nature of proposed MSW facilities, very careful consideration has to be given to the communications and consultation procedures associated with this OBC submission.

The Communications Protocol identifies the level of detail of information, especially relating to sites and planning, provided to Government, potential bidders and other parties as part of the proposed PFI bidding process and at what stage this information is released. It is essential that proposed programmes align as clearly as possible to the Communications Protocol being developed through the Waste DPD process.

The protocol identifies a programme of work to assist MWDA in the process of entering into consultations with Local Planning Authorities and other key consultees and identifies key issues regarding the Planning Process, including need, local context, local consultation mechanisms, LPA resource identification and alignment to planning submission timetable attached as Appendix 7.12 to this OBC.

The Protocol will be reviewed and amended as appropriate throughout the process.

7.11 Bankability

The reference project assumes a project financing based structure comprising 85% senior debt and 15% equity. As is common with most PFI projects the equity is made up of shareholder loans and share capital. The ratio used in the reference project is 1/15 (Equity): 14/15 (Shareholder Loan).

The Unitary Charge generated by the reference project shadow bid model is such that a commercial return, comparable with that seen in recent waste management projects, may be generated by the Service Provider whilst meeting likely debt service requirements and banking covenants of senior debt providers.

For the purpose of this OBC the reference project utilises only one senior debt facility that is able to be committed on contract signature. It is assumed that the construction of the thermal treatments facilities will take place after construction of the MBT plants on the basis of improving the deliverability of the project in terms of securing the

necessary planning approvals and acquisition of suitable sites. Should this be the solution put forward bidders the funding structure may comprise two senior facilities, one for the MBT plants and one for the thermal treatment facilities. Such an approach may provide additional contractual flexibility and possibly VFM benefits depending on the inherent risk profile of each service element.

Final drawdown under the senior debt facility is expected to take place in March 2013, a period of five years after financial close assuming a construction period of two years for the MBT plants followed by three years for the thermal treatment facilities. This timetable is dictated by the construction of the two thermal facilities.

The programme for construction of the key facilities is aligned to the Authority's need to access waste treatment facilities in order to deliver upon its BMW diversion obligations. However, based on experience on other waste management projects the above programme provides approximately two years for delay in planning. Any delay beyond this point may result in funders becoming reluctant to commit funding (i.e. a funding period of seven years).

Due to the scale of the facilities involved, and the period of time required to construct the facilities, there is likely to be a need for a consortia of lenders each taking between 15% and 25% of the total funding requirements. This is considered achievable as there have been an increasing number of banks showing strong interest in the waste management sector over the last eighteen months given the level of investment required in this sector over the short to medium term.

In order to gauge the level support for this project the Authority held an industry day with potential funders in London on 27th February 2006. The key aim was to consult with the financial sector on the funding implications of the Authority's procurement strategy prior to going to market. The event received positive feedback from potential funders and identified a number of considerations which were subject to consultation with potential bidders in order for the Authority to assess the wider implications of a multi contract approach.

A summary of key issues discussed are listed below:

- **Separate Landfill Contract**: There was a view held that the separation of Landfill would increase competition and encourage interest from a larger numbers of sponsors, in particular Technology Providers;
- **Interface Risk**: A key factor under the Recovery Contract, which will only manage residual waste, will be the degree of certainty with regards to the amount of waste to be treated (volume) and the composition of waste (e.g. Calorific Value). Funders indicated that the PFI Contractor will require some form of relief should the performance of the Recycling Contractor adversely effect the Recovery Contract. In such a scenario funders would be held harmless via recourse to the Authority given that they would not want to take any long term credit risk on the Recycling Contractor. This is also likely to be the case even if the same organisation is dealing with both the Recycling and Recovery Contracts;
- **Technology Risk**: There was a preference for proven technology. A further consideration was the flexibility of conventional technologies should the solution

source an element of industrial and commercial waste. i.e. conventional thermal treatment is perhaps more developed than RDF combustion; and

- **Planning**: There was a general view from funders that the Authority is taking a pro-active approach to planning and as such should remove a key potential future "barrier" in the process to closing the PFI project.

