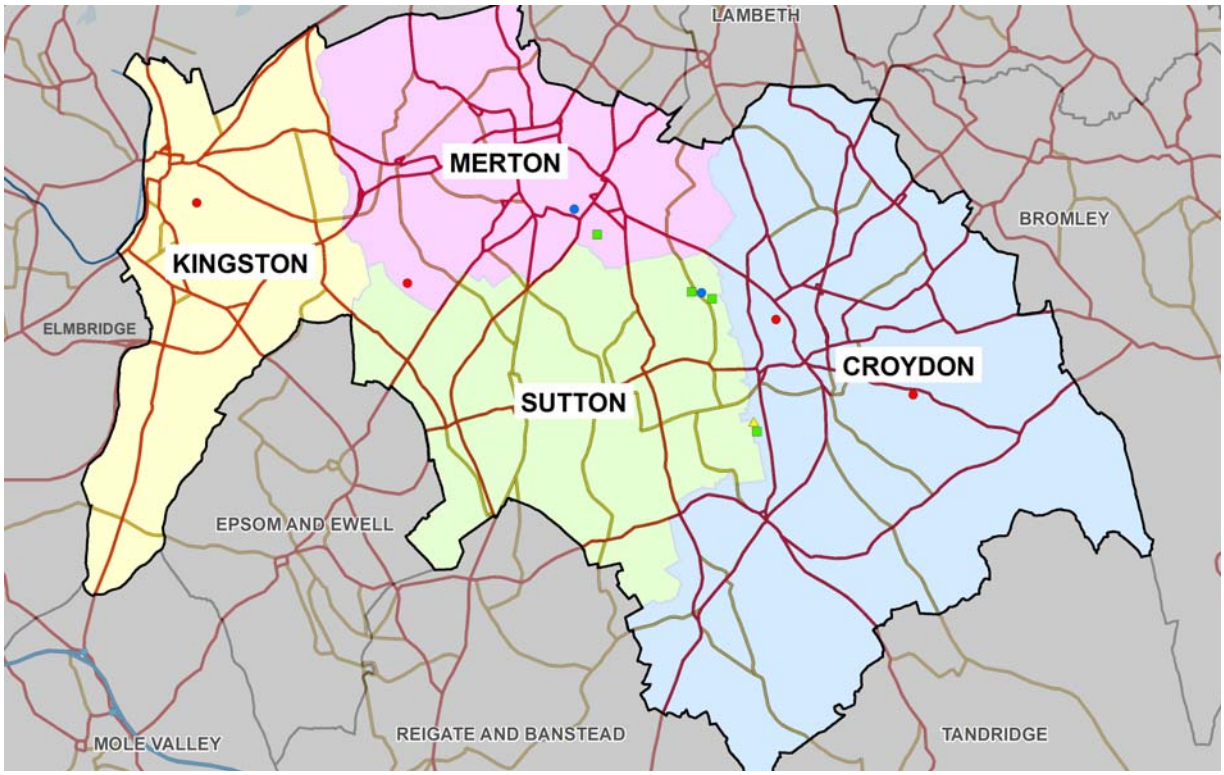
South London Waste Partnership



Outline Business Case October 2008

CROYDON COUNCIL
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Contents

1.0 Executive Summary

1.1 Background

The South London Waste Partnership comprises of four unitary London authorities: the London Borough of Croydon (LBC), the London Borough of Merton (LBM), the Royal Borough of Kingston (RBK) and the London Borough of Sutton (LBS), with a combined population of approximately 868,000 residents. Total Municipal waste arisings are in the region of 420,000ktpa.

In applying for PFI credits, the partnership is committed to significantly improving its recycling rate to 51% and improving waste minimisation, thereby contributing to the new National Waste Strategy target of 225kg residual waste per head.

Modelling suggests that with increased recycling commitments and services the partnership could reach a recycling rate of 51% by 2020. Current recycling rates are improving particularly since the start of a new contract for management of the Househod Waste and Recycling Centres began in September of this year at six of the partnership's seven HWRC's. The new contractor has already exceeded the 60% recycling targets at each of the sites.

As modelled, improved waste minimisation and recycling would leave approximately 213ktpa to be treated through the PFI residual waste treatment solution. We `are mindful of Defra's desire to encourage new entrants and new technologies to the waste market and as such the partnership will be open to a range of technologies during procurement. We will be emphasising this to the market.

The partnership's targets are to be LATS compliant through the purchase of LATS in 2009/10 and 2012/13 and to have surplus LATS in 2019/20 when the residual treatment solution is operational.

The partnership has worked successfully together since its inception some four years ago and has previously secured funding for projects as outlined in section 2.

In 2006 market testing suggested a two-phase procurement strategy was the best way of dealing with long term waste arisings. Throughout this document references are made to phases 'A' and 'B'. The last of three Phase 'A' contract procurements was completed in August of this year and are now set to move to Phase 'B' which is the residual treatment PFI phase.

In the last 18 months we have moved to a formal Joint Waste Committee status for Member governance and during 2007/08 the partnership jointly and simultaneously procured three contracts 1) for haulage transfer and disposal to landfill, 2) management of the Household Reuse and Recycling Centres, and 3) treatment of comingled waste by MRF, composting of kitchen and green waste including the procurement of a new AD plant and a small residual treatment of waste to EfW.

This third contract was procured through Competitive Dialogue (CD) and remains one of only two waste CD's completed in the country. Dialogue was closed in just over twelve months between OJEU April 2007 and Close of Dialogue in April 2008 and the contract was mobilised and signed in a further four months. This was an incredibly challenging timetable

and while it was not a full PFI CD it does show that the partnership has an exceptional ability to deliver in challenging circumstances.

During 2008 the partnership also further cemented their relationship through a legally binding Inter Authority Agreement. This document provided a legal and financial basis under which to procure and manage contracts. One of the greatest challenges of the document was in finding an equitable way to allow partner boroughs to terminate existing contracts/arrangements in order for the whole partnership to benefit from greater economies of scale. There were considerable, political, financial and legal implications to this and again it is testimony to the partnership's ability to work together towards solutions that it was able to produce an agreement in such a short timeframe. The Inter Authority Agreement is attached at appendix 1.

1.2 Strategic Waste Management Objectives

The partnership has a Joint Waste Statement (JWS) appendix 2 and is in close discussion with the GLA in order to align a new Joint Municipal Waste Management Strategy (JMWMS) with the Mayor's Waste Strategy which we are informed will be refreshed in 2009/10. The partnership's new strategy will also mirror the targets of National Waste Strategy 2007 and also reflect the importance of emerging policy areas in relation to matters such as carbon and CHP.

The partnership has listened closely to WIDP guidance on emerging policy and has begun work to look at outlets for SRF and nearby regional outlets for CHP. This work has been procured in partnership with Essex County Council and consists of a desktop first phase study followed by face to face meetings with end users. To this end, the partnership has had initial discussions with some potential energy users but has further discussions in the coming weeks. The final report for this study will be completed in November/December and will be forwarded as a supporting addendum to the partnership's OBC, as Appendix 15.

1.3 Procurement Strategy and Reference Project

The partnership's Reference Project is split site MBT producing solid recovered fuel going to EfW which will seek to produce combined heat and power. The split site approach utilises three of our existing waste management sites, thus mitigating a considerable degree of planning risk, associated with obtaining sites and with attempting to use sites that are not currently in use for waste management.

These sites have been selected from the partner boroughs for the purpose of the Reference Project. They do not predetermine the eventual locations of the sites, which will be finally determined during the procurement process, and subject to evaluation criteria agreed by the Joint Waste Committee. This will be influenced following public consultation and on the basis of the best technology and value for money available to the partnership as indicated by the external independent technical and financial advisers, and bids submitted. Bidders will be encouraged to bring forward their own sites if they have them and deem them more suitable.

1.4 Risk management, risk allocation and contract structure

Having just completed the Phase 'A' procurement, the partnership is prepared for the strategic risk management implications of a complex procurement and the commercial risk positions of the SOPC4 waste Project Agreement. Having closed a Competitive Dialogue and employed a risk register to manage that procurement, the partnership is exceptionally well placed to anticipate and manage risks through the PFI procurement. The partnership also has a very keen understanding of the relative weight and areas for commercial debate inherent within the PFI risk allocations. We have a project team that it is exceptionally well

positioned to mitigate risk and secure the best possible deal given the experience of the officer team and advisers.

The Project Strategic Risk Register is attached at appendix 3, the Risk Allocation Matrix appendix 4 and the Treasury pre and post FBC Risk Register appendix 12.

1.5 Project team and governance

The partnership has already secured the services of the Phase 'A' advisers who have worked productively with us for the last eighteen months during our first procurement. We have also secured the same individuals who have proven they can work together and with us in delivering to tight deadlines. There is an agreed scope of advisory work and budget for the procurement which Members have signed off on.

The advisers for the PFI procurement will be:

PWC: finance and lead or co-ordinating advisers
Entec: technical advisers
Eversheds: legal advisers
Willis: Insurance advisers

The partnership's internal governance is in place both at officer and Member level. Two Officers from each borough along with the Project Director sit on the Management Group. This group is the key strategic decision making group; it is fortunate to still have all the individuals who have worked so well as a unit since the partnership was first formed four years ago. It is also notable that the entire Phase 'A' management Group remains in place for Phase 'B'. This continuity will doubtless be invaluable.

So as to ensure internal ownership of the procurement, key areas of advisory work are mirrored by the officer structure. Thus the partnership has legal, technical and financial leads to work alongside our advisers. The advisers themselves have proven they can work effectively as a unit and are project managed and coordinated by the Project Manager from PWC. The partnership are looking to further strengthen the project team so that Lead officers in any given area have a supporting officer.

1.6 Sites, planning and design

The new Joint Waste Development Planning Document (JWDPD) is developing through the requisite stages in the process towards the adoption of a new policy document in September 2011 at the very latest. Clearly any new facilities planned will need to be procured and progressed on the basis of those emerging policies. The partnership has a Joint Waste Development Planning Document (JWDPD), Project Manager to coordinate the production of that document and manage the stakeholder relationships not least with the procurement team and bidders for the waste PFI. The planning advice of the Waste DPD Project Manager was key to mitigating planning risks on proposals from the phase 'A' procurement.

Where possible, the partnership is keen to dovetail the progression of the procurement with the new Joint Waste Development Planning Document. We will be encouraging early planning applications, where such applications are strategically sensible but would be hoping the adoption process could be earlier than the longstop date of September 2011. We are confident that we can close dialogue in the required timeframe and again our experience of managing the CD process in a much tighter timeframe will doubtless be invaluable.

1.7 Costs, budget and finance

The Reference Project is seeking £109 million in PFI credits which equates to £211 million of revenue support grant when drawn down over the life of the contract. The partnership have identified a total modelled affordability gap for all waste services of £365m for the partnership. Each borough has understood the affordability position in relation to their own affordability gaps which they are committed to meeting. The borough commitment letters to meet the affordability gap are presented in appendix 17 and will be forwarded when they have been officially approved by each borough's Executive.

The partnership have identified that the Reference Project provides a saving over the 'Do minimum' or continued landfill approach which is neither financially or environmentally desirable to the partnership. The reference project has been calculated on the most prudent lines and we will be looking to close this affordability gap in discussion with the market.

1.8 Stakeholder communications

SLWP has recently refreshed its Communications Strategy for the purposes of managing the Phase 'B' PFI procurement and the Phase 'A' contracts commencement. The strategy is attached as appendix 14. The Partnership's Lead Communications Officer is from Merton and has the role of co-ordinating press and communications officers from each of the boroughs. There is a direct reporting line to the Management Group and for accuracy, the officer liaises with the Project Director over key issues.

Timely and judicious engagement with stakeholders is seen as key to the success of the procurement. The partnership enjoys an open relationship with key political stakeholders such as the GLA and London Councils. Members are regularly engaged in briefing and the press and local MPs are scheduled to meet with the partnership so that objectives can be conveyed. Planning consultation with residents is underway for the issue of 'where' new facilities are sited and the issue of what these facilities should achieve in terms of output will be at the core of community liaison and consultation in the coming months. This will in turn feed into the refreshed Joint Waste Statement.

One of the key stakeholder relationships is with the GLA and the partnership is keen to consider the emerging environmental policy from the new mayor's office during 2009. For this reason its own Waste Statement or Joint Municipal Waste Strategy (JMWMS) will incorporate salient policy elements of the Mayor's Waste Strategy.

1.9 Timetable

The partnership's timetable envisages operation of new facilities by 2014/15. We are aware of the implications of delay and the requirement to build in contingencies around planning approval and the progression of construction from design and appointment of any sub-contractors. The partnership will liaise with the Joint Waste Development Document Project Manager to ensure the risk of planning delay is mitigated as far as possible. The procurement timetable is two years, in keeping with WIDP guidance.

1.10 OBC approval

The submission off an OBC was recommended by the Joint Waste Committee on the 23rd of October 2008. The affordability and endorsed approval of individual cabinets was/will be made on:
London Borough of Croydon – 20th October 2008
London Borough of Merton – 10th November 2008

Royal Borough of Kingston – 4th November 2008
London Borough of Sutton – 4th November 2008

Minutes of these meetings are provided on each authority's website.

2.0 Background and Policy Compliance

2.1 Introduction

The four Boroughs that comprise the South London Waste Partnership are London Borough of Croydon (LBC), Royal Borough of Kingston (RBK), London Borough of Merton (LBM) and London Borough of Sutton (LBS). All four are Unitary Authorities and therefore control and manage both waste collection and disposal services.

The combined population of the partnership area is approximately 868,000 and municipal waste arisings in the area are currently in the order of 439,000 tonnes. The quantity of residual waste which will require treatment under the PFI residual waste treatment solution is modelled to be 213,000 tonnes per annum by 2019/20, which is profiled to remain until 2039 at the expiry of the contract.

In applying for PFI credits, the partnership is committed to significantly increasing its recycling rate to 51% and improving waste minimisation, thereby contributing to the new National Waste Strategy target of 225kg residual waste per head.

The partnership's first move to work together came in 2002. £2m of funding was secured for In Vessel Composting systems, provided and managed by Viridor Waste Management. This was an approach designed to benefit from the economies of scale and shared financial and personnel resources that joint working enabled.

This was followed up in 2004 with a successful funding application for £2m towards an MBT facility used by all partner boroughs and sited within the London Borough of Sutton. The partnership worked jointly with both Viridor Waste Management and Sita to deliver this facility.

Between 2006 and 2007, the partnership developed a two-phase Waste Procurement Strategy, derived from an options appraisal undertaken by external consultants and taking account of the views of the waste management industry. This confirmed the benefits of economies of scale through the tonnage of waste available for treatment and the shared resources and pooled skills of four authorities in undertaking a procurement.

Further funding could be made available to the partnership as we undertake a study to look at the value of forming a Joint Waste Authority.

During 2007/08 the partnership undertook the first phase of its procurement strategy. In completing the phase 'A' of our procurement strategy, we became one of only two in the country to close a waste Competitive Dialogue procurement. This was achieved in twelve months from OJEU to close of dialogue. In achieving this, the partnership showed innovation and unwavering commitment to deliver within a very tight timetable.

This experience means that the partnership is currently in an almost unique position, having a commercially experienced internal procurement team and the same team of external advisers who closed the first Competitive Dialogue with us. We believe this to be invaluable in understanding the challenges that lie ahead in the procurement of a new PFI contract.

The outcomes of the three contract procurements let under Phase 'A' are:

- Viridor were awarded a 14 year contract for transport, transfer and disposal to landfill (Contract 1) and contracts for MRF, kitchen and green waste composting, as well as a small contract for 10ktpa of residual waste, treated in a London EfW facility (Contract 3).

- Environmental Waste Controls (EWC) were awarded a 14 year contract to manage the partnership's Household Reuse and Recycling Centres (Contract 2).

An Inter Authority Agreement (IAA) (in Appendix 1) is in place which supported the award of the three major contracts this year. This agreement has set out a model for bringing the four boroughs together, terminating existing contracts and making the appropriate operational payments to the contractor. It also allows for benefits from the economies of scale and the logistics of using the resources of all four boroughs to minimise carbon impacts through journey times and overnight storage of vehicles.

The legally binding IAA is underpinned by a clear management structure for both operational contracts and ongoing procurement. Despite the complexities such an agreement creates, the partnership have been able to co-ordinate and mobilise senior officers in producing an agreement that has full political support. Creating this agreement happened alongside the procurement of three contracts in a little over 6 months.

The partnership already has a Joint Waste Statement to meet our statutory requirement but are seeking to go beyond this requirement by producing a Joint Municipal Waste Management Strategy. This is due for consultation and completion of a draft around the time procurement commences in the spring of 2009. The finalised strategy will necessarily be completed when our own regional policy is also finalised next year.

The partnership are keenly aware of the changes afoot at regional level with the Mayor's Municipal Waste Management Strategy, *Rethinking Rubbish* to be reviewed in 2009. We have an excellent relationship with the GLA and will continue to discuss our regional policy, as it develops.

The key drivers for the existing Joint Waste Statement, which is based on the individual strategies of each of the Boroughs, are:

- to increase the amount of MSW and BMW diverted from landfill and exceed the LATS allocations;

- to achieve statutory performance standards for the recycling and composting of household waste; and

- to ensure compliance with the Mayor's Municipal Waste Strategy for London.

SLWP has undertaken a considerable amount of work on the assessment and availability of sites in relation to the procurement process. SLWP has reserved three sites within its ownership, which are existing waste management sites. These sites are noted within the Inter Authority Agreement and these would be supported by additional sites, if further planning work suggested it were necessary. The identified sites which are in Councils control can be developed in line with the existing policies in the Boroughs UDPs.

Extensive communication with both internal and external stakeholders has already taken place and will continue as the procurement process moves forward. Public consultation on both the choice and location of the Phase 'B' solution will take place with the necessary audiences.

2.2 Key Characteristics of the South London Waste Partnership

The key characteristics and waste management activities of the four partner boroughs are attached at appendix 5. More detailed information and performance against the existing Waste Statement are included in the appendices.

The high-level statistics pertinent to our waste PFI are included in the table below. The partnership have approximately 868,000 residents in four of the 32 London boroughs. All boroughs are outer London boroughs. Two of the boroughs, Merton and Sutton, are very similar in size with Merton and Sutton having very similar waste arisings from almost the same number of households and populations.

Kingston are slightly smaller than both of these boroughs and Croydon are the largest borough in the partnership as can be seen from the table below and the waste arisings table further on in this section.

Borough	Square km	No Households	Population
Croydon	49.5	148,000	353,200
Kingston	38.66	63,243	155,000
Merton	37.95	78,178	188,000
Sutton	44.00	77,743	184,000

2.3 Analysis of waste arising

The historic waste arisings for the partnership are detailed in table 1 below. It is difficult to establish trends due to confounding factors related to the weather, holidays, data reporting systems, trade waste competition, and changes to HRRC and collection arrangements over the period.

Results suggest that arisings have stabilised, but the partnership are aware of the growing demand for more housing which it anticipates will have an effect on future waste growth rates.

The household projections were taken from the Greater London Authority 2007 Round Demographic Projections[1]. The "Post London Plan High" projections were used as these take into account any continuation of migration into the Boroughs and are the preferred data set used by Transport for London when planning long term infrastructure projects. These give a growth factor of 0.6% up to 2025, which is the last published data.

Table 1 shows the population and number of households used in the reference project modelling. All waste is modelled to grow at the same rate as the projected households in each Borough.

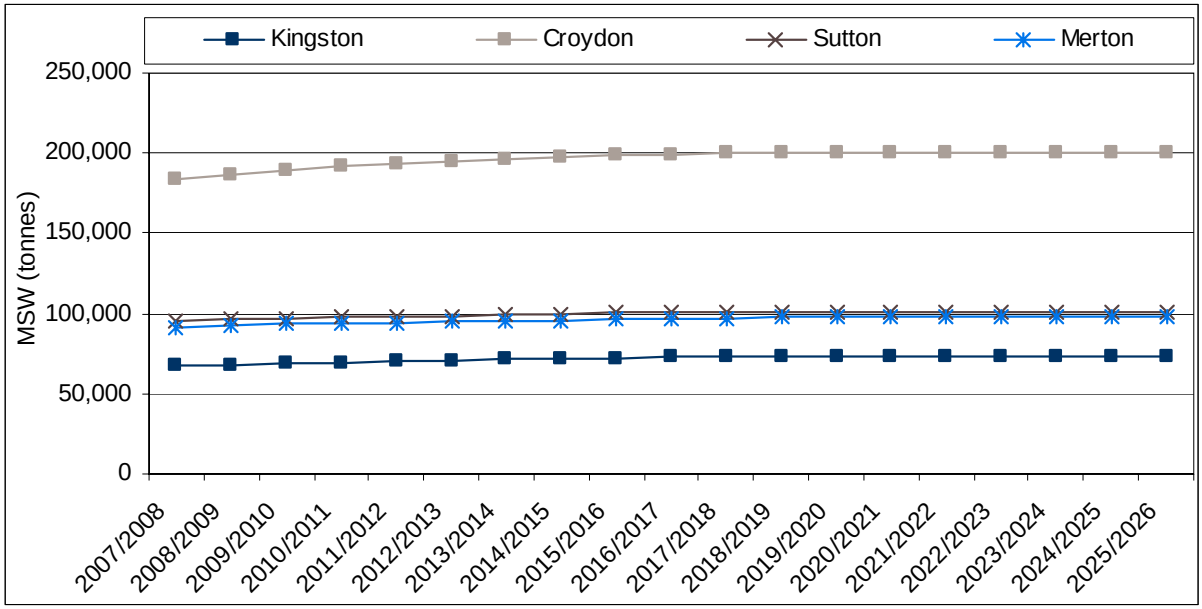
[1] http://www.london.gov.uk/gla/publications/factsandfigures/dmag-briefing-2008-07.pdf

This continues up to the year 2014/15 when waste minimisation campaigns start to take effect. Waste growth is gradually modelled to drop to 0% by the year 2020/21 (Figure 1 – arisings graphs). The waste arisings predicted within the Reference Project are detailed in table 1 below.

Table 1 Predicted Waste arisings

Year	WCA Household Collected Waste	WCA Collected Trade Waste	HRRC Collected Household Waste	Other MSW	Total MSW Arising	Percentage change
	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	%
THE PARTNERSHIP						
2008/09	291,926	49,730	63,998	37,675	443,329	
2009/10	295,081	50,375	64,762	38,115	448,333	1.13%
2010/11	298,236	51,020	65,527	38,554	453,337	1.12%
2011/12	300,101	51,337	65,971	38,785	456,194	0.63%
2012/13	301,966	51,653	66,416	39,016	459,051	0.63%
2013/14	303,831	51,970	66,860	39,247	461,909	0.62%
2014/15	305,695	52,287	67,292	39,491	464,766	0.62%
2015/16	307,407	52,575	67,679	39,707	467,367	0.56%
2016/17	308,784	52,806	67,990	39,880	469,461	0.45%
2017/18	309,822	52,980	68,225	40,011	471,038	0.34%
2018/19	310,516	53,097	68,382	40,098	472,093	0.22%
2019/20	310,864	53,156	68,460	40,142	472,621	0.11%
2020/21	310,864	53,156	68,460	40,142	472,621	0.00%
2021/22	310,864	53,156	68,460	40,142	472,621	0.00%
2022/23	310,864	53,156	68,460	40,142	472,621	0.00%
2023/24	310,864	53,156	68,460	40,142	472,621	0.00%
2024/25	310,864	53,156	68,460	40,142	472,621	0.00%
2025/26	310,864	53,156	68,460	40,142	472,621	0.00%
2026/27	310,864	53,156	68,460	40,142	472,621	0.00%
2027/28	310,864	53,156	68,460	40,142	472,621	0.00%
2028/29	310,864	53,156	68,460	40,142	472,621	0.00%
2029/30	310,864	53,156	68,460	40,142	472,621	0.00%
2030/31	310,864	53,156	68,460	40,142	472,621	0.00%
2031/32	310,864	53,156	68,460	40,142	472,621	0.00%
2032/33	310,864	53,156	68,460	40,142	472,621	0.00%
2033/34	310,864	53,156	68,460	40,142	472,621	0.00%
2034/35	310,864	53,156	68,460	40,142	472,621	0.00%
2035/36	310,864	53,156	68,460	40,142	472,621	0.00%
2036/37	310,864	53,156	68,460	40,142	472,621	0.00%
2037/38	310,864	53,156	68,460	40,142	472,621	0.00%
2038/39	310,864	53,156	68,460	40,142	472,621	0.00%
2039/40	310,864	53,156	68,460	40,142	472,621	0.00%

Figure 2.3.1 MSW arisings for SLWP as modelled

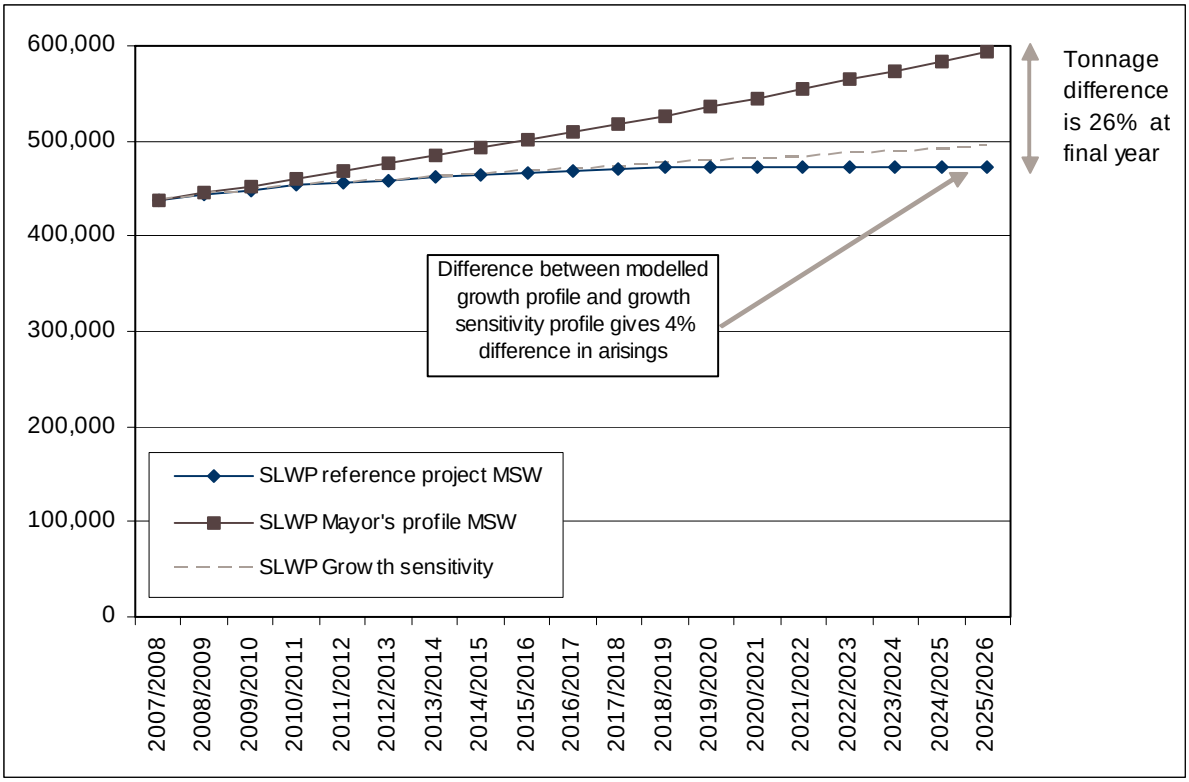


A sensitivity analysis was conducted on the waste growth used in the Reference Project modelling compared to the Mayor's Municipal Waste Management Strategy assumptions[2]. The preferred option used in the Mayor's Strategy was the 'central' profile which equates to a 2% increase each year after 2006 up to 2020. Figure 2 shows how the 'central' waste growth profile would compare to the profile used in the Reference Project modelling. The profiles have been shown up to 2025/26; this year was chosen as it was considered that projections become more uncertain given the lack of housing data post 2025.

The Reference Project modelling provides more conservative waste arisings than the Mayor's Strategy profile by some 26% or 122,000 tonnes in 2025, and growing exponentially into the longer term. For the Reference Project growth sensitivity was also conducted to test the effect of continuing waste growth by housing figures after 2014/15 instead of reducing waste growth to zero. This sensitivity gave a 4% difference in the tonnage of arisings when compared to the Reference Project modelling, and was used as a prudent risk adjustment factor when sizing the residual treatment facility.

[2] *Rethinking Rubbish in London: The Mayor's Municipal Waste Management Strategy. The Mayor of London, September 2003.*

Figure 2.3.2 Total Partnership arisings modelled versus Mayor's Strategy profile arisings



2.4 Details of current arrangements for collection and disposal

Table 2 shows existing collection arrangements and includes the new procured services for this year.

Table 2 Summary collection arrangements

	Sutton	Kingston	Merton	Croydon
Kitchen waste	Trial to 2,500 properties Full roll out in 2011/12	Berrylands trial of 2,400 houses and 6,000 flats Separate weekly collections currently being rolled out to all properties	Trial to 2,500 properties Full roll out in 2011/12	Trial to 2,500 properties Separate weekly collections to be rolled out to additional properties in 2009/10
Mixed Dry Recyclables (MDR)	Green Bin: Paper, card, plastic bottles, cans Blue bin: Glass collections Both fortnightly	Green box (39,219): Glass, paper, textiles + shoes, plastic bottles, cans, cardboard (1,252 only for cardboard) (kerbside sorted)	Green box: Paper, glass Purple box: Beverage cartons, Cardboard, cans, plastic bottles, yellow pages	Blue box: Mixed paper, card and textiles Green box: Glass, cans, plastic bottles

	Sutton	Kingston	Merton	Croydon
	collections	Berrylands Trial (2,400) being extended borough wide later this year Green box (as above except cardboard is collected in a separate white bag plus drink cartons and household batteries. Weekly collections	*To be reviewed in the coming year – possibly change to co-mingled; trial already in two patches but lots of other patches reverting to comingled*	Fortnightly collections
Garden waste	Reusable bag	Reusable jute bag service under review container likely to change to wheeled bin from 2009	Clear reusable plastic sacks	Clear reusable plastic sacks Full roll out at 2008/09 Stops at end of November (i.e. seasonal collection)
Frequency	Fortnightly	Opt in -Weekly	Opt in – as required	Fortnightly
Charge?	Yes	Yes	No	No
Residual waste	Possibly AWC in 2011, depending on food waste collections.	Fortnightly	Weekly	Weekly.
Residual waste policies	No side waste Only 140 litre bins provided Weekly collections	No side waste 180/240 wheeled bin container	Side waste N/A for sack collections	No side waste
Trade residual and recycling	Residual collections Recycling trial to be confirmed for a year (not in place yet)	No collections Borough waste is collected, but this is included with other waste that needs to be separated out as much as possible.	Residual collections Recycling is actively being promoted with local businesses	Residual collections Recycling collections of paper and card
Bulky waste	Croydon Arc collect white goods along with WEEE items. Nothing recycled (fridges	Kingston Community Furniture Project Fridges – Croydon ARC	Some re-use but reported in HRRC data. Fridges collected separately	Croydon Arc collect white goods along with WEEE items.

Table 3 shows existing contractual arrangements and includes the new procured services for this year.

Table 3 Summary contractual arrangements

Service	Current Arrangements	Notes
Waste Collection	Kerbside, bring-bank, bulky and street cleansing operations waste under various service arrangements (see previous table Summary collection contracts are; • LB Croydon- Veolia until 2014 • RB Kingston upon Thames – Veolia until 2015 /2022 • LB Merton – in-house • LB Sutton – in-house	Partnership will consider long-term synergies between Borough collection arrangements when outsourced contracts due for renewal.
Recyclable Processing	Viridor arranging processing at Crayford MRF and/or collection of separated materials by reprocessors for bulked Recyclables from Sutton, RB Kingston and Merton managed by Viridor For Croydon, materials managed by Veolia as collection contractor.	Contract Commencement: 1st September 2008 Contract Expiry: 2022 with option for extension up to 5yrs.
Biowaste Processing	Viridor arranging for processing of green and kitchen wastes at the Beddington In-vessel composter, and development of a new Anaerobic Digestor (planning permission granted at Beddington)	Contract Commencement: 1st September 2008 Contract Expiry: 2022 with option for extension up to 5yrs.
HRRC Management	EWC managing majority HRRC sites and off-take of all recyclates. Residual and green waste managed by other partnership contracts.	Contract Commencement: 1st September 2008 Contract Expiry: 2022 with option for extension up to 5yrs.
Transfer, Haulage and Landfill	Viridor arranging for reception and disposal at Beddington Landfill, and haulage of residual waste from RB Kingston. Interim arrangements with Sita for continued operation of RB Kingston waste transfer station until 2013. All three Borough sites are strategically located, and any not utilised for treatment may continue to be used for separately procured transfer functions, depending on the location of the treatment technology.	Contract Commencement: 1st September 2008 Contract Expiry: 2022 with option for extension up to 5yrs.
Residual Waste Treatment	Contract with Viridor for limited access to Lakeside Energy from Waste facility.	Contract Commencement: 1st September 2008 Contract Expiry: 2022 with option for extension up to 5yrs. Upon expiry the waste from the Viridor contract would revert to the PFI contract.

Service	Current Arrangements	Notes
		Partnership to meet long-term LATS targets through PFI residual waste treatment contract.

SLWP currently disposes of the majority of its waste to landfill and consequently has historically had long term disposal contracts for landfill in place. The disposal contractor for all four Boroughs is Viridor Ltd.

2.5 Performance of existing services

Recycling and composting performance

Current performance with respect to recycling and composting is presented in Table 2 below. All four Boroughs are actively pursuing improvements in both recycling and composting services, which will be rolled out in conjunction with the Phase 'A' Contracts.

All of the Boroughs of the SLWP have been involved with the WRAP funded food waste collection trials. Each Borough conducted weekly source separated collections of food waste. Table 4 shows the average yields experienced by the Boroughs whilst the trial was in operation (as reported by WRAP[3]). It should be noted that the WRAP trial for Kingston only took place in flats via door to door collections where it is accepted that engagement of residents is more difficult than from houses, thus the lower yield compared to the other Boroughs.

Table 4 Kitchen trial results

Borough	WRAP Trial yield kg/ household/week
Croydon	1.67
Kingston	0.46
Merton	1.51
Sutton	1.49

Residual waste treatment

The partnership has a contract for 10ktpa of residual waste treatment at the new Lakeside EfW starting in 2009.

2.6 Waste composition

The composition applied to the modelling is a key factor in modelling future performance, however it is also subject to great uncertainty. The composition used will affect maximum capture rates[4] used within the model, so it should be borne in mind that the recycling/ composting performance of a particular London Borough will be linked to the composition used.

[3] http://www.wrap.org.uk/downloads/Evaluation_report_-_food_waste_collection_trials.b64f96fe.5883.pdf
[4] '*Capture'* is the participation rate multiplied by the recognition rate

All four Boroughs provided Entec (technical advisers) with compositional analyses for collected household waste. These were conducted taking ACORN profiles into account. It is preferable to use data that has come from specific studies rather than 'national data' to reflect the local characteristics of each Borough. The data was adjusted to include green waste, and for LBC a merged composition from all four Boroughs was used to give realistic capture rates from their current recycling schemes. The compositions for the London Boroughs and the national average for comparison are set out below (table 5).

These studies have been completed by different companies so it should be noted that there is likely to be differences in the methodology of the studies and analysis of the data. The Boroughs will review the need for further joint analysis to refine the data during the procurement process.

Table 5 Compositional data for collected household waste

Waste component	Sutton	Merton	Kingston	Croydon	National [5]
Paper and Cardboard*	29.04%	36.03%	37.27%	31.66%	22.70%
Plastic*	12.17%	10.68%	4.98%	10.54%	8.80%
Textiles and shoes	3.94%	1.82%	1.02%	2.20%	3.25%
Glass*	5.67%	10.24%	10.38%	9.11%	8.40%
Metal cans and foil*	3.43%	2.09%	2.73%	2.97%	3.40%
Garden waste	18.32%	6.47%	7.65%	10.47%	15.30%
Kitchen waste	10.93%	24.01%	21.30%	21.28%	23.30%
TOTAL	83.50%	91.34%	88.33%	88.22%	85.15%

[5] '*Analysis of household waste composition and factors driving waste increase*'. Dr Julian Parfitt, Principal Analyst, WRAP. December 2002.

3.0 Strategic Waste Management Objectives

3.1 Status of the SLWP Waste Management Strategy

The partnership has reflected both the regional and national objectives in creating its Joint Waste Statement. Close dialogue with the GLA is maintained through meetings and invitation to the partnership's Management Group meetings, when appropriate. We have been informed that the Mayor's Municipal Waste Management Strategy is to be reviewed in 2009. The Mayor's Strategy will be something the partnership will monitor closely and look to adhere to in seeking to retain its excellent relationship with the GLA.

The partnership has decided to go beyond statutory requirement in producing its own Joint Municipal Waste Management Strategy (JMWMS) and in conversation with Defra/WIDP, we are intending to produce one which dovetails with the refreshed Mayor's Municipal Waste Management Strategy in 2009.

This committed approach is in keeping with the robust partnership that we have developed, manifest in our various procurements and underpinned by an Inter Authority Agreement. We feel a JMWMS will further cement that partnership, lend focus to our own procurement and strengthen the commercial, market perception of SLWP. It will also ensure all is being done in the light of the most up to date London policies and with a continued productive relationship with the GLA.

The partnership currently has a Joint Waste Statement (JWS) (appendix 2) which was produced in July 2006. This describes the aims of the partnership, and rightly anticipates the efficiencies to be gained through joint procurement. The JWS has been developed to incorporate, the aims of the individual Boroughs Municipal Waste Management Strategies (MWMS). The principal aims of the JWS are as follows:

- to increase the amount of BMW diverted from landfill and ultimately exceed the LATS allocations;
- to achieve statutory performance standards for the recycling and composting of household waste;
- to ensure compliance with the Mayor's Municipal Waste Strategy for London; and
- to ensure compliance with the national Waste Strategy 2007.

The inclusion of any of the three new waste indicators, in any relevant Local Area Authority (LAA) are set out in table 6. National indicators that have not been adopted as part of a Borough's Local Area Agreement, will still be monitored internally, in order to monitor performance and improve service.

Table 6 Adopted National indicators as part of each Borough's Local Area Agreement

National Indicator (NI)	Croydon	Kingston	Merton	Sutton
NI 191 **Residual household waste per household**	×	✓	✓	×
NI 192 **Household waste reused, recycled and composted**	✓	×	×	×
NI 193 **Municipal waste land filled**	×	×	×	×

3.2 Waste Minimisation

The partnership intend to invest in additional minimisation and education officers to help reduce arisings and increase participation rates. In addition to extra human resources, an allowance for further promotional and advertising material and various campaigns has been made in the Reference Project. The exact nature, timing and costings for joint waste minimisation and educational campaigns will be developed through the partnership's forthcoming JMWMS.

Initially this budget was calculated for the year 2025/26 and indicates an expenditure equivalent to £2.17 per household per year (£1 per person) was required. This unit price is used as the benchmark cost and applied to the projected number of households to generate an annual budget. The joint budget is anticipated to ramp over time from 2010/11, with full implementation from 2014/15 in order to coincide with the date when waste growth rates are projected to start decreasing.