7.12 Project management

7.12.1 Project Management Methodology and Techniques

A formal project management structure is utilised to manage the MWDA waste management contract procurement project.

PRINCE2 (PRojects IN Controlled Environments) process methodology is used to provide a framework that is capable of managing various disciplines and activities that are required by the project. This utilises the components and techniques of the PRINCE2 process.

7.13 Decision making arrangements

The Merseyside Waste Partnership takes a lead role in decision making, to develop and implement the JMWMS. Ultimate decision-making authority rests with the Executive Members of the MWDA, but will be informed by the Members and Officers of the five District Councils.

The development of the organisational requirements for the project resulted in three levels of project authority being implemented. These levels ultimately report to MWDA and are as follows:

- Procurement Group
- Project Board
- Core Project Team including External Advisors

The project team support the work of the Procurement Group at all levels, and is managed by the Procurement Director. The Project Director sits on the Project Board and the Procurement Group.

The membership of these key groups is presented in Tables 7.2, 7.3, 7.4, and Figure 7.6 illustrates how the MWDA is managing the project. Table 7.1 below illustrates the decision making process.

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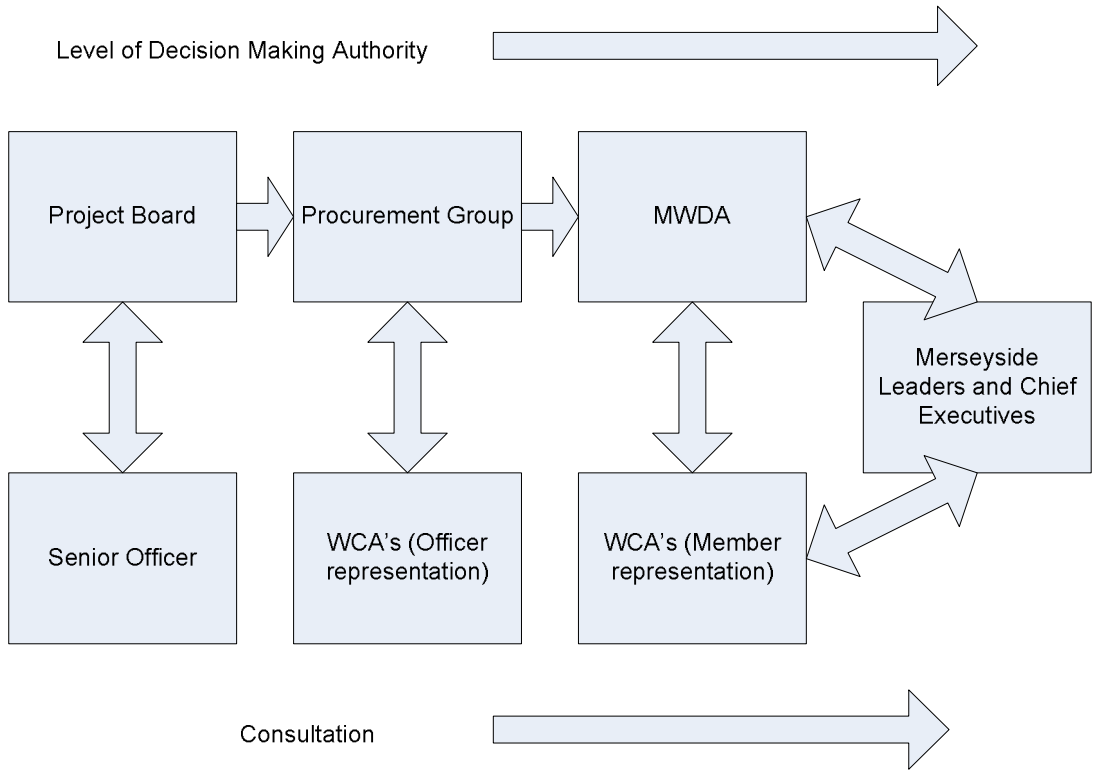
Figure 7.1 Project management framework



7.13.1 Project Board

The Project Board is responsible to the Authority for the overall direction and management of the project.