3.2.1 Measures Being Taken to Address Waste Minimisation Objectives

Details of each of the boroughs specific activities are attached at appendix 5. Within the framework of the JWS, all four Boroughs have jointly agreed objectives including:

- the development of an extensive waste awareness and education programme that focuses on all aspects of waste management including waste prevention, minimisation, reuse, recycling, composting, treatment and disposal;
- to seek a partnering relationship with waste service providers in order to implement waste minimisation initiatives; and
- to encourage and strengthen partnership with the community and voluntary sectors and investigate opportunities for external funding to generate community based waste minimisation initiatives.

Each of the Boroughs has documented mechanisms for instigating these measures to achieve the aims of the JWS and individual Waste Strategy targets.

Within LBC, the Waste Management Team are responsible for developing and delivering an ongoing programme of environmental awareness and waste minimisation, a specific annual

action plan is developed by recycling activities funded from the waste management budget. In addition the Environment and Sustainability team work with businesses.

LBC is developing a series of Action Plans aiming to address the requirements of the Mayor of London's Waste Strategy.

LBC formally adopted their Waste Strategy and Recycling Plan 2008-2011 at its Cabinet meeting on 8 February 2008. One of the key objectives included promoting and raising waste awareness throughout the borough.

RBK maintains an Environmental Awareness Strategy (EAS) which sets down the approach taken to communicating environmental information to the Kingston population in order to raise awareness of environmental issues and ensure residents know how to take positive steps to reduce their environmental impact. Awareness is increased through various campaigns and activities, which are detailed in the annual Team Plan and Environmental Awareness Communications Plan.

RBK produces annual Waste Strategy Implementation Plans setting out in detail the activities and measures to be undertaken over a 2-3 year period to achieve the objectives of the Waste Strategy. RBK's 4th Waste Strategy Implementation Plan (April 2006 – March 2009) was published in June 2006 with the primary aim of reducing the amount of BMW to landfill and complying with the annual BMW allowances to landfill under the Landfill Allowance Trading Scheme (LATS).

Objective Three of RBK's Waste Strategy relates to waste minimisation. The key actions under this objective include:

- Implementing the waste awareness activities identified in the Environmental Awareness Strategy and Communications Plan.
- Increased awareness on the importance of waste minimisation, recycling and composting; and increased awareness of the recycling and composting services available to residents.
- Introduction of waste enforcement policy to reduce waste and encourage more re-use, recycling and composting.

Key activities during 2008/09 will include:

- Maintaining the accuracy of the Council's website relating to refuse and recycling, in particular information will be needed on the implementation of the waste management contracts and collection changes in 2008/09.
- Development of a Street Scene Strategy for the Street Cleansing Services provided by Veolia Environmental Services and Quadron and the creation of a Waste Enforcement Strategy.

The list of activities may be added to throughout the year as opportunities for awareness raising and waste minimisation promotion occur as a result of other activities.

LBM's Municipal Waste Management Strategy Implementation Plan (July 2006 – August 2008) sets out the short term activities and measures which are required to meet the immediate objectives of the Municipal Waste Strategy. The Implementation Plan is reviewed and updated on an annual basis.

LBS is currently finalising its Business Plan for 2009/10 for waste management services. Current waste prevention initiatives include home composting, furniture and household appliance re-use, the Real Nappy scheme, green and kitchen waste trials and “no junk mail” stickers.

3.3 Recycling and Composting

The partnership is aiming to recycle and compost 51% of its municipal waste by 2020. This is considerably in excess of existing performance which averages around 25% across the boroughs. It is felt that such a target is achievable given a dedicated commitment. While the partnership is aware that higher recycling rates of 60% are desirable, technical advice and mass flow modelling suggest this is not a realistic target for the London/ urban environment in which we are operating based on current best practise from WRAP.

Detailed waste flow models have been developed for each of the Boroughs, which have been used to develop a combined partnership model. The detailed mass flow modelling for each Borough underpins the Reference Project.

By 2011/12 all of the four Boroughs of the partnership are projected to be collecting three streams from the kerbside: Dry recyclables; green garden waste and food waste.

Future collection schemes and predicted capture rates were modelled to show performance against the national targets, and is summarised in Table 7 below. The final figures also include the addition of recyclables from the Reference Project (assumed to be 7% of the input to the Mechanical-Biological Treatment facility). This modelling confirmed the WS2007 50% target for 2020 can be exceeded using best practise data.

Table 7: Performance of the Reference Project against NI 192 (Household waste reused, recycled and composted)

Year	National Waste Strategy	Reference Project
SLWP	%	%
2009/10	40	35.51%
2014/15	45	45.79%
2019/20	50	51.08%

A key driver to increasing the recycling and composting rates is the extension of the food waste collection service that has been trialled by all four Boroughs through the DEFRA funded scheme. In the future, the kitchen waste will be treated at a new Anaerobic Digestor being developed at Beddington in Sutton. The year of full roll out and the modelled yields at 1, 5 and 10 years after full roll out can be seen in table 8.

Table 8: Kitchen waste yields anticipated from the Reference Project (KG per household)

Borough	Year of full roll out	1 year after	5 years after	10 years after*
Croydon	2009/10	1.57	1.60	1.58
Kingston	2008/09	1.38	1.38	1.58
Merton[#]	2011/12	1.29	1.76	1.96

Borough	Year of full roll out	1 year after	5 years after	10 years after*
Sutton	2011/12	0.91	1.00	1.03

**Towards the end of the model the yield gradually drops due to the increasing number of households but static waste growth.*

#It should be noted that Merton is due to have a major review of its service in early 2009 which may effect the timing of service roll-out. This data was correct at the time of the OBC submission.

The partnership recognises and welcomes the waste prevention targets as outlined in WS2007 which includes the aim to reduce the amount of household waste not re-used, recycled or composted per household by 50% between the year 2000 and 2020, equivalent to a fall from 450kg per person in 2000 to 225kg in 2020.

As shown in table 9 below the partnership as a whole expects to perform well with respect to these targets (the residual waste per person target is exceeded) due to increased efforts in waste minimisation and intensified recycling and composting schemes.

Table 9: Performance of the Reference Project against NI 191 (Residual household waste per household) and residual waste per person target.

Year	National Waste Strategy	Reference Project
	Kg	Kg
2000/01	450	
2007/08		308
2015/16	270	231
2019/20	225	212

Year	NI 191	National Waste Strategy	Reference Project
	kg/ household	kg/ person	kg/ person
2007/08	715		308
2015/16	515	270	231
2019/20	466	225	212

3.4 Landfill Objectives

Table 10 shows that before the operation of the residual waste treatment starts, the tonnage of BMW sent to landfill exceeds the LATS permits but dramatically reduces with the introduction of residual waste treatment capacity in 2014/15.

Table 10: Performance of the Reference Project against LATS Allowance targets

Year	LATS allowance	BMW sent to landfill in Reference Project
SLWP	Tonnes	Tonnes
2009/10	181,725	192,462
2012/13	121,042	169,654
2019/20	84,697	34,395

Table 11 shows how the Reference Project will perform against NI 193 – Municipal Waste Landfilled. The Authority's LATS trading strategy is addressed under Section 8 – Costs, Budget and Finance. LATS profiles developed were calculated consistent with the M-BEAM calculations.

Table 11: Performance of the Reference Project against NI 193 (Municipal waste landfilled)

Year	Reference Project
	%
2007/08	73.85%
2010/11	59.62%
2014/15	14.25%
2019/20	12.79%

3.5 Appraisal of technology options for residual waste treatment

The Joint Procurement Plan published in May 2006 included an options assessment which concluded that the three highest ranked optimum solutions for the long-term were ATT, MBT-RDF-ATT and MBT-Stabilisation-ATT. Following a headline costs assessment the Preferred Option was identified as MBT-Stabilisation-ATT, where MBT produces a stabilised organic residue ('compost like output' – CLO) and, to a lesser extent, refuse derived fuel (RDF) for thermal treatment in a gasification facility.

The strategic preference for emerging technologies such as ATT was also in keeping with the London Plan. New and emerging technologies are defined in the London Plan as technologies that are either still at a developmental stage or have only recently started operating at a commercial scale. They may be new applications of existing technologies. In relation to waste, they include such technologies as anaerobic digestion, Mechanical Biological Treatment, pyrolysis and gasification.

Since the conclusion of the procurement options appraisal there have been significant developments in the waste market for different technologies such as Anaerobic Digestion and Autoclaves and in Councils exploring markets for supply and use of SRF from MBT plants. Conversely there has been less progress in commercially funded ATT facilities and in proving outlets for CLO products.

It was therefore concluded that it would be prudent to undertake a new options appraisal for the purposes of selecting a Reference Project for the OBC, as set out in Section 4.

3.6 Environmental Impact

The partnership is pursuing a solution which reflects the carbon strategy set out in the National Waste Strategy 2007. We are mindful of the considerable environmental benefits of CHP and for this reason we have undertaken a study to identify and then pursue possible CHP solutions ad SRF off-takers. Entec have been commissioned to produce this work and the report findings will be forwarded late November / early December as Appendix 15.

This work took place in two phases. The first phase was a desktop study completed earlier this month . The second phase will involve dialogue with potential SRF off takers and CHP

users and this will be completed and made available to WIDP before the end (Appendix 15) of the year and in good time for the procurement.

For the purpose of this OBC the partnership has modelled the thermal SRF-EfW facility as including a CHP element with prudent income assumptions. This enables calculation of a sufficiently wide affordability envelope and does not run the risk of needing to return to members for additional approval of funds if one of more bidders comes forward with a viable CHP scheme which has higher costs. It has also enabled the partnership to generate baseline load information in order to inform an ongoing CHP study around the council's three sites.

It is also possible to use a dispersed network of smaller thermal units each with a dedicated CHP network (micro-CHP). This is a new concept for waste projects in the UK and was therefore not deemed suitable for the Reference Project due to the considerable cost uncertainty and market risk issues. However the partnership has commissioned an ongoing joint sub-regional study with Essex County Council in order to investigate potential outlets for Solid Recovered Fuel and so inform prospective bidders on the deliverability of third party outlets and CHP potential in the region.

4.0 Procurement Strategy and Reference Project

4.1 Rationale for Procurement Strategy

SLWP developed a Joint Procurement Strategy which comprises two phases of procurement (referred to as Phases 'A' and 'B'). The strategy evolved through an options appraisal and consultation with the waste management industry through two soft market testing (SMT) events in 2006 and 2007.

The partnership concluded that future waste management services should be procured on a non-integrated phased basis, with residual waste treatment services procured separately. This route was considered most appropriate for the following reasons:

- it is consistent with the phased reduction in LATS allocations;
- it has allowed consideration of a wider variety of procurement options (including PFI) for the second phase;
- it facilitates the identification and assessment of potential shared development sites for incorporation into the Waste DPD, and thereby reducing risks associated with sites and planning; and
- It maximises competition for all contracts in keeping with Defra's Criteria 10 for waste PFI contracts, and supports the findings of the second Kelly report which investigated competition and waste PFI contracts.

Phase 'A' was designed to replace a number of expiring contracts in 2008. Phase 'B' is the PFI phase capable of dealing with 213ktpa of residual waste for which we are seeking PFI credits. Representatives of the industry agreed that, given the range of services required and the timescales concerned, a phased strategy was the most appropriate approach. Details of the contracts awarded through Phase 'A' are set out in section 2.

A key driver of the phase 'A' negotiation strategy was to avoid splitting the residual waste tonnages between two-phases. This would not have allowed the partnership to benefit from the significant economies of scale that are necessary to a value for money residual solution. Only 10ktpa are committed to Lakeside EfW until 2022 leaving over 95% of the residual waste to be handled through the PFI phase until this time and of course 100% after 2022.

In completing the phase 'A' of its procurement strategy the partnership became one of only two in the country to close a waste Competitive Dialogue procurement. This was achieved in just over twelve months from OJEU April 07 to close of dialogue April 08, and contract signatures 29 August 2008, all of which represents a timeframe that many thought was incredibly challenging. In achieving this, the partnership and its advisers (who have been retained) showed innovation and unwavering commitment to a very tight timetable.

Partnership working has been adopted as the preferred approach of the four Boroughs based on previous successes in joint projects and the following factors:

- achievement of a strategic sub-regional approach;
- increased opportunity to secure market appetite;
- opportunity to secure more competitive tenders;
- cost effective contract administration monitoring;
- optimum use of existing and future facilities; and
- pooled skills and resources for procurement.

Updated mass flow modelling undertaken in support of this OBC confirms that even if the partnership implement ambitious waste minimisation activities and increase recycling and composting, long term residual treatment infrastructure is necessary to meet the required diversion of waste from landfill.

The partnership therefore aims to procure a contract for treatment of residual municipal solid waste, with the diversion of biodegradable waste from landfill to meet and exceed the partnerships' Landfill Allowance obligations, and provide additional recycling performance.

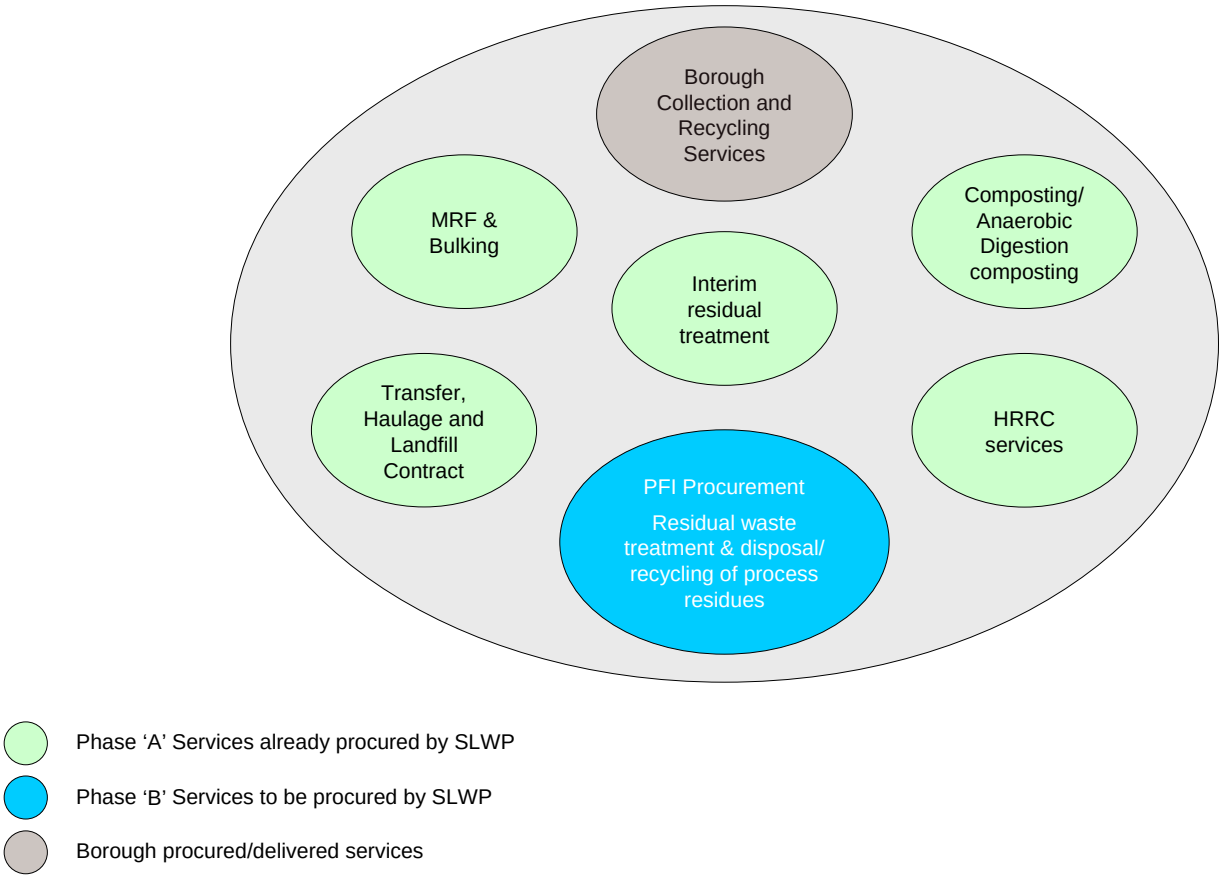
The partnership seeks PFI credit support to procure a long term residual waste treatment contract. The Reference Case for this contract includes the following outputs:

- Provision of 213,000 Residual Waste Treatment Capacity; and
- Disposal/Recycling of process end products and by-products at secure markets.

A Reference Case is a potential solution (out of a spectrum of possible solutions) to meet the waste management demands of the partnership. It is a Defra requirement to use an existing plant as the basis for the costing of the Reference Project to demonstrate that there is at least one possible solution capable of meeting the output specification that is deliverable, bankable and affordable. The Reference Project does not commit the partnership to delivering the outputs of their project using that technology. Ultimately the process leads to a set of performance and cost predictions that are within the envelope of those that might be received in the bid process.

The actual solution procured will depend on the specification for the service issued in the bid process and the evaluation of the bids received in response to this against agreed evaluation criteria. There are also many commercial considerations to make through the process of dialogue which cannot be made at this stage in a Reference Project without detailed market discussions. The key issue is that the competitive aspects of the process may provide alternative solutions that perform better than the modelled solution or the competing bids or circumstances change between the time when the modelling is performed and the bids are prepared.

Figure 4.1.1 SLWP's Phased Procurement Strategy



Phase 'A' comprises three sets of contracts for transfer and disposal (Contract 1), Household Reuse and Recycling Centres (Contract 2) and bulking and treatment though composting, MRF and additional treatment (Contract 3). The partnership recognises that these will contribute to diversion of BMW, they will not meet its full long term landfill diversion targets. It is estimated that even with the implementation of waste minimisation schemes, enhanced recycling and composting collection schemes and an intensive communications programme, the partnership will still generate approximately circa 213,000 tonnes of residual waste by 2025.

To achieve the partnership strategic aim to reduce reliance on landfill and to mitigate its long term exposure to LATS penalties, SLWP has identified the need to treat its residual waste in a way that is acceptable, feasible, flexible, environmentally sustainable and Value for Money.

'Do minimum', which continues to send residual waste to landfill after recycling and composting and relying upon purchasing LATS allowances is not considered an option. This is an area where the penalties for landfill represent a threatened substantially increased and as yet, unquantifiable financial risk.

The partnership therefore intends to procure a Phase ''B long term residual waste treatment contract to divert residual MSW away from landfill and to comply with LATS. The Reference Project for this contract forms the basis of this application for PFI credits.

In the short to medium term, during the development of the long-term solution, the partnership projects that the interim contracts will not be sufficient to meet all its LATS obligations. A Joint LATS Strategy has been developed to facilitate the transfer and

purchasing of Allowances as necessary. The specific actions for this are discussed in Section 8 (LATS Strategy).

4.2 Output Specification

The Output Specification will be based upon the latest WIDP template. The partnership will use its experience from negotiating the recent treatment contract under Phase 'A', and the advisers current involvement elsewhere in competitive dialogue on the WIDP draft in order to produce a tailored specification to the project. The principal aspects of the Specification are listed in table 12 below.

The partnership's previous experience in the Phase 'A' procurement for interim residual treatment, and the Options Appraisal undertaken for this OBC identified several contender technologies. In line with WIDP's preference to be open to new technologies, the partnership wishes to be technology neutral and provide bidders freedom to propose different technical solutions. To this end the specification will be based on open outputs required rather than specific technology options.

The results from the soft market re-testing exercise will be used to refine the Specification prior to OJEU. In addition, the partnership plans to use the results of its forthcoming public consultation on a Joint Municipal Waste Management Strategy to help inform the development of the Output Specification and the tender evaluation criteria.

The key Performance Standard in the Output Specification will be to achieve landfill diversion targets that will ensure that the partnership exceeds its LATS Allowances and significantly reduces its reliance on landfill. It is anticipated that in addition to the typical performance standards on waste reception and treatment that are included in the template, the Output Specification will also cover unavailable events whereby the Boroughs will be compensated by the contractor for disruption costs incurred in travelling to contingency delivery points.

Table 12 OBC Contract Assumptions

	Theme	Key parameters
1	**Contract Structure**	• PFI project. • Contractor responsible for design, build, finance and operations. • Monthly Unitary Charge.
2	**Contract Scope**	• The acceptance of residual Municipal Solid Waste (MSW) for treatment; • The provision of residual waste treatment capacity; and • Disposal/recycling of all process end and by-products, including transport (see sub-sections 12 and 13 below) • Boroughs responsible for delivery of waste direct or via Contract 1 transfer contract. • Key service outputs to be adapted from 4ps template with lessons learnt from Phase 'A' procurement.
3	**Contract Duration**	• 25-30yrs. • Up to 5yrs planning/construction and 25yrs facility operations.
4	**Risk allocation**	• See risk matrix.
5	**Asset Transfer at**	• Partnership retains site ownership of any Borough freehold sites.

	Theme	Key parameters
	Borough Sites	• Sites available to contractors under a lease. • Site clearance and decontamination likely to be wrapped up into main PFI contract. • Contractor takes risk on site contamination during operations.
6	**Exclusivity and tonnage guarantees**	• Contractor has exclusivity to all suitable residual MSW arisings listed in waste acceptance criteria, up to upper tonnage guarantee. • Partnership guarantees minimum tonnage – negotiated based on value for money assessment and not to limit other waste activities higher up the waste hierarchy where appropriate.
7	**Sustainability**	• Promotion of waste hierarchy, with further extraction of recyclables and recovery of energy value. • Minimise carbon footprint, including promotion of CHP schemes • Sustainable Design principles– energy, water, materials.
8	**Targets**	• Maximise diversion from landfill, and meet LATS Allowances for partnership (as set out in chapter 3 above), with incentives/deductions through the payment mechanism. • Contractor guarantees BMW diversion efficiency rate. Evidence of BMW diversion efficiency required from Contractor
9	**Performance Management**	• Self monitoring by Contractor. • Performance Regime and deductions.
10	**Technology**	• Partnership is technology neutral, but will require demonstration of deliverability and bankability through procurement evaluation process. • The partnership is keen to discuss with bidders the scope for flexibility to incorporate emerging technologies, particularly hydrogen production in facility designs to allow the future addition of such technologies as they become more deliverable.
111	**Flexibility**	• The process is reasonably tolerant of long-term changes in waste composition including improved source-segregation. • Facility has sufficient flexibility to accommodate reasonable variations in the growth of waste volumes. • The contractor is responsible for cost-effective utilisation of spare capacity through third party contracts. • Both parties to the contract will be able to implement improvement and initiate change through agreed change mechanisms in accordance with recent amendments to SoPC4 and response times.
12	**Markets**	• Contractor responsible for marketing products, electricity and heat, with profit share with SLWP to be explored through payment mechanism. • Contractor to pursue CHP with profit share to offset additional facility capex expenditure.
13	**Residual landfill**	• Process rejects to landfill may be dealt with by Contractor or partnership depending on solution – likely to be explored through a separate lot; this approach will be reviewed over the coming

	Theme	Key parameters
		months. • Payment mechanism to incentivise diversion from landfill.

4.3 Identification of Options: Long listing

The options selected for the long list appraisal are provided in table 13 below. The key principles that were considered (in line with Defra OBC guidance where applicable) when developing the long list of options were:

- High front end diversion / minimisation that meets WS2007 targets;
- Maximising diversion from landfill in addition to meeting LATS Allowance targets;
- All thermal options modelled as including a combined heat and power (CHP) element;
- Options using third party outlets for any Solid Recovered Fuel (SRF) were excluded, and dedicated energy from waste facilities were modelled for offtake. However the technology neutral stance being taken in the procurement process does not prevent a market response for using SRF in a merchant facility; and
- Exclusion of new technologies with insufficient reference plants to meet the fundamental requirement for an OBC Reference Project they are "bankable and deliverable." (PFI Criteria 9).

Justification of these principles can be found in section 2 of appendix 6 (Long list report).

Table 13 Long list technology options

Option	Treatment
1	Landfill residuals and trade LATS (after increased source-segregation)
2	MBT (Aerobic)- Bio-stabilisation - Landfill
3	MBT (Aerobic) - Bio-stabilisation - Compost Like Output (CLO) to land restoration
4	MBT (Aerobic) - Biodrying - Secondary Recovery Fuel (SRF) to EFW-CHP
5	MBT (Anaerobic Digestion) – Stabilisation – Landfill as daily cover
6	MBT (Anaerobic Digestion) - Compost Like Output (CLO) to land restoration
7	MBT (Anaerobic Digestion) - SRF to EFW-CHP
8	Autoclave - Fibre recycling
9	Autoclave - Anaerobic Digestion - Landfill as daily cover
10	Autoclave - SRF to EFW-CHP
11	Energy from waste (EfW) – with combined heat and power
12	Advanced Thermal Treatment (ATT) - Pre-treatment & Gasification

4.4 Details of Evaluation Criteria

An evaluation criteria workshop was held on 11th June 2008 attended by a lead officer from each Borough. Other contributors to the meeting were Frank Smith (Project Director), and Daryl Hill (WIDP transactor).

An initial list of technical evaluation criteria was prepared by Entec and presented to the Officers group for review. The initial list of criteria were considered and through discussion the criteria were refined. The criteria were identified as being the most important factors against which the options would be evaluated.

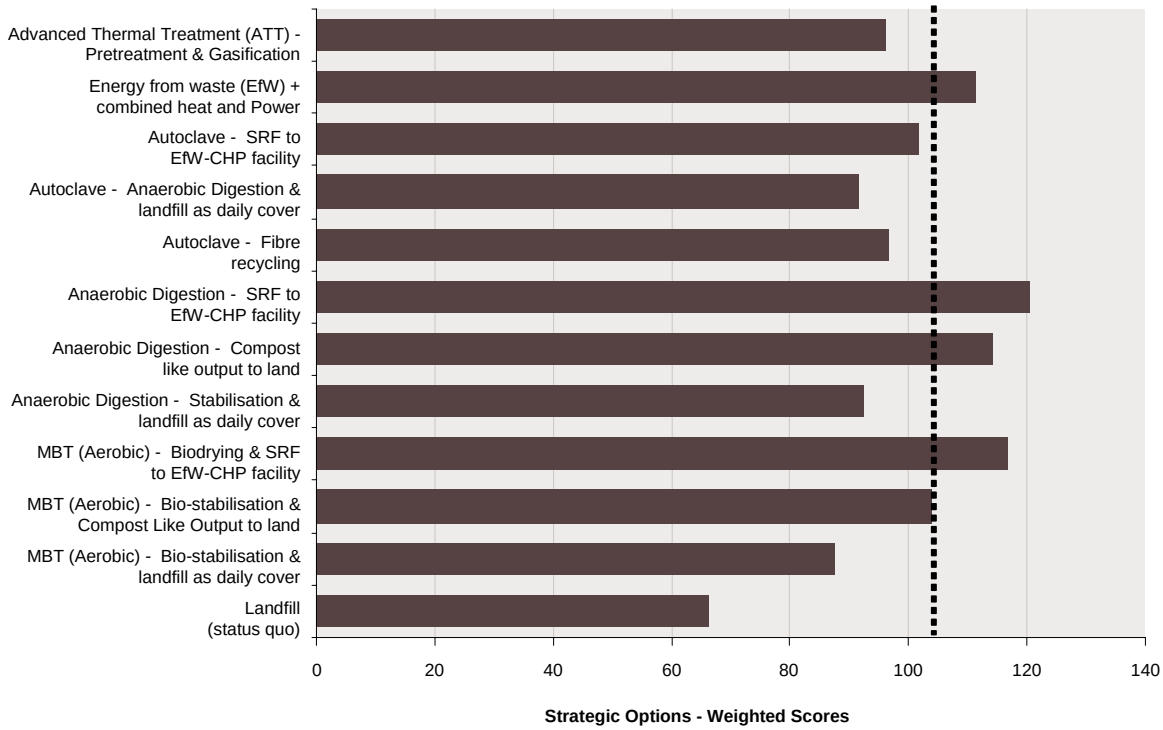
Criteria were each weighted, this was to ensure that those criteria considered more important to the partnership and the local circumstances of the Boroughs were properly reflected in the appraisal. Weightings ranged from 6 for Very highly important, down to 1 for Less important in the context of a residual treatment facility. (note not in importance in their role in overall waste management).

Each Borough officer independently weighted each criterion from 1 to 6 in terms of importance, 6 being most important. These sets of marks were compared on a spreadsheet and any large variances discussed. The average of the scores was used to calculate the final weighting. Table 14 shows the options appraisal criteria and the weighting applied to each one.

Table 14 Long list Options scoring criteria and weightings

No.	Theme	Criteria	Weighting
1	Technical	Recycling/Composting Performance	1.4
2		Landfill Diversion	5.6
3		Deliverability and 'track record' of technology	5.4
4		Off-take risk transfer	3.4
5		Interaction with collection (inc compositional risk)	2.8
6	Financial	Bankability	4.6
7	Planning and local deliverability	Regional strategic fit	2.2
8		Local site & Planning risks (incl local plans and timetables)	4.6
9		Stakeholder acceptability	3.0
10	Environmental	Environmental impacts	3.4
11		Transport impacts	2.2

Figure 4.4.1 Summary of weighted scores from long list evaluation



The scores of the top 2 options differed by only 3.6 points, and the top four performing options differed by 9.2 points. Another gap of 7.4 points separated the 4th ranked option of EfW from the next grouping of options, suggesting a distinct grouping of the top four options from the others. The base case of landfill scored just over half the marks of the top option, and was clearly the worst performing.

SLWP officers reviewed the results and it was agreed to short-list the top 4 options for detailed modelling and financial appraisal. The short listed options for the treatment of residual waste are summarised in table 15.

Table 15 Summary of short listed options

1. Base Case - Landfill
Collection services are improved to meet national targets of 50% recycling/composting by 2020, but all residual waste is sent to landfill without further treatment.
2. MBT (Aerobic Biodrying) - Secondary Recovery Fuel (SRF) to EfW
MBT facility that is primarily designed to produce a Solid Recovered Fuel (SRF). The MBT plant is configured to mechanically recover some additional recyclables, including ferrous and non-ferrous metals and a glass/grit fraction, and produce an SRF fraction, and subject the waste to limited aerobic composting. There is wide variety in the way these functions are engineered between competing technologies. The SRF is combusted in a purpose built Energy Recovery Facility. This means that there is an assured outlet for the SRF rather than depending on third party outlets. The EfW air pollution control residues are landfilled, and bottom ash is sent to regional aggregate processing companies. Following limited aerobic composting (bio-stabilisation), the remaining waste is landfilled in a partially stabilised form to assist compliance with the LATS Allowance targets. However this is not such an extended stabilisation process as in Option 2&3, and therefore achieves less bio-stabilisation.
3. MBT (Anaerobic Digestion) - SRF to EfW
Anaerobic Digestion (AD) facility configured to recover additional recyclables at the front-end, including ferrous, non-ferrous and glass, and segregate an organic rich fraction. The organic fraction is screened (mechanical or water flotation systems are available) to remove major contaminants prior to digestion. The methane is used on-site in gas engines to generate electricity. The digestion process is compliant with the animal-by-products regulations. The digestate is subject to some further aerobic composting (biostabilisation). The resulting compost like fraction is assumed to be disposed of to landfill where it could be used in landfill engineering or restoration without attracting full Landfill Tax. Some systems compost the reject fractions together with the digestate, but it has been assumed that these systems would have the same final results in terms of stabilising the waste prior to landfill. The SRF is combusted in a purpose built Energy Recovery Facility. This means that there is an assured outlet for the SRF rather than depending on third party outlets. The EfW air pollution control residues are landfilled, and bottom ash is sent to regional aggregate processing companies.
4. MBT (Anaerobic Digestion) - Compost Like Output (CLO) to land restoration
Similar to option 3, except the composting plant is configures to produce a CLO rather than SRF. This is marketed as a soil conditioner to 3rd party markets. Usually requires more front-end sorting.
5. Energy from Waste (EfW) - combined heat and power
Suitable residual waste is sent to an Energy from Waste via incineration facility. The modelling assumes a moving grate system (most common) and emission controls that meet the requirements of the Waste Incineration Directive. The EfW air pollution control residues are landfilled, and bottom ash is sent to regional aggregate processing companies.

4.5 Appraisal of short listed options to identify Reference Project

To enable a Reference Project to be selected for this OBC, further analysis of the short list options was undertaken. A mass flow model was completed for each of the short listed options, allowing key details such as size of facility, cost, material flows, residual recycling/composting rates and recovery rates to be assessed. In addition to the flow model, a WRATE assessment was undertaken to assess the likely environmental impacts of each option, including carbon. The detailed approach is provided in the report included in appendix 7.

Table 16 below summarises the facility size and cost input data modelled for each option. The 'rough order costs' for the options were compiled from Entec's internal database, including recent waste procurement projects (PFI and non-PFI projects at various stages in the bidding process) and published literature. All capital and operating costs were best estimates based on knowledge of similar schemes throughout the UK and Europe.

Borough owned sites were assumed to be used in all of the options so this was not included as a factor in the selection process. The mass flow and costings data were analysed by PWC in order to enable a Full Economic Cost analysis in line with Defra's latest Options Appraisal guidance. The overall value for money of the short-listed options and selection of the Reference Project is set out in section 4.5.3 below.

Table 16 Summary of costs used in modelling of short listed options

OBC requirement	Data	Option 2 MBT	Option 3 MBT-AD	Options 2 & 3 - SRF-EfW	Option 4 AD - CLO	Option 5 EfW-CHP
Facility number	Number of facilities	2	2	1 per option	2	2
Facility capacity	Capacity (tpa)	105,000	105,000	105,000 EfW with CHP	105,000	105,000 EfW with CHP
Capital Costs	Capex (£/t)	£270/t	£400/t	£785/t	£400/t	£720/t
	Capex (£)	**£56.97M**	**£84.4M**	**£56.97M**	**£84.4M**	**£151.9M**
Life Cycle & Maintenance Costs	Lifecycle as % of Capex	2%	Inc. in opex	Inc. in opex	Inc. in opex	Inc. in opex
	Annual Lifecycle (£)	£2.7M	-	-	-	-
Operating Costs	Opex (£/t)	£13/t	£33/t	£27/t £10/t bottom ash fraction (processing)	£33/t	£26/t £10/t bottom ash fraction (processing)
Revenue	Revenue (£/t) (electricity)	0	£11/t	£40/t	£11/t	£28/t
	Revenue (£/t)	0	£13/t	0	£13/t	0

OBC requirement	Data	Option 2 MBT	Option 3 MBT-AD	Options 2 & 3 - SRF-EfW	Option 4 AD - CLO	Option 5 EfW-CHP
	(ROCS)					
Landfill Costs	Gatefee (£/t)	Non-hazardous: £36/t escalating at RPI+1% per annum from 2022 (end of current contracts) Hazardous: £170/t from 2008 escalating at RPI+1% per annum				
Landfill Tax	(£/t)	Announced rates (£48/t from 2010/11 onwards)				

4.6 Performance of the Short Listed Options

Approach

High level mass flow modelling was completed to inform the performance of the technologies in comparison to one another. The five short listed options were then subject to detailed evaluation in terms of diversion performance, WRATE assessment, LATS Allowances, shadow price of Carbon (SPC) and financial costs.

The evaluation criteria and weightings were kept as per the Stage 1 long-list options appraisal, with the exception that evaluation of carbon impacts (global warming) was removed from the environmental criterion and was instead used to calculate the Shadow Price of Carbon (see section 2.4.4) as required in Defra guidance on the Options Appraisal process.

The detailed mass-flow modelling and WRATE assessment of the short-listed options provided data allowed for the following evaluation criteria (see table 14) to be quantified:

- 1. Recycling performance of residual treatment technology;
- 2. Landfill Diversion;
- 10. Environmental (using WRATE indicators except Greenhouse Gases); and
- 11. Transport impact.

Performance

Some key performance indicators for the year 2025/26 (after the cessation of Phase 'A' contracts and half way through the Phase B contract) are set out in table 17. M-BEAM based LATS calculations are shown in Table 18.

The Environment Agency was contacted regarding the assumptions made in relation to the reduction in biodegradability of waste being treated in the MBT facilities but it has not yet agreed a reduction factor for any UK MBT processes. It is currently revising the guidance on evidencing the reduction in Biodegradability given by the process. As such Entec used a prudent factor of 50% in the MBT option 2 (based on a biostabilised fraction), and 75% in the AD options 3 and 4 (based on a matured digestate) based on Entec's' knowledge of bids in similar procurements. Due to the inclusion of an SRF fraction in both of these options the total tonnage requiring landfill is relatively low, so the uncertainties in these figures would not have a major impact on overall meeting of LATS Allowance targets (LATS income is also not assessed in the full economic cost analysis).

The LATS Allowances in table 18 confirm that with the exception of Option 1 Landfill, all Short-listed Options meet and exceed the Boroughs LATS Allowances once the facilities come on-line. Option 5, which exclusively uses EfW for residual waste treatment, diverts the most BMW from landfill as all waste sent to the facility is deemed to be diverted. The Options comprising MBT or AD facilities combined with SRF facilities (Options 2 and 3) divert a large proportion of BMW from landfill, with AD performing better due to the more intensive biological processing. Options 4 (AD-CLO) sends the most BMW to landfill as everything that cannot be extracted for beneficial use to land or recycling is sent to landfill.

Table 17 Summary performance of the Short-list options treatment technologies

	Facility	Recycled*	Other Diversion	Landfilled
1	**Landfill**	-	-	100%
2	**MBT - SRF**	10%*	70%	20%
3	**AD - SRF**	10%*	80%	10%
4	**AD to CLO**	10%*	45%	45%
5	**EfW - CHP**	4%*	86%	10%

All values excludes the contribution of source-separation (equal between options) in order to focus on the relative benefits of the treatment technologies.

**includes some materials which are extracted for reprocessing but may not contribute to National Indicators for recycling*

Table 18 Summary LATS performance of the Short-list options

	Facility	Combined LATS Allowance (2019/20)	BMW to landfill	LATS Surplus (deficit)
1	**Landfill**	84,697	159,630	(-69,563)
2	**MBT -SRF**	84,697	28,388	61,532
3	**AD - SRF**	84,697	24,841	65,075
4	**AD to CLO**	84,697	49,671	40,274
5	**EfW - CHP**	84,697	17,747	72,162

The WRATE model uses a variety of databases to generate environmental impacts for a range of potential waste management solutions, including the Environment Agency Waste Technologies Data Centre which uses detailed data from process suppliers. The reference facilities selected to develop the WRATE model are detailed in Table 19.