The Project Board receives and produces progress status information. This information is evaluated to enable the identification of options to resolve problems/create opportunities and propose decisions that are required for the project to achieve its aims and objectives. The options and proposed decisions are presented to the Procurement Group for consideration and decision making. Membership of the board consists of the Executive, Project Assurance, Senior User, Senior Supplier, Project Manager (PRINCE 2 roles).

7.13.2 District involvement

Procurement Group

The options and proposed decisions are presented to the Procurement Group.

One of the functions of the Group is the consideration of the options and the acceptance, rejection or referral to the Waste Disposal Authority of the proposed decisions.

The Procurement Group is chaired by a Member of MWDA and its membership consists of the Senior Officers of Liverpool, Knowsley, Wirral, Sefton and St.Helens.

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The Project Executive, Project Assurance, Senior User, Procurement Director and Project Manager also attend.

Project Team

The procurement Director has access to the Procurement Group and the project board and also attends the meetings for the Procurement Group and the Project Board. The project team therefore has access to the group and board via the procurement director.

Table 7.2 Procurement Group

Name	Position
Councillor Cluskey	Chair Person
Carl Beer - Director	Represents MWDA
Bob Beresford – Senior Officer	Represents Wirral Council
Bill Millburn – Senior Officer	Represents Sefton Council
Mike Cockburn – Senior Officer	Represents Liverpool Council
Paul Sanderson – Senior Officer	Represents St. Helens Council
Peter MacLeod – Senior Officer	Represents Knowsley Council
Angela Sanderson - Legal	Represents MWDA
Ian Roberts - Financial	Represents MWDA
Terry Bradley – Procurement Director	Represents MWDA
John Connell – Senior User	Represents MWDA
David Packard – Senior Officer	Represents Sefton Council
Brian Malcolm – Senior Officer	Represents St. Helens
Keith Cadman – Senior Officer	Represents Liverpool
John Webster – Finance	Represents MWDA

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Table 7.3 Project Board (The positions are listed as PRINCE2 roles.)

Name	Organisation	Position
Carl Beer	MWDA	Executive
Terry Bradley	MWDA	Procurement Director
John Connell	MWDA	Senior User
Jonathan Johns	Ernst & Young LLP	Senior Supplier
Colin McKenzie	MWDA	Project Manager
Alan Burnett	4Ps	Project Advisor

Table 7.4 Project Team

Name	Position
Terry Bradley	Procurement Director
Colin McKenzie	Project Manager
Stuart Donaldson	Waste Strategy Manager
Calvin Stockton	Planning /Environmental Manager
Colette Gill	PR and Communication
Lyn Fairhurst	Waste Facilities Manager
Mandy Valentine	Support Services Manager
Nicola Stewart	Project Assistant – Planning
Kerry Harvey	Project Assistant – Administration
Vanessa Adams	Project Assistant – Administration
John Connell - In addition to providing service to the procurement group and the project board, John also provides professional assistance to the project team	Contracts Manager

The core project team has access to the external advisors.

Table 7.5 External Advisors

Name	Organisation	Position
Jonathan Johns	Ernst & Young LLP	Partner
Justin Smallman	Ernst & Young LLP	Assistant Director
Phil Butler	Enviros	Project Director
Keith Corden	Enviros	Senior Waste Engineer
Robert Ryan	Mouchel Parkman	Technical Director
Gary Wolfe	Mouchel Parkman	Senior Consultant
Michael Grimes	Eversheds LLP	Lead Partner
Michael Mousdale	Eversheds LLP	Procurement Partner

7.13.3 Recent consultation

A *Waste Summit* of senior Officers and Members from MWDA and Councils was held on 25 November 2005, to share information and knowledge of the decisions and commitment required from the partners in order to procure a solution to deliver the JMWMS.

The *Waste Summit* also addressed the implications of the procurement for decision making between the authorities, and the resource requirements for carrying out the Procurement Strategy and the PFI project, particularly with regard to the collection arrangements.

Letters of Support are attached as Appendix 7.13.

7.14 Contract monitoring

The MWDA currently monitors the existing waste management contracts. Comprehensive monitoring systems have been established and approved by internal audit.