Table 19 Reference technologies used in WRATE modelling

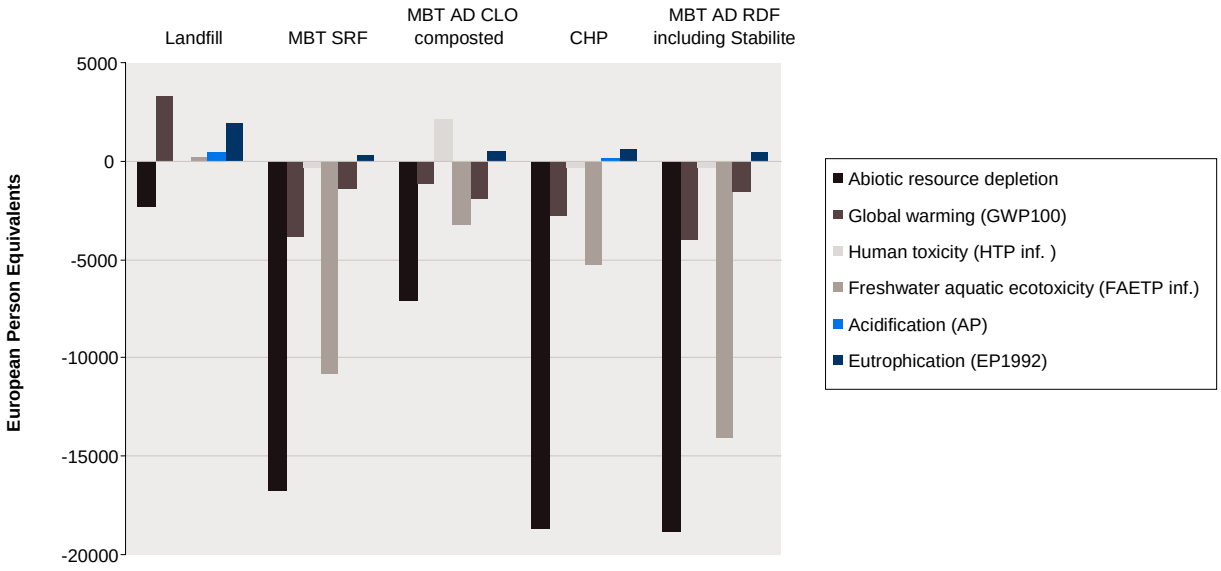
Option	Technology
1. Landfill	WRATE: Clay lined, Clay capped
2. Aerobic Biodrying – Solid Recovered Fuel (SRF) to EfW	WRATE: EcoDeco technology, with SRF going to dedicated EfW-CHP plant based on Sheffield EfW.
3. MBT (Anaerobic Digestion) – SRF to EfW	WRATE: HAASE, with SRF going to dedicated EfW-CHP plant based on Sheffield EfW.
4. MBT (Anaerobic Digestion) – Compost Like Output to land restoration	WRATE: Global Renewables technology
5. EfW CHP	WRATE: Sheffield EfW CHP (modern moving grate facility with district heat distribution and power recovery)

The key results from the WRATE analysis are shown in figure 4.5.2, with the underlying data set out in Annex B of appendix 7 (Short list report).

All of the options offer significant benefits over sending the material to landfill for the Abiotic Resource Depletion, Global Warming Potential, Acidification, Freshwater Aquatic Toxicity and Eutrophication indicators. Option 4 - MBT CLO has a worse human toxicity impact than the baseline due to heavy metal emissions to soil from the process, the other options perform significantly better than the baseline.

Overall any of the studied solutions would be beneficial compared to Option 1- landfill, however, Option 3 – MBT(AD) -SRF is environmentally the most beneficial option by a small margin. It gives the most environmental benefits for Abiotic Resource Depletion, Global Warming Potential, Human and Freshwater Toxicity indicators and also performs well in terms of the remaining 2 indicators.

Figure 4.6.1 Results of short list options WRATE assessment



Conclusion

A Reference Project selection workshop was held on 28th August 2008, attended by a lead officer from each Borough, Frank Smith (Project Director) and representation from WIDP. The key results of the short-list evaluation were presented by Entec and discussed.

The overall score and ranking of the Short-list option is summarised in table 20 and Figure 4.5.2b below. Further information relating to the scores can be found in appendix 7 (short list options appraisal).

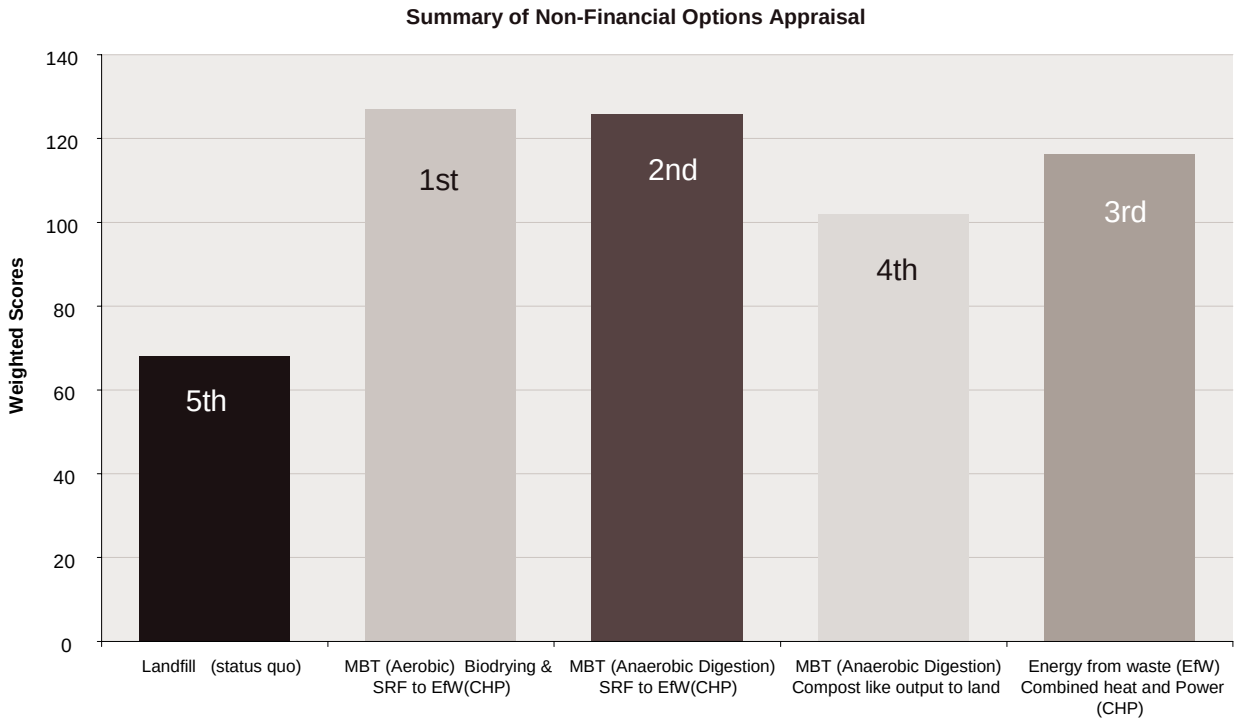
The highest scoring technical option in the non-financial options appraisal was Option 2- Mechanical Biological Treatment (MBT) in combination with a specialised EfW facility with combined heat and power (CHP) generation from the Solid Recovered Fuel (SRF). This was closely followed by Option 3 - Anaerobic Digestion, similarly with CHP generation from SRF. This indicates they would both be viable Reference Projects for the partnership. The scores between the two options would be equal if a market of the digestate product from the AD-SRF facility was to become available (thereby increasing the score for overall landfill diversion).

Energy from Waste with CHP ranks third, and Anaerobic Digestion producing a compost like output ranks fourth. Both these two options had low scores on key evaluation criteria which were considered by the partnership to be sufficient cause not to progress them through as a Reference Project as this time (see sections 4.5.4 and 4.5.5).

Table 20 Total Short-list Weighted Score and Rankings

No.	Strategic Option	Weighted Score	Ranking
1	Landfill	68	5
2	MBT (Aerobic Biodrying) - Secondary Recovery Fuel (SRF) to EfW	127	1
4	MBT (Anaerobic Digestion) - SRF to EfW	126	2
3	MBT (Anaerobic Digestion) - Compost Like Output (CLO) to land restoration	102	4
5	Energy from waste (EfW) – with combined heat and power	116	3

Figure 4.6.2 Total Short-list Weighted Score and Rankings



Cost of each option - approach

The short-list financial appraisal is based on PwC's modelling and is shown in the Full Economic Cost Report at appendix 8. It was purely undertaken to compare options not to calculate the revenue impact on SLWP's budgets. Key economic assumptions were;

- Costs are shown on a simple cash basis and the financing of capital costs assumes conventional borrowing at 6% interest.
- No assumptions are made at this stage about an alternative structure of a contract or dividing the capital into different sources of funding.
- Annual RPI of 2.5% has been applied to all operating costs and third party income, with 5% applied to construction costs.
- Nominal discount rate of 6.09% has been applied to all costs and income.
- No income, only cost, has been assumed from LATS Allowances.

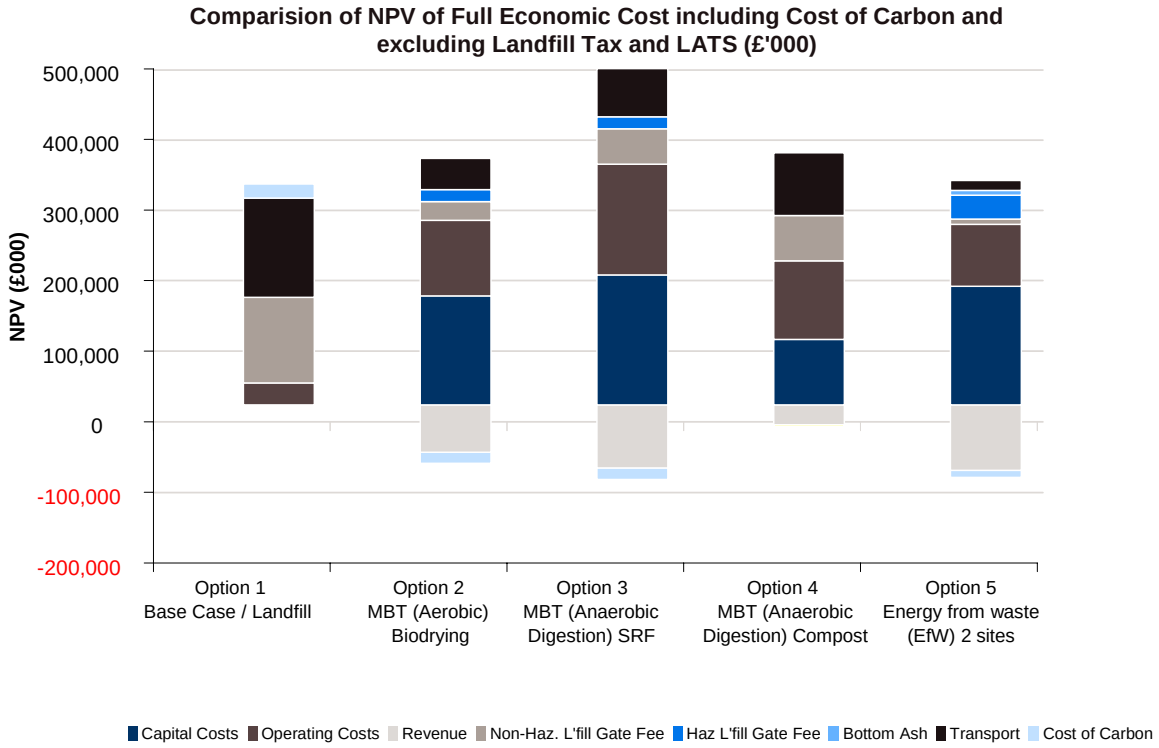
Results

The full economic costs over the anticipated duration of the contract are set out below in Table 21 and Figure 4.6.3.

Table 21 Results of Analysis of Full Economic Cost (FEC) of the Short-list

NPV £'000	Option 1 Base Case / Landfill	Option 2 MBT-SRF	Option 3 AD-SRF	Option 4 AD-CLO	Option 5 EfW-CHP
Capital Costs	0	154,203	184,350	92,762	168,009
Operating Costs	30,987	107,489	156,619	111,149	87,572
Bottom Ash	0	0	0	0	6,736
Non-Hazardous Landfill Gate Fee	121,388	26,306	49,889	64,143	7,516
Hazardous Landfill Gate Fee	0	17,038	17,038	0	34,076
Landfill Tax	109,869	21,974	41,201	49,441	10,987
Transport	140,553	44,109	68,706	89,167	14,055
LATS	21,223	5,514	5,514	5,514	5,514
Revenue	0	-67,447	-89,564	-28,435	-92,793
Sub-Total	**424,020**	**309,184**	**433,753**	**383,740**	**241,672**
Less Landfill Tax	-109,869	-21,974	-41,201	-49,441	-10,987
Less LATS	-21,223	-5,514	-5,514	-5,514	-5,514
Total	**292,929**	**281,697**	**387,039**	**328,786**	**225,172**
Cost of Carbon	19,684	-15,780	-16,307	-2,245	-10,172
Full Economic Cost	**312,612**	**265,917**	**370,732**	**326,541**	**215,000**

Figure 4.6.3 Results of Analysis of Full Economic Cost (FEC) of the Short-list

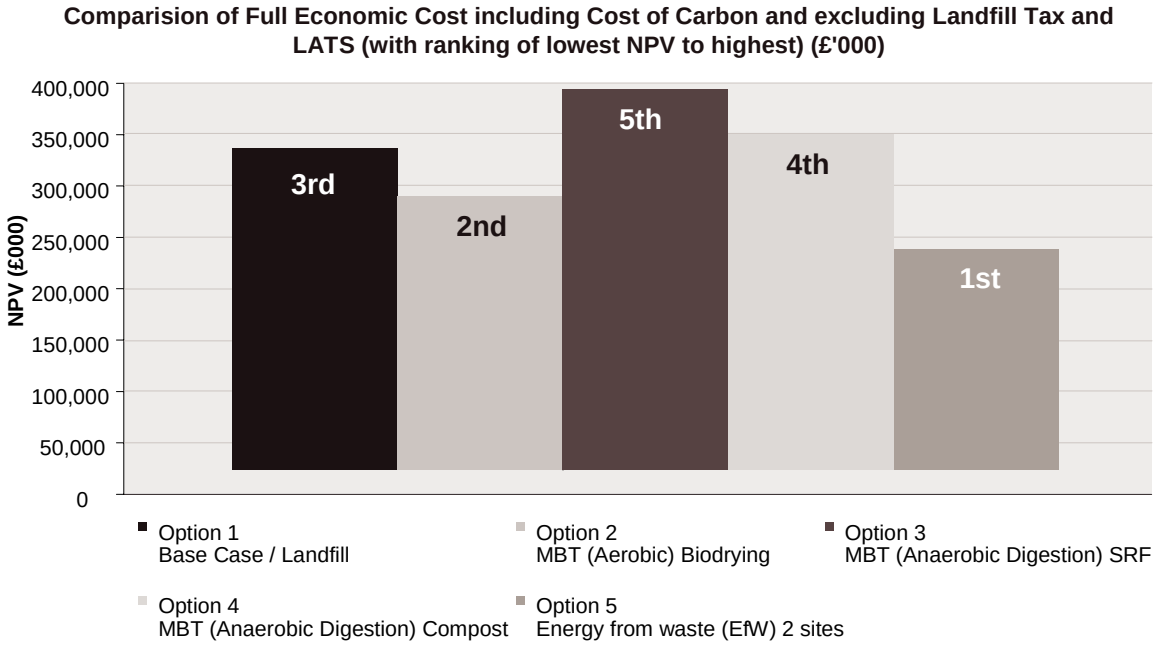


When a comparison is performed of the full economic cost including shadow price of carbon but excluding landfill tax and LATS it provides a ranking of each of the five options as set out in table 22.

Table 22 Full Economic Cost for the Short-list

Ranking	Option	NPV £m
1st	5 - EfW-CHP	215
2nd	2 - MBT-SRF	266
3rd	1 - Landfill	313
4th	4 - AD-CLO	327
5th	3 - AD-SRF	371

Figure 4.6.4 Full Economic Cost for the Short-list



Conclusion

The financial analysis shows that option 5 - EfW-CHP has the lowest NPV and option 2 – MBT-SRF has the second lowest NPV. Option 1 - landfill is ranked 3rd when the shadow price of carbon is included but the landfill tax and LATS costs are excluded. This is considered in conjunction with the qualitative scores.

Bankability

Table 23 sets out a selection of reference plants that confirm the bankability of the short list options. In terms of reference plants and bankability evidence, options 2, 3 and 5 are well established with a large number of operational plants with externally funded investment, and were given full marks. Option 4 is less established in terms of operational facilities, but has been attracting funding for future facilities, and this was reflected in lower scoring under this criterion.

Table 23 Example Reference Plants for the Short-listed Options

Technology	Example Reference Plants
MBT-SRF	MBT is a tried and tested technology in mainland Europe, including some 45 plants in Germany, and over 100 in Italy[6]. A major MBT study by Juniper detailed 27 MBT suppliers, or which 12 process suppliers has fully commercial systems (defined as two or more commercial facilities that have both operated for more than one year).[7] Similar examples of planned or operational plants (but with 3rd party markets for SRF): Shanks (Sistema Ecodeco)–East London & Dumfries & Galloway 60-120kpta, including use of Slough Combined Heat and Power Plant Hills (Entsorga) 60ktpa Veolia (WTT) Southwark 85kpta Viridor, Greater Manchester (dedicated SRF Ineos Claw energy recovery facility. In Germany alone, there are 80 installations in key industries that are using SRF, including cement plants and power generation facilities. In Europe, the cement industry utilises approximately 2.6 million tonnes/year of SRF.
AD-SRF	Similar examples of planned or operational plants: Biffa (Hese) Leicester 150ktpa – 3rd party SRF outlets Viridor GMWDA proposals –SRF and digestate output to Ineos Claw energy recovery facility. Polsche-Heide, Germany (WTT) 100ktpa Luebeck, Germany (Clarke/Hass) 125 ktpa Munster, Germany (OWS/Dranco)100ktpa
AD-CLO	Similar examples of planned or operational plants: Global Renewables' UR-3R 340ktpa Lancashire contract in construction– markets to be confirmed (tree planting) SRM-NEWS, Costessey, Norfolk 150ktpa in development – CLO markets to be confirmed (quarry restoration) Biffa (Hese) Leicester 150ktpa– minor exemption for CLO Valoga, Barcelona, Spain 170ktpa WSN (Arrowbio) 90ktpa plant under construction in Sydney Australia. Oaktech Ltd (Arrowbio) 75ktpa merchant proposal for Avondale Environmental Limited in Falkirk (CLO markets unclear).
EfW CHP	Similar examples of planned or operational plants: In 2000 there were 291 large scale EfWs processing MSW in 18 Western European Countries. Incineration is also widely utilised outside of Europe with facilities in operation in most developed countries.[8] In the UK there are CHP plants in operation in Sheffield, Coventry, Grimsby, Slough, and Nottingham. Viridor have submitted planning for a 450ktpa CHP facility in East Lothian Council

[6] *"MBT in Europe" ISWA Waste Management World, July-August 2007*
[7] *MBT: A Guide for Decision Makers – Processes, Policies & Markets." Juniper Consultancy services Ltd, March 2005. Summary Report, Figure 13*
[8] "*Incineration of Municipal Solid Waste." DEFRA, 2007*

4.6.1 Planning issues

The ability of the Reference Project to achieve satisfactory planning permission is a key risk consideration. The long-list evaluation identified medium planning and stakeholder risks across criteria 7, 8 and 9 for Option 4 - AD-CLO (due to the methane combustion plant and large land take), medium-high risks for Option 2 - MBT-SRF and Option 3 - AD-SRF (reflecting the added inclusion of a combustion element), but high risks for option 5 – a mass burn Energy from Waste facility (Option 5). (see appendix 6 Long List report).

In light of the planning risk for Option 5, with low scores of 1 across all three criteria, the partnership again considered the appropriateness of progressing an EfW based option through as a Reference Project at this point in time.

The London Plan is explicit in policy 4a.21 stating that;

"*Having regard to the existing incineration capacity in London and with a view to encouraging an increase in waste minimisation, recycling, composting and the development of new and emerging advanced conversion technologies for waste, the Mayor will consider these waste management methods in preference to any increase in conventional incineration capacity*", but notes that "*Each case however will be treated on its individual merits."*

The Greater London Authority has been strongly opposed to EfW based proposals, leading to long delays in final permission for the Cory Belvedere plant, and legal challenges to West London Waste Authority about using the Lakeside facility near Slough (also on self-sufficiency grounds). Whilst there has recently been a change in Mayor there is still considerable uncertainty over how the London Plan policies would be applied to a conventional incineration based proposal, and the exact nature of the case specific tests that would be applied. This could lead to a long planning procedure with resulting impacts on the operational timetable.