A draft Performance Framework will be developed for the ITd stage. This framework will cover compliance with Service Delivery Plans and Project Programmes, Best Value Method Statements and KPIs. The framework will include a rectification process and a default system.

Bidders will be required to submit their proposals for the monitoring and reporting of service performance including environmental protection, anti-discriminatory policies, data protection and compliance with health and safety requirements.

KPIs will be developed and agreed prior to commencement of the contract and will relate to the agreed SDPs. They will include the Statutory BVPIs.

7.15 Tupe and 'Two Tier Workforce' – Code Of Practice on Workforce Matters

The MWDA wishes to select only those providers who offer staff a package of terms and conditions which will secure high quality service delivery throughout the life of the contract in accordance with The Code of Practice on Workforce Matters in Public Service Contracts.

Subject to confirmation from the current contractors, TUPE will apply to the approximately 259 members of their staff. However, in that the Recovery Contract will contract for the provision of new facilities, it is anticipated that the TUPE arrangements will not be dealt with within the Recovery Contract, but within the Recycling Contract which is not included within this Reference Case, OBC submission.

7.16 Project Plan

A procurement project plan has been produced utilising the MS Project Management tool. Work Breakdown Structures (WBS) were used in the development of the plan.

The plan contains the key stages for PRINCE2 stage and end of stage reporting, OBC submission, planning, landfill, recycling and recovery tasks.

The procurement project plan is in Appendix 7.14

7.17 Timetable

A high level procurement timetable indicating the three contracts (landfill, recycling and recovery) which form part of the overall procurement programme is provided below. It assumes an OBC submission in May 2006 and approval at the Project Review Group ("PRG") in September 2006. Given the progress being made in many areas, including in both the technical and financial analysis that will be required, the project team feel that this timeframe is achievable. The MWDA also intends to use the Public Private Partnerships Programme ("4ps") Waste Management Procurement Pack, which will help to minimise costs for the Councils and bidders alike and streamline the procurement timescale.

Table 7.6 Landfill Contract

	Stage	Date
1	Notice in the Official Journal of European Union ("OJEU") published	August 2006
2	PQQ Evaluation	November 2006
3	Draft ITT	February 2007
4	Issue Tender	March 2007
5	Complete Evaluation of Tender	August 2007
6	Short Listing & Tender Report	September 2007
7	Issue Contract Award Notice	September 2007

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Table 7.7 Recycling Contract

	Stage	Date
1	Notice in the Official Journal of European Union ("OJEU") published	August 2006
2	PQQ Evaluation	October 2006
3	Draft ITPD Document	November 2006
4	Invitation to Participate in Initial Dialogue	November 2006
5	Invitation to Participate in Dialogue	March 2007
6	Clarification Dialogue	August 2007
7	Refine Requirements	February 2008
8	Invitation to Submit Final Tenders	April 2008
9	Contract Award Notice	July 2008

Table 7.8 Recovery Contract

	Stage	Date
1	Submission of OBC to DEFRA	May 2006
2	OBC (PRG) Approval	September 2006
3	Notice in the Official Journal of European Union ("OJEU") published	October 2006
4	PQQ Evaluation	December 2006
5	Draft ITPD Document	January 2007
6	Invitation to Participate in Initial Dialogue	January 2007
7	Invitation to Participate in Dialogue	May 2007
8	Clarification Dialogue	October 2007
9	Refine Requirements	April 2008
10	Invitation to Submit Final Tenders	June 2008
11	Contract Award Notice	September 2008

7.17.1 Managing timetable risks

The termination of the WDA contracts on 30 September 2008 defines the timescale for implementation of this project. This allows a period of 24 months for the procurement process assuming the OBC receives PRG approval in September and an OJEU notice is placed shortly afterwards. MWDA and its partners have demonstrated that the commitment and the resource are available to deliver this project. This is also supported by the Partnership's robust and thorough approach in developing this OBC.

In the unlikely event that this PFI project is delayed for any reason, the Partnership will either extend current contract arrangements or procure new interim contracts, depending on circumstances at the time. It is envisaged that this will be reviewed no later than 31 March 2007.