In terms of local policy, the various Borough Unitary Development Plans are supportive of waste management uses on the existing transfer station sites. The boroughs UDP's do not constrain the use of any waste treatment technologies on the three sites. Any proposals would be subject to close scrutiny against set planning criteria and the London Plan.

The partnership has also considered there are high risks on stakeholder acceptability for option 5 and it would be appropriate to undertake further discussion and public consultation around this option. The Boroughs intend to address these uncertainties through both the ongoing development and consultation on their joint Waste Strategy and further market testing with potential bidders.

No large scale sites for waste management use have been identified in the partnership areas, with the preferred borough owned sites being smaller in size (2-3 hectares) and in proximity to housing, as is common within London.

One way to mitigate site specific engineering and planning issues for Option 5 would be to build two smaller scale facilities, and therefore reduce the physical facility size, local traffic movements and emissions impacts. However this would double the site planning risk as two EfW proposals would need to progress in order to implement the option. This contrasts with MBT or AD based options which produce a fuel product that also has the potential be taken to third party facilities.

For this reason the low score of 1 on these three criteria is itself considered sufficient cause not to progress this option through as a Reference Project.

Site specific planning issues depend on the outcome of ongoing site studies, and consideration of planning issues for the partnerships sites is provided in Chapter 7.

4.6.2 Other evaluation issues

The markets for process outputs were also key risk consideration in the options selection process. Landfill capacity in the South East is diminishing rapidly, and with Beddington landfill due to close in 2022, the partnership believe a solution that has high risks failure in market outlets for any products is not a suitable long term solution for the local situation.

The long-list evaluation identified high risks for compost products from Option 4, medium risk for MBT-SRF and AD-SRF products (reflecting the recyclable fractions), and low risks for offtake from thermal processes and (see appendix 6 long list report).

The lowest performing technology option was Option 4- AD-CLO. Whilst it scored well in a number of criteria, and may be capable of being part of viable bids, the low score for market offtake risk for the compost like output was itself considered by the partnership to be sufficient cause not to progress this option through as a Reference Project at this time. Overall it is felt that Option 4 has a high degree of exposure to regional off-take markets for residues, and any market failure would make the option highly susceptible to changes in Landfill Tax, landfill gate fees, and LATS allowances, of the compost like output had to be landfilled.

Both the MBT and AD options 2 and 3 are based on technologies that have been proven in Europe for municipal waste, and have been funded, permitted and constructed in the UK context. They offer flexibility to extract further recyclables from mixed waste, and the market offtake risk for the SRF product is managed by including provision of a dedicated SRF-fed EfW facility. This SRF-EfW facility would handle wastes with a high biomass content (generally >60%), and would be compatible with a CHP network. There is also the potential for additional revenues from electrical generation from the renewable biomass fraction, either from a SRF facility (depending on the efficiency of the CHP system), and/or through the generation of methane from the biomass fraction.

4.6.3 Selection of Reference Project

Table 24 shows the overall short list options appraisal scores including both the qualitative (technical) and quantitative (financial) scores. These were divided together in order to appraise the overall “value for money” of each option, with technical and financial issues being equally weighted. The scoring of the EfW option is also highly dependant on the projected electricity revenues, and lower income levels would impact its performance relative to the MBT option.

Table 24 Combined Technical and Financial Appraisal of the Short-listed Options

	Option 1 - Base Case / Landfill	Option 2 - MBT & SRF to EfW	Option 3 - MBT (AD) SRF to EfW	Option 4 - MBT (AD) CLO to land	Option 5 - EfW with CHP
Weighted Technical Score	68.2	126.7	124.0	101.6	115.6
Technical Ranking	5	1	2	4	3
Full Economic Cost £000	312,612	265,917	370,732	326,541	215,000
Cost Ranking	3	2	5	4	1
Overall Ranking (FEC/	**4587**	**2099**	**2991**	**3214**	**1860**

technical score)					
Overall Ranking	**5**	**2**	**3**	**4**	**1**

The overall analysis undertaken for this Options Appraisal indicated that Option-5 EfW was the top ranked option, with a difference from the second ranked Option 2-MBT of about 13%. However, as noted in the deliverability section above, the planning risks are themselves considered by the partnership to be sufficient cause not to progress this option through as a Reference Project as this time. Significant resulting delays in construction for Option 5 - EFW would make the option highly susceptible to changes in Landfill Tax, Landfill gate fees, and the LATS regime. Given that the more likely scenario at this time, informed by experience from the Phase A procurement, is that other non-EFW technologies will be proposed, it is prudent for the partnership to base their affordability calculation and Reference Project on such options.

It is recognised that acceptable EfW centred solutions may become viable in the partnership areas the planning context evolves and stakeholder views (public, political, industry and the GLA) are better understood through the forthcoming review of the Joint Waste Strategy.

Overall the next best performing option was option 2 – the Biodrying MBT – SRF to EfW CHP. This presented no significant risks for the partnership (i.e. no 1s were scored for any of the criteria), but would still require management of planning risks for a smaller specialist EfW component. At the time of the options appraisal and OBC production, no credible third party market for SRF was identified. The technology neutral stance being taken in the procurement process does not prevent a market response for using SRF in a merchant facility.

Updated mass-flow modelling for the Reference Project and base-case was subsequently undertaken, utilising the projected increases in recycling and composting from each Borough (#see chapter 3). This resulted in refinements to the tonnage of residual waste requiring treatment in each year. The financial modelling assumptions were also updated and subject to sensitivity checks.

4.6.4 Key Features of the Reference Project

The selected Reference Project is Mechanical-Biological-Treatment (MBT) in combination with Solid Recovered Fuel (SRF) being treated in a specialised Energy from Waste (EFW) facility equipped with combined heat and power (CHP) generation. The key features are;

The PFI contract will be for the provision of residual waste treatment infrastructure only.

Two MBT facilities each with capacity of 106,500 tonnes, and a single SRF-EfW facility of capacity 103,000 tonnes to process the Solid Recovered Fuel. The EfW facility has on-site connections for a combined heat and power network.

Disposal/Recycling of process end products and by-products at secure markets (including landfill services as an optional Lot).

It is anticipated that the facilities will begin operation on 1st April 2014, and with be operated and maintained by the contractor for a period of 25 years.

A household waste recycling and composting rate reaching 51% by 2019/20, meeting WS2007 targets.

In order to achieve ambitious recycling and composting rates, an assumption has been made subject to final agreement from Sutton and Merton that kerbside food waste collections will be expanded over the whole partnership area following the conclusion of the current trials.

A 10% headroom has been added to the size of the facility to allow for inherent uncertainty in the waste growth and trade recycling assumptions

Table 25 Key facilities included within the Reference Project

Proposed Facility	Number of Proposed Facilities	Nominal Capital Expenditure	Capacity of Facility
Mechanical-Biological-Treatment	1	£36.2m	106,500 tonnes
Mechanical-Biological-Treatment	1	£36.2m	106,500 tonnes
Energy from Waste (CHP)	1	£97.4m	102,000 tonnes

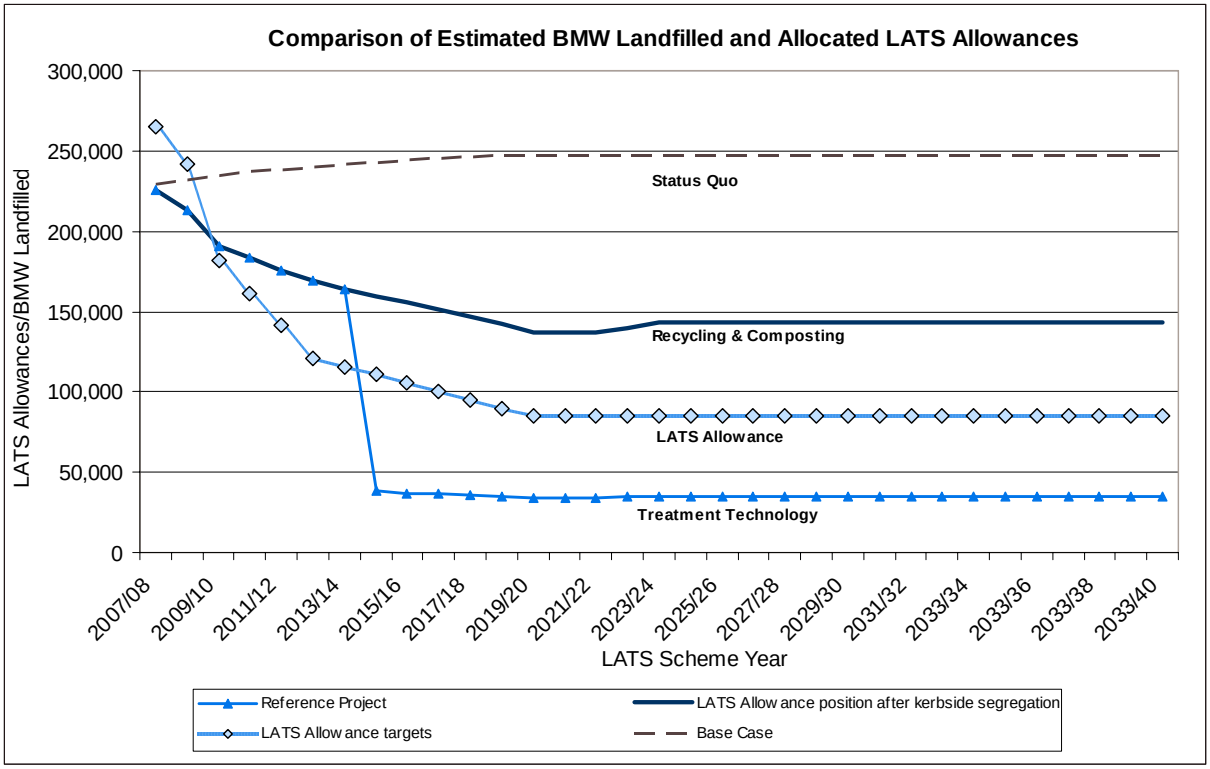
Full details of the Reference Project assumptions are provided in appendix 9 –OBC Modelling Assumptions. A summary of the facilities is provided in table 25, key performance indicators in table 26 and compliance with LATS in Figure 4.6.2a.

Table 26 Summary performance of the Reference Project

Parameter	2014/15A	2019/20	2024/25	2029/30
Recycling (NI-192)	45.79%	51.08%	51.17%	51.17%
Diversion of waste from landfill %	85.75%	87.21%	86.78%	86.78%
Diversion of BMW from landfill %	203,882	212,755	211,672	211,672
LATS Allowances available for trading (t)*	71,498	50,302	49,218	49,218

**Assuming that LATS scheme is continued beyond 2019/20*

Figure 4.6.5 LATS Allowance performance of the Reference Project



Figures 4.6.2b and 4.6.2c below presents the waste flows and facility utilisations for the Reference Project.

As the recycling rate increases, it is anticipated that the amount of residual waste requiring treatment will decrease to 193,019 tonnes in 2025/26, compared to total 213,000 tonnes MBT capacity. It is expected that the successful contractor will market any headroom capacity to ensure that the plant is operating at or near capacity, therefore ensuring operational costs are minimised.

The Reference Project assumes that a recycling and composting rate of 51% is achieved by 2020. However, the partnership has high aspirations and is keen to ensure that any residual treatment does not provide a barrier to further improvements in recycling and composting. To this end, the partnership aims to work with the private sector to ensure that other waste streams, such as commercial and industrial waste streams, or those wastes that at present are not deemed suitable for treatment, can be substituted into the facility. Based on a recent report for the forthcoming Joint Waste Development Plan[9] it is estimated there will be 750,000 tonnes of Commercial and Industrial waste generated locally in 2020. The Mayor's London Plan currently requires 70% recycling of C&I waste by 2020, which would still leave 225,000 tonnes of C&I waste requiring a disposal route which is much greater than likely spare capacity.

[9] *South London Joint Waste Development Plan Document; Building the Evidence Base for Issues and Options. May 2008. Mouchel*

Figure 4.6.6 Reference Project Wasteflows

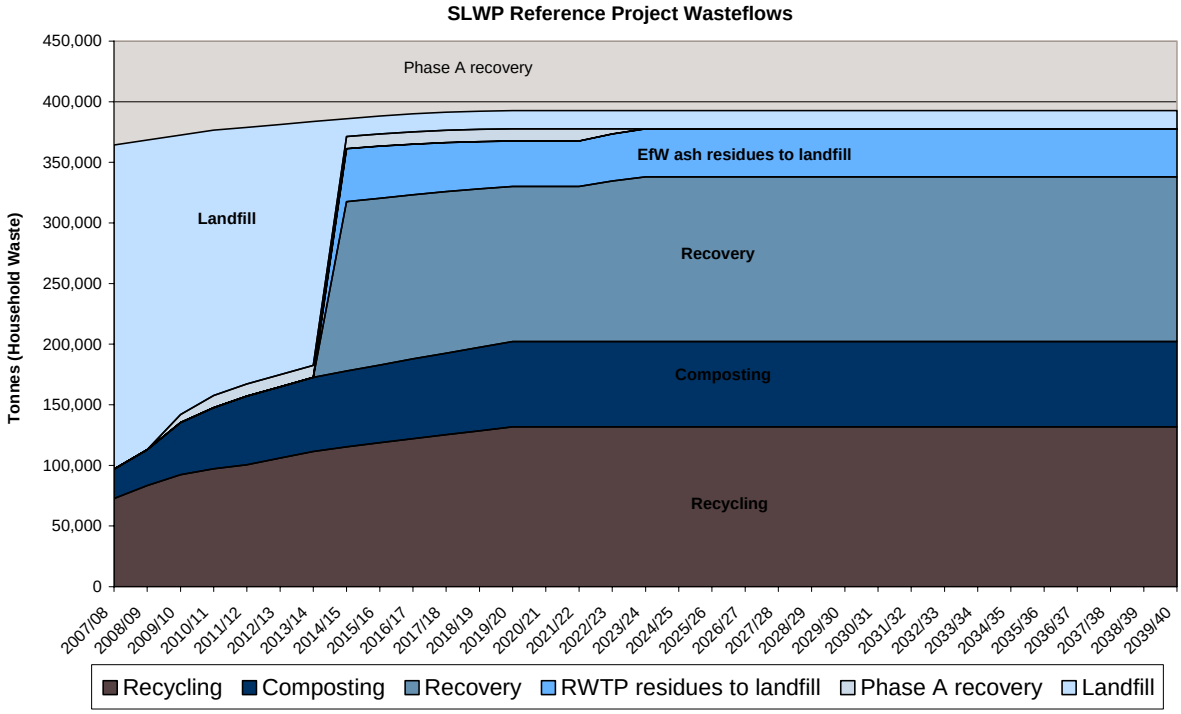
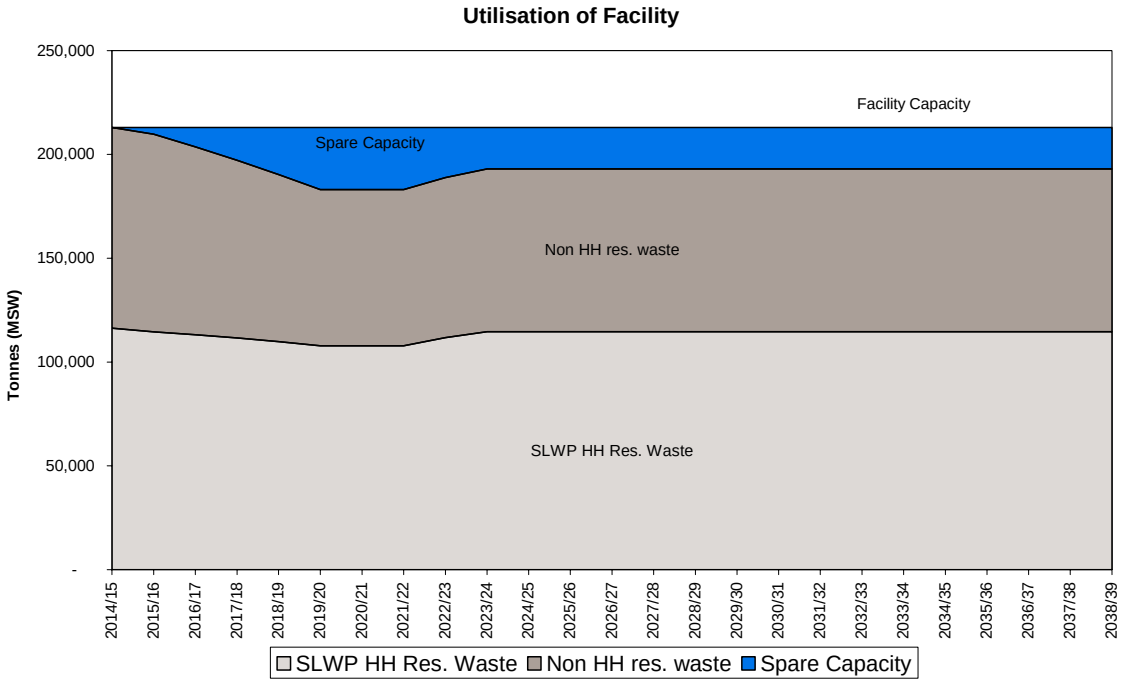


Figure 4.6.7 Utilisation of Facilities



4.6.5 Wider Strategic Issues

In producing a Reference Project at this time there are a number of wider strategic issues both at regional and local level that will need to be explored in the dialogue process.

The partnership is seeking serious proposals with regards to CHP solutions and have already met and discussed these possibilities with end users. SRF off-take is another key risk issue and again the partnership has commissioned a study to look into the possibility of setting up fuel contracts for the potential off-take. These considerations will clearly have an impact on the procurement of our solution.

Dialogue around regional policy is continuing with the GLA and the partnership's new JMWMS will need to reflect the most current thinking and not rely on policy which may become outdated during the course of the procurement. The GLA and the partnership have mutually recognised the need for flexibility on both sides given these circumstances.

There are clearly many planning issues that will need to be resolved on existing sites and the desirability of split sites against potential new sites offered by bidders both in and out of region must be considered. Unavoidably the OBC happens in something of a commercial vacuum and the partnership is keen to be flexible and respond to emerging political and commercial imperatives as the dialogue process progresses.

The partnership will stress the context of the reference project to stakeholders. The reference project is not the chosen solution or even the preferred solution but it is a technically, environmentally and financially feasible solution at this time, without the benefit of having engaged in detailed dialogue with the market and with reference to regional policy that is in the process of being reviewed.

5.0 Risk Management

5.1 Introduction

The partnership has a demonstrable track record of managing risk. It is recognised that risk management is essential to achieve successful delivery, both in terms of delivery of a successful procurement, and the contracted services. This section outlines the partnership's approach to risk management.

The partnership routinely carries out an assessment of project risk, which has also been used to identify and prioritise additional works streams and mitigate quickly the risks on current workstreams. A risk register was used through the first phase of procurement and the partnership are also aware of the risk allocation positions inherent within SOPC4, as a consequence of using it as a base contracting model during phase 'A'.

The Project Team and Advisers appreciate the risks associated with the Project. To be successful and provide the best value for money, optimal apportionment of risk between the partnership and private sector must be achieved. That recognises that risk should be borne by the party that is best able to manage it.

In a project of this nature there are certain unavoidable inherent risks. Therefore, the Project Team are committed to manage, monitor and control the inevitable risks whilst avoiding the introduction of additional risk where possible.

Risk and uncertainty will be reduced in the following ways, to increase market interest:

- Project scope clearly defined;
- top level ownership in the partnership with clear mandate from the Executive of each participating authority - giving confidence to the market;
- the partnership's joint Waste Strategy with its participating authorities who are the collection authorities;
- realistic timetable for procurement process;
- clear selection and evaluation criteria;
- adequate valid data and supporting information provided to bidders;
- land and planning issues being resolved at an early stage;
- good resourcing of the Project Team to respond quickly and effectively to bidders.

In developing this OBC, detailed risk analysis and modelling has been undertaken including optimism bias, risk transfer, sensitivity analysis, value for money, assessment and affordability. These sections are to be found throughout the respective parts of this OBC submission.

5.2 Risk management process

The Project Team recognises there are two main areas of risk for the Project:

- risk to the partnership in delivery of the procurement, and;
- risk to the delivery of the procured services.

In undertaking a number of workshops with the Project Team and Advisers both aspects above have been considered in detail.

Risks to the partnership will be managed, monitored and controlled by the Project Director with individual risks assigned a 'risk owner'. The partnership has been using a risk register format since June 2007, which was adopted following a risk workshop. The register was employed extensively through phase 'A' and used as a tool to aid the management of the procurement process.

The risk register is broken down into a series of categories such as planning, technical, financial, etc. The register uses a traffic light or RAG (red, amber, green) system and multiplies the likelihood of a risk by its impact both on a 1-5 scale giving a maximum red risk score of 25.

Green risks are those scoring 1-8, amber those scoring 9-15 and red those scoring 16-25. All of this will no doubt be very familiar to Defra as the format follows OGC best practice guidance and was originally derived in consultation with 4ps on a schools PFI and developed by the Project Director.

The register will continue to be updated and reviewed by Officers of the Management Group and advisers. Reviews are carried out monthly by the partnership's Management Group and then a report of red risks and risks which have changed colour are reported to the Joint Waste Committee.

A risk workshop was held on 25th September to provide the latest copy of the register for inclusion in the OBC. The risk register for October 08 is appended for information and it should be noted that many risks raised during the Phase 'A' procurement although closed off during phase 'A' remain live for Phase 'B'.

5.3 Risk Allocation Matrix

The risk allocation matrix was updated at a partnership workshop in September 2008. One of the partnership's strengths is in its recent experience and understanding of allocation positions, which were reviewed in the light of the recent Competitive Dialogue discussions held with a number of bidders in the waste industry.

The contract signed in Phase 'A' was substantially founded upon SOPC4 principles and codes. Accordingly, as a result of this background and experience, the project team is suitably placed to achieve a successful outcome for Phase B.

Having recently awarded a contract using the competitive dialogue process, the partnership is uniquely positioned to understand the likely stance on key issues such as planning risk, compositional changes, guaranteed tonnages, performance and incentivisation and financial issues such as indexation and bench marking.

The risk matrix is appended in appendix 4. It has been given full consideration by the Management Group and the Project Director who led previous discussions and negotiations.

Again the partnership would like to stress that its positions are arrived at with input from a team of people who have discussed the situation in recent months and are acutely aware of the commercial and legal implications.

5.4 Project Agreement

The partnership intend to use the standard form WIDP project agreement, assuming it is available for use at the relevant time under advice from the same Eversheds legal team who closed the first contract using competitive dialogue (as mentioned above).

The partnership has confidence that there is mutual understanding between it and Eversheds, who have received a copy of the WIDP draft, of the implications of the Project Agreement and there is awareness of likely key contractual issues. The partnership sees this as key to speedy progression of issues and resolution towards a satisfactory contract completion.

5.5 Service Delivery Plan

A service delivery plan for residual treatment was produced for the Phase 'A' procurement and as such the level of understanding and readiness around this document is advanced. The partnership's technical lead who led many of the detailed technical discussions around the Delivery Plan remains in place for the PFI procurement.

5.6 Payment Mechanism

The partnership has fresh experience of setting up and developing a Payment Mechanism, with PWC as lead advisers, through the procurement of contracts in Phase 'A'.

The Payment Mechanism provides the financial incentive for delivering the Output Specification whilst ensuring risk transfer in conjunction with the Project Agreement. It is intended that the principles of the Payment Mechanism will be based on the framework of the 4ps Waste Procurement Pack Payment Mechanism taking account of project specific issues and appropriate market precedent.

The Boroughs will pay the Service Provider a Unitary Charge for the delivery of the service identified within the Output Specification. The Payment Mechanism will also encompass measures to provide the necessary incentives to the Service Provider with regard to recycling and diversion from landfill targets and the wider performance of the waste management service.

The broad principles of the payment mechanism are as follows:

- Payment for services only when availability and performance is achieved;
- Risk transfer to the Service Provider in line with their obligations; and
- Provides a financial incentive for the Service Provider to perform in accordance with the Output Specification.

The payment mechanism sent to potential Service Providers as part of the bidding process will be developed to ensure it incentivises performance irrespective of the technology solution proposed. Throughout the Competitive Dialogue process it may be necessary to make adjustments to ensure the underlying principles are maintained for the actual technology solution selected.

Third Party Income

The Boroughs are aware of the potential value that can be created through the treatment of waste. Bidders will be encouraged to guarantee third party income where possible to help reduce the price payable. However it is also accepted that bidders may not be able to guarantee all potential third party income and as a result the Payment Mechanism will include provision for sharing the potential upside.

Indexation

Although the contract will require the general transfer of long term cost risk to the private sector it is recognised that the Service Provider will wish to protect itself against inflation over the life of the Project. This will be a requirement from the Service Provider to ensure the deliverability and bankability of the Project, but should also avoid the Boroughs having to pay for unnecessary risk pricing. It is therefore proposed that the Unitary Charge will, in part, be subject to indexation. Bidders will propose a proportion of the Unitary Charge that will be subject to indexation taking account of the underlying cost structure of the Project including the value of funding repayments. In line with the Boroughs' budgeting process it is expected that RPIx will be the standard inflationary measure however bidders may be invited to propose alternative approaches where they can demonstrate improved value for money and affordability.

Performance Monitoring

The Boroughs intend for the PFI contract to be based on self-monitoring as far as possible. However, it is appreciated that there will need to be a dedicated team representing the Boroughs who will carry out the performance monitoring of the contract and will be responsible for confirming the detail contained within the monthly invoices and performance reports provided by the Service Provider.

5.7 Markets for Process Outputs

In agreement with Essex County Council, the partnership appointed Entec in September 2008 to undertake a study of SRF and CHP end users. The work had two phases, a desktop study of potential users drawing on a range of sources followed by direct contact and follow up meetings to outline the opportunity for guaranteed supply of fuel and or heat at an economic rate which offers significant financial benefits.

The partnership is aware that the availability of a single SRF offtake contract may not provide sufficient commercial certainty for it to underpin diversion from landfill performance throughout the proposed contract period in a project finance transaction. Therefore the partnership will evaluate the likely take up off off-take contracts over a range of periods.

The SRF/CHP desktop study was completed in October and a second phase of follow up meetings is to be held with potential users through October and November. A finalised report showing the results of this study will be forwarded to support the OBC.

As the partnership will offer bidders the opportunity to propose alternative technologies to the Reference Project it may have to evaluate proposals with significantly different market outlets, such as Solid Recovered Fuel or forms of compost-like-output. In these situations the respective bidders will be expected to supply details of how they propose to ensure that secure long term markets exist for all outputs and what contingency arrangements they propose for outlets that fail. Bidders will also be expected to supply copies of relevant contracts with outlets. The security of outlets will be an important element in the evaluation criteria.

For the Reference Project the following market assumptions have been made:

Recyclables

A zero value has been assigned to recyclables derived from the treatment process to reflect uncertainties in their quality and the net profit following transport and processing costs. The income from source-segregated materials is separately managed as part of the current contractual arrangements. Any credit that is received from the sale of mixed waste derived recyclables would be considered a bonus by the Boroughs.

Electricity & Heat

It is anticipated that electricity generated from the facility will either be exported to the National Grid or to a local user. Electrical energy from the SRF plant is assumed to be worth £35/MWh (e). The market for electricity is relatively stable and while there may be some uncertainty regarding the precise price, the availability of a market is not considered an issue. This conservative pricing provides appropriate risk mitigation and the potential for upside is greater than downside risk, with expectations that it could readily reach a minimum of £50/MWh (e).

The selected Reference Project includes EfW with, if practical and best value, a CHP system. CHP is dependant on finding a suitable user of the heat/steam within the locality of the facility. While the infrastructure required to deliver a CHP solution will increase project costs, it is assumed that the increased revenue generated from the sale of the heat and the Renewable Obligations Certificates (ROCs) and Levy Exemption Certificates (LECs) would mean the scheme will be at worst, cost neutral to the project. WIDP have also suggested to us that there would be additional capital support for CHP projects.

The modelling undertaken to date has therefore assumed zero revenue for CHP. Essentially the heat market should be viewed as an opportunistic benefit to the project and the environment but failure to achieve this does not alter the project structure in any substantive way as the next best solution is a power only EfW. All energy production has therefore been modelled as electricity above. At the highest level it is deemed reasonable that a CHP scheme would only be commercially attractive if it could generate the same revenues as an electricity only scheme. Whilst this approach may therefore underestimate total revenues it is deemed prudent for modelling the Reference Project and associated affordability

Energy from Waste Residues

Whilst still subject to partnership finalisation it is anticipated that the procurement will require bidders to be responsible for all downstream disposal requirements including any landfilling or disposal of all specialist waste streams. The quantities to be moved will be relatively small although the partnership will encourage bidders to explore the possibility of neutralising the fly ash locally and or marketing it as a reagent for other industrial processes.

Incinerator bottom ash (IBA) constitutes approximately 25% of the input tonnage to an EfW facility. The Reference Project flow modelling has assumed that the IBA is reused, and a cost of £20/t is incurred including transport. The IBA can be reprocessed and used as a secondary aggregate and make building blocks or can be used in road building. A recent study by the Chartered Institute of Waste Management (CIWM 2006) suggested that approximately 50% of IBA is recycled in the UK. However, the market is growing and in other countries up to 90% of the ash is recycled and in the modelling only 80% has been assumed to be recycled: below what is technically possible. Thus the conservative assumptions on the valuation and proportion recycled provides sufficient risk mitigation within the relevant Reference Project.

Flue gas treatment (FGT) residue / air pollution control (APC) residue / fly ash constitutes approximately 5% of the input tonnage to an EfW facility, and is classed as hazardous and usually disposed of in specialist landfill sites. The modelling undertaken has assumed that disposal to a hazardous landfill site is required, and a cost of £160 per tonne (disposal and transport) plus landfill tax has been modelled. Recent developments have, however, indicated that the material can be combined with other hazardous material to produce a non-hazardous substance, which can then be sent to a non-hazardous landfill site.

5.8 Balance Sheet treatment

Current regulations under the Local Government Act 2003 require that, based on proper practice, if an authority determines that the liabilities arising from the PFI transaction do not require the authority to recognise a fixed asset in the Balance Sheet, then it is not a qualifying liability and is therefore excluded from the definition of a credit agreement. Currently, the Local Authority Code of Practice defines proper practice as Financial Reporting Standard 5 (FRS 5) – "Reporting the substance of transactions – Application Note F" and the Statement of Standard Accounting Practice 21 (SSAP 21) "Accounting for leases and hire purchase contracts".

An initial review of the relative property risks associated with the proposed PFI Contract for the proposed Residual Waste Management PFI Project has been undertaken and advice has been received from the Boroughs' External Financial Adviser, PwC, (attached as Appendix 10 and this is expected to lead to an assessment by the Chief Financial Officers that, based on the information and advice provided to them, and in accordance with proper practices, no liabilities will arise which will result in the Boroughs being required to recognise a fixed asset in any balance sheet required to be prepared by the Boroughs in accordance with such practices for the financial year in which the agreement will be entered for the purposes of Regulation 3 of the Local Authorities (Capital Finance and Accounting) (England) Regulations 2003.)

It is anticipated that the Financial Reporting Standards currently applicable in the UK will be replaced by the International Financial Reporting Standards in Local Government from the financial year 2010/11. However, the CIPFA / LASAAC Joint Board are due to issue the 2009 SORP exposure draft in the next two months, and it is probable that the exposure draft will incorporate the HM Treasury IFRIC 12-based guidance (that is already published in the iFReM), so that it applies to Local Authority accounts for 2009/10

6.0 Project Team and Governance

6.1 Governance background

The partnership, in consultation with Defra and 4P's, agreed the following three stage approach to ensuring the governance arrangements were suitable both now and for the future.

These arrangements have enabled the joint procurement of three waste contracts this year. The Joint Waste Committee make recommendations to their respective Executives, who then approve execution of a contract through the procuring authority. The procuring authority for the partnership is the Royal Borough of Kingston.

The three stage framework for governance included:

- **Stage 1: Informal joint working (2004 – September 2007)**
  This stage looked at the benefits of joint procurement and progressed the first half of the phase 'A' procurement.

- **Stage 2: Formalising a joint committee structure (September 2007 – to date)**

- **Stage 3: Assessing the options for a new Joint Waste Authority (August 2008 – tbc)**

The movement to stage 2, to a more legally binding Joint Committee structure offered greater strength and certainty to the partnership and industry during the formal procurement. This was further cemented by the Inter Authority Agreement (IAA) which delivered a basis upon which Sutton could join the partnership in procuring three new contracts after terminating an existing integrated contract.

Having moved to the second stage the partnership needs to consider the political, commercial and policy/Joint Waste Strategy issues which will inform the decision as to the preferred ongoing Governance structure.

The partnership's Shadow Board (the group that predated the establishment of the Joint Waste Committee) considered in some detail the best governance arrangements for the partnership. The Shadow Board concluded that the formation of a Joint Waste Committee was the best approach. This approach was recommended to the Executive / Cabinet of each borough and the necessary decisions were taken to establish the Joint Waste Committee.

In concluding this was the best arrangement the Shadow Board had previously considered a report at its meeting on 26 April 2007 where it reviewed the new legislation being taken through Parliament by DEFRA to allow the voluntary formation of new Joint Waste Authorities. Whilst this was an option that would only be available in the future the Shadow Board did conclude that a phased approach with the formation of Joint Committee in the short term and consideration of a new voluntary Waste Authority, once the legislation was available, would be feasible for the partnership.

At its meeting on 28 August 2008 the Joint Waste Committee agreed to explore the feasibility of establishing a Joint Waste Authority under the new legislation. And to that end it was agreed that an expression of interest should be submitted to DEFRA.

The partnership understands that DEFRA has allocated £500,000 for 2008/09 to support the development of proposals for joint waste authorities, and anticipates that a portion of these funds will be available for supporting the exploration of the partnership's case to form a Joint Waste Authority.

6.1.1 The Inter Authority Agreement

A key measure of the partnership's ability to work together is the creation of a legally binding Inter Authority Agreement. This agreement faced a number of challenges not least the need to find an equitable and rational costs basis for the each borough to procure in partnership. With some contracts coming to an end for landfill and disposal and for HRRC's this was readily justifiable for some of the boroughs for some of the services.

However, other boroughs had more delicate issues to balance in joining the partnership. Not all boroughs were in the same position for all of the services the partnership intended to procure and therefore the move to a partnership contract required termination of existing contracts or in-house services.

These decisions had to be made on the basis of a clear business case which considered both the costs and service quality of new arrangements. Sutton had an integrated contract for all of the services the partnership were seeking to procure and therefore had a complex decision to make, as to whether they should joint the partnership. Sutton's business case suggested they should join in the new contracts and terminate the existing contract. Sutton incurred a cost for this termination and they had to make a Business Case for this decision and be financially supported by the three partnership boroughs in meeting the termination costs.

In turn the boroughs themselves had to be able to justify paying Sutton compensation on the basis that they were better off with Sutton in the partnership. The political and financial complexities around such arrangements would have led to the collapse of a weaker partnership. The IAA offers genuine testimony to our commitment to working together in providing mutual benefits and working to overcome challenges.

Similarly, Merton had an in-house HRRC service and they had to make a business case for taking on the new service, which had TUPE staffing implications.

While much has been achieved in binding the partnership together we are mindful of the need to avoid complacency in the face of the many challenges that still lay ahead. We are keenly aware of the risks and issues that a waste procurement generates and we are alive to the strains these may place on the partnership.

6.2 Member Governance Arrangements

The partnership is steered by a Joint Waste Committee comprising of cabinet members of each of the four boroughs. The committee is currently chaired by the Leader of the Royal Borough of Kingston, Derek Osbourne and the vice chair is Councillor David Simpson, of Sutton. The chair is rotated annually and is due for renewal in June 2009. Officers of each authority and the Project Director attend monthly meetings and report to the Joint committee.

The member committee is attended entirely by cabinet members and has a mixed liberal-Democrat and Conservative representation. It is fair to say that the thrust of the Committee's attitude is towards providing the best possible service delivery and members of the committee are keen that waste remains an important but apolitical issue.

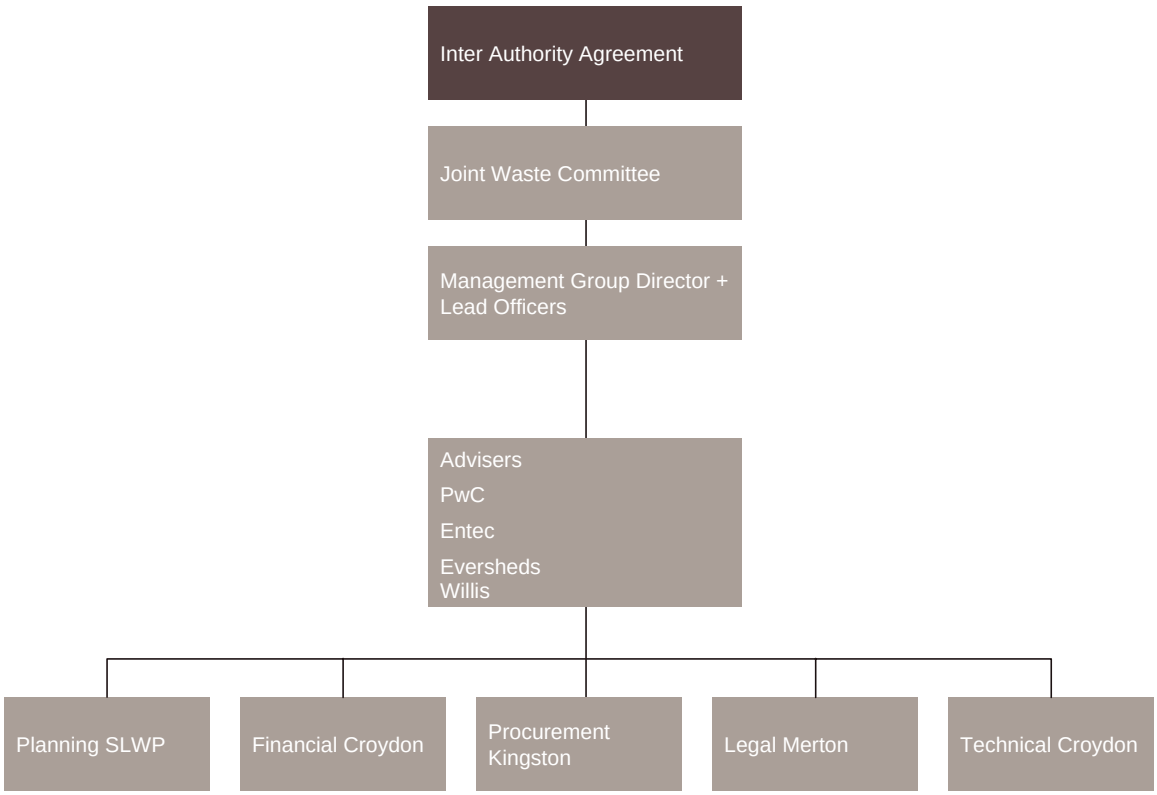
6.3 Officer Governance Arrangements

At Officer level, the partnership has a Management Group consisting of two officers from each borough, usually a services Director or Assistant Director and the Head of Waste Management. The role of rotating chair of the Management Group falls to the same authority as the chair of the Joint Committee. Thus the Chair currently rests with Rob Dickson, the Service Director for Environment and Sustainability at the Royal Borough of Kingston. In the absence of the Chair the Project Director Chairs the Management Group. RBK also currently acts as lead authority on procurement matters for the partnership, with Merton leading on legal issues. Croydon lead on financial, technical and governance issues, Sutton are leading on property and contract payment set-up.

The partnership has three jointly procured members of staff. A Project Director, a Joint Waste Development Planning Document Project Manager, who provides planning liaison and a Contracts Manager.

The partnership operates on the basis that all these duties will be shared among the boroughs and allocated on the basis of the skill set and experience of Officers and where practicable the most equal distribution of roles among the boroughs. The structure below shows the ongoing governance and management structure. In addition to this Sutton have led on the setting up of contract payment systems for the phase 'A' contracts. Sutton were also the lead on technical matters until the Technical Lead, Malcolm Kendall, moved to Croydon, where he has retained his role with the partnership.

Figure 6.3.1 Management and Decision Structure for SLWP



6.4 South London Waste Partnership: Management Group Personnel

The project team have the distinction of being one of only two to complete a Competitive Dialogue procurement in the waste industry. This was achieved with a team of advisers led by PWC that will be replicated for the Phase B procurement. SLWP were keen to retain not only the consultancy organisations but also the individuals within those organisations.

A brief explanation of the internal project team roles and advisers biographies are provided.

At this moment in time it is also worth noting that the officers of the Management Group were all involved during the first phase of procurement and so have current relevant experience. They are all committed to be involved in the fortnightly Management Group meetings and will attend Dialogue meetings on an ad hoc basis, or as necessary in their capacity as a Lead Officer.

The Project Director will lead the negotiations and be accompanied by the Project Leads for all dialogue meetings in which their area is on the meeting agenda.

The partnership have formed a very productive team that have the experience of project managing waste CD at both a macro and a micro level. Key lessons were learned in phase 'A' as to how best conduct this process, including the timing of key discussion items, frequency and nature of meetings and format and shape of dialogue meetings. Again, all of this will be invaluable in managing the process, stakeholder inputs and decision making.

During the dialogue process key positions were arrived at by the consensus of the Management Group, presented by the Project Director and relevant lead officers and discussed with bidders. Significant changes or deviations from positions were discussed with the full Management Group to ensure all boroughs in the partnership were involved in the process of making key strategic decisions.

Chair of the Management Group

This position currently rests with Rob Dickson, the Director for Environment and Sustainability from Kingston. Rob has sat on the Management Group since its inception and has been a key figure in pulling the partnership together. He was particularly involved in finalising the partnership's strategic and commercial position and closing dialogue during Phase 'A'.

Project Director

Frank Smith has held this position since the commencement of the Phase 'A' procurement in May 2007. On behalf of the partnership he led the Competitive Dialogue negotiations and oversaw the procurement of the three phase 'A' contracts. He was responsible for overall project management of Phase A. Frank has managed both waste and Building Schools for the Future programmes within the PFI framework and has also worked on the private sector side of a PPP.

Technical Lead

Malcolm Kendall has been the technical Lead since the partnership's inception. He provided quality assessment of the work of the technical advisers and was an ever present and key figure on the Competitive Dialogue of Phase 'A' contracts. He acted as moderator to the technical aspects of the evaluation of Phase 'A' contracts. He is the Head of Waste Management for the London Borough of Croydon.

Strategic Financial Lead

Richard Simpson is the Financial Lead on Strategic Waste Procurement. He worked closely with financial advisers and again quality assessed their work. He was involved in the financial evaluation around the Phase 'A' contracts and the financial discussions during the Phase 'A' Competitive Dialogue. Richard is the Head of Strategic Financial Planning for the London Borough of Croydon.

Legal Lead

Andrew Smith has been the partnership's legal lead since December 2007. He was involved in the legal aspects of the Competitive Dialogue including the derogations from SOPC 4 which was used as the base document for the purposes of contracting in Phase A. Andrew has also led on the pulling together of the Inter Authority Agreement and the work necessary to facilitate the completion of the Phase A contracts.

Joint Waste Development Planning Document Project Manager

Emma Smyth has been the Project Manager since June 2007. She has acted as the liaison point between the procurement and planning project teams and has had a key role to play in briefing members of the Joint Waste Planning Group. She was involved in planning discussions during the Competitive Dialogue and had a key role in giving early indication of planning risk on numerous proposals. Emma will continue in this capacity through the Phase B procurement and her role in mitigating arguably the principle risk area will be pivotal to yet another successful procurement.

Management Group Officers

It is worth reiterating that all the Officers of the Management Group included below were involved in the Phase 'A' procurement and thus have current experience with the waste industry and competitive dialogue. They are all on board to now be involved in the Phase 'B' procurement.

Peter O' Connell – Service Director Environment, London Borough of Sutton

Peter has been involved with the partnership since its inception. He was involved in the competitive dialogue and procurement decision on Phase 'A' contracts. He was additionally required to lead the London Borough of Sutton in making the Business Case for Sutton's inclusion or otherwise in the Phase 'A' contracts. This decision was a key element in providing the basis for the Inter Authority Agreement.

Matthew Clubb – Head of Waste Management, London Borough of Sutton

Matthew has been involved in the Competitive Dialogue negotiations on behalf of the partnership. As a former accountant he has also been heavily involved in producing the business case for Sutton's inclusion in the Phase 'A' contracts. Matthew supports Richard Simpson on strategic financial issues during the procurement.

Sue Harris – Assistant Director Environment, London Borough of Merton

Sue was involved in the Phase A procurement and led a key decision on Merton's inclusion in the Household Reuse and Recycling Centre contract. This was significant inasmuch as it had considerable TUPE implications for the resident in-house service. Sue's role was to garner political support for this decision once the business case was made.

Cormac Stokes – Waste Services Manager

Cormac provided key technical inputs into the Phase 'A' contracts and alongside the technical lead, Malcolm Kendall, was responsible for moderation of the technical assessment. Cormac was also involved in dialogue meetings and technical specification of, as well as considerable member briefing for the decision on Merton's inclusion in the HRRC contract. He led on the production of Merton's Business Case to enter the HRRC contract which involved replacing their in-house service.

Ian Stupple – Director Street Scene and Waste Management, London Borough of Croydon

Ian chaired the Management Group in 2007/2008 through the award of Phase 'A' contracts and approval of the Inter Authority Agreement. At Croydon, Ian was involved in the successful TUPE transfer and has presented a number of reports through Cabinet Committees including approval of the OBC and Reference Project.

Jim Brennan – Interim Head of Waste Management, Royal Borough of Kingston

Jim was previously Service Director for Environment at Croydon and chaired the Management Group in 2006/07 in this capacity. Latterly Jim has overseen the mobilisation of the Phase 'A' contracts alongside the Interim Contracts Manager and works alongside Rob Dickson to represent Kingston on the Management Group

In what is a brief synopsis, we have not fully done justice to the level of strategic decision making with the attendant complexities that each of these boroughs have faced. Suffice to say that it is rare to have a project team with such relevant current experience allied to a demonstrable ability to work successfully together. This much is evident in the legally binding Inter Authority Agreement and the Phase 'A' contracts that each of these individuals has done much to create.

6.5 Procurement of External Consultants

A consortia led by PwC as financial consultant, was brought on board for the Phase 'A' procurement. The consortia included Entec as technical consultants, Eversheds as legal consultants and Willis as insurance consultants.

One of the evident strengths of the consortia was in the coordinated and efficient approach to working engendered by PWC acting as the coordinating or 'lead' adviser. Given the success of the Phase 'A' procurement against an exceptionally challenging timetable SLWP were keen to retain the services of an advisory team that had proven individuals who worked effectively together and individually.

SLWP are in the fortunate position of having worked for the past 18 months with all of the advisers involved in the Phase B procurement and having a good deal of faith in them as individuals and in their organisations.

In August 2008 a two day OBC workshop was held in which lessons learned were discussed frankly and openly. Key matters for consideration were the timetabling for the procurement, readiness of documentation, important strategic and political decisions, and key commercial discussions with bidders and risk profiles both commercial and delivery risks.

The scope and budget (see section 8.2 procurement costs) for advisers have been completed and there is a full understanding of the relative roles of internal time commitment required against advisory commitment. A full project plan and resource plan is now being

worked up to describe the relative roles and commitment of the entire 'project team' by which we mean both SLWP staff and consortia advisers.

6.6 Advisory Team Profiles

The advisers are coordinated by PWC whose role is described as that of 'lead adviser'.

6.5.1 PwC Project Team Members

John Gibbs is a Partner in PwC's Corporate Finance Public Private Advisory team and is responsible for the waste management portfolio in PwC and has extensive UK and international PFI/PPP experience gained principally on waste management, water and wastewater transactions.

John is as a highly experienced adviser supporting clients across all stages of major PFI/PPP deals in the waste, water & wastewater sectors. Since 2002, John has led the PwC waste team advising public sector Waste Disposal Authorities on successfully closed PFI deals in Cambridgeshire, Northumberland and Cornwall. More recently he has advised SLWP through the successful procurement of three interlocking waste contracts in Phase A, and worked with clients in Wakefield, Leeds, South Yorkshire, Coventry/Solihull and West of England. In addition he is recognised as one of the leading bidside advisers in the waste sector having worked with Viridor, Cory, WRG, Veolia and Ineos Chlor. He has played a pivotal role in the Greater Manchester Waste PFI as lead adviser to Viridor Laing on the main PFI and Ineos Chlor on the linked Runcorn EfW plant.

Georgina Taylor is a Consultant in PwC's Government and Public Sector team and is the Project Manager for the advisory consortium to SLWP, having advised SLWP since April 2007 on its Phase 'A' contracts.

She holds a BA degree in Accountancy and Finance, and belongs to the ICAEW as a qualified chartered accountant. Georgina has a sound knowledge of public private partnerships and over the past 4 years has specialised in advisory services to the waste sector. Georgina is familiar with the recently published 4ps Payment Mechanism and is a pivotal member of the waste team in PwC.

Georgina's relevant experience includes advising West of England on their waste PFI project (to be procured under the Competitive Dialogue procedure) where she is currently leading our advice, and advising Northamptonshire, Milton Keynes, Leeds and Lewisham on waste projects through from options appraisal to financial close.

6.5.2 Entec Project Team members

Steve Blackburn is an Associate Director and specialises in waste procurement services, including preparation of Outline Business Cases, preparation of bidder questions and evaluation criteria, pre-qualification shortlisting, appraisal of tender submissions, preferred bidder negotiations and contract close. He co-ordinates the technical inputs from various disciplines, including planners, process engineers, and financial analysts. He was technical project manager for the Central Berkshire PFI for 6 years, and recently closed the Southwark PFI project. He is currently Entec's Project Director for the South London procurements, the first phase of which recently closed under the Competitive Dialogue process.

Steve is also experienced in many elements of municipal waste management, including baseline data analysis; waste characterisation; best practice reviews of technologies; Best Value reviews; options evaluation; transport modelling, and stakeholders consultation meetings. He has also appeared as an Expert Witness for a Waste Local Plan Public Inquiry.

Ken Rigby is a Technical Director and is responsible for the Waste Strategy and Procurement Team at Entec. He is a Chartered Wastes Manager and has over 25 years' consultancy and commercial experience and for the last 15 years has specialised in waste management. His key skills include strategy development and PFI procurements, together with public consultation, partnership working, and development of recycling and commercial opportunities, collection logistics, waste transfer and contractual issues.

In addition to the South London PFI project, Ken is currently acting as Project Director on the following projects: GMWDA PFI, Suffolk PFI, Barnsley, Doncaster and Rotherham (BDR) PFI, Cumbria PPP.

6.5.3 Eversheds Project Team Members

Tim Costello is a Partner in Eversheds' Project and Infrastructure Finance Group. Tim qualified as a solicitor in 1971 and has practised in the commercial, banking and corporate fields, giving him a range of relevant experience. He joined Eversheds in 1994 and has been involved in PPP projects in waste, housing, education and transport for local authorities and contractors.

Tim's relevant experience includes advising Derbyshire County Council and Derby City Council and Staffordshire County Council on their waste PFI projects (both of which are being procured under the competitive dialogue procedure), Worcestershire County Council and the County of Herefordshire District Council on the reconfiguration of their waste project, and Medway Council on their waste project. He advised the seven Nottinghamshire District Councils on their proposed arrangements with Nottinghamshire feeding into Nottinghamshire County Council's waste project. Tim led the team that successfully completed the Wrexham waste PFI project.

Lucy Plowright is an Associate in Eversheds' Project and Infrastructure Finance Group, specialising in PFI and PPP projects, with experience in a number of sectors including waste, energy and renewables, education, custodial, leisure, streetlighting and highways/toll roads.

Lucy has been advising the partnership on its "Phase A" contracts for reception/transfer, HRRCs, Materials Recovery, Composting and Additional Treatment since April 2007. Lucy has assisted on a number of other waste projects in the past five years including Greater Manchester, Wrexham, Southwark, Central Berkshire and Jersey.

Lucy is familiar with standardised documents and guidance including SoPC4, the WIDP residual waste management procurement pack and Defra derogations guidance. She is co-editor of Eversheds' regular "Focus on Waste" newsletters and is a member of the Chartered Institution of Wastes Management (CIWM) and the Associate Parliamentary Sustainable Resource Group.

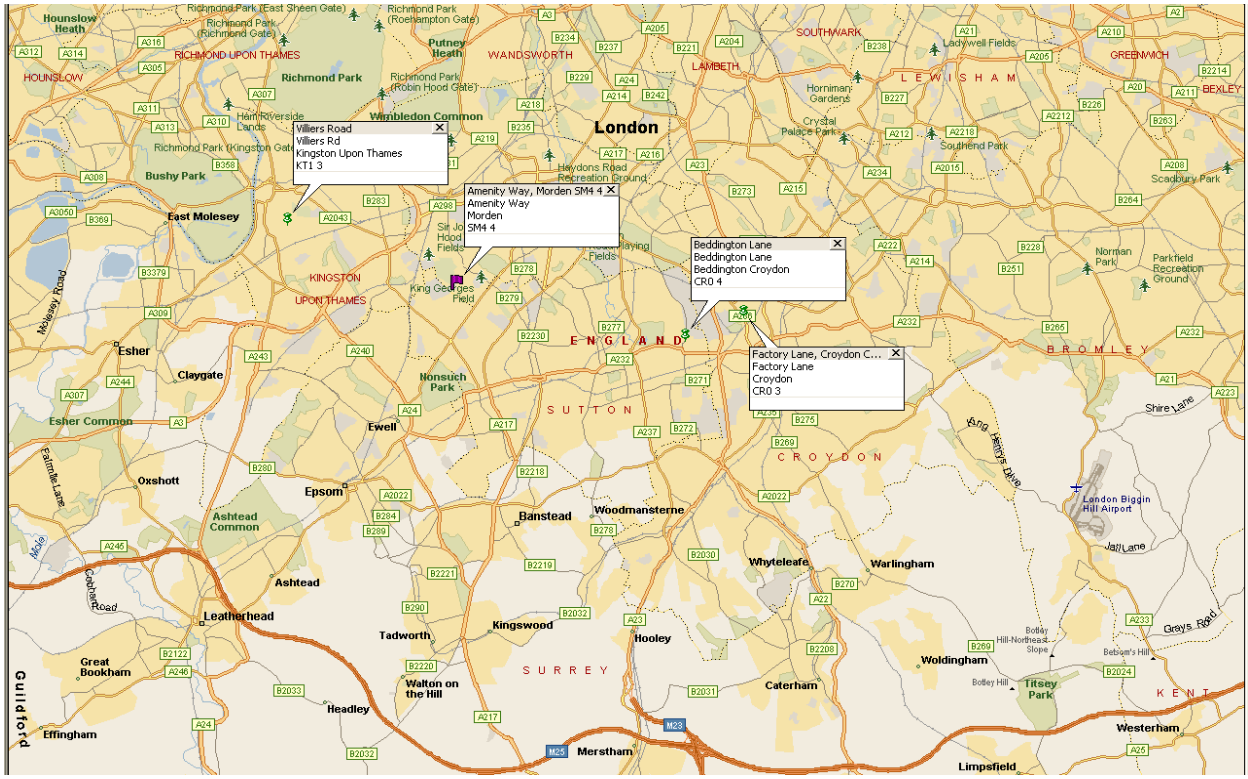
7.0 Sites, planning and design

7.1 Introduction

The sites identified for the Reference Project are owned by the partnership boroughs and detailed below in Figure 7.1.

- Villiers Road, Kingston (2.1 hectares)
- Factory Lane, Croydon (1.9 hectares)
- Garth Road, Amenity Way, Morden in the borough of Merton (2.5 hectares)

Figure 7.1.1 Location of sites identified for the Reference Project, the Beddington Lane landfill site is also marked for reference and to show proximity to the reference sites.



All are in existing waste management use and serve as each borough's waste transfer station and reuse and recycling centres. The future of these site's existing activities would be taken into account in the bidder assessment stage of the procurement process should bidder's proposals identify these as preferred sites,

As highlighted in question 2 of the Planning Healthcheck (which appears within appendix 11), existing UDP policies for the three boroughs with sites support in principle the redevelopment of these sites into waste treatment facilities. The existing and emerging local and regional

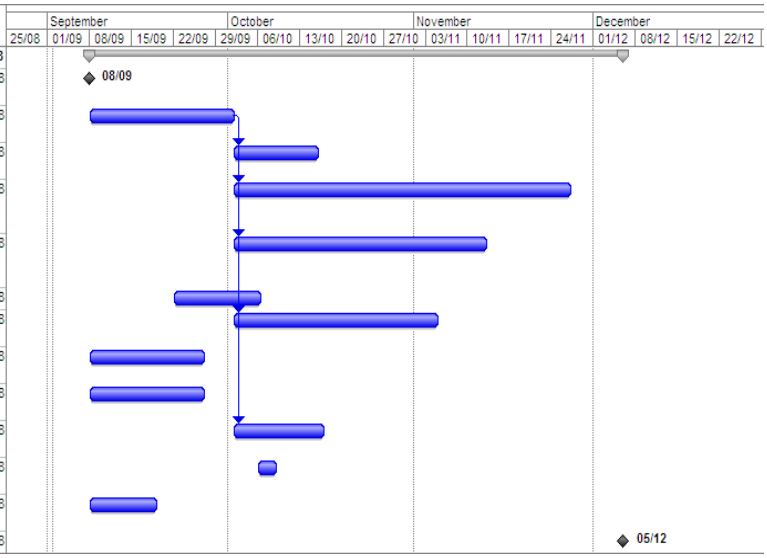
policy context is also supportive and is explored further in question 2 of the Planning Healthcheck.

A sites suitability report is currently being prepared by Entec to identify whether the three sites are capable of delivering the infrastructure of the Reference Project, namely two MBT sites, each handling 106.5ktpa of residual waste and one thermal treatment plant/EfW handling the SRF. The sites suitability report being prepared includes the studies listed in Figure 7.2 below. The reports from all of these studies will be produced as the Partnership's Appendix 16, and forwarded as they are ready and as described in the Gantt chart below.

The three sites are large enough to accommodate the Reference Project technologies. Initial findings from the sites suitability report, together with the favourable policy context (described in question 2 of the planning healthcheck) indicate that there would be no impediments to successful planning permission for the Reference Project at this stage. The studies currently underway will provide further details on the sites' suitability. These will be submitted to Defra in line with the timetable in Figure 7.2 below and should be considered alongside this OBC.

Figure 7.1.2 Timetable of the preparation of site-specific studies to inform this OBC

ID	Task Name	Duration	Start	Finish
0	**OBC Site Assessments**	**65 days**	**Mon 08/09/08**	**Fri 05/12/08**
1	Start assessments	0 days	Mon 08/09/08	Mon 08/09/08
2	Draft conceptual layouts	18 days	Mon 08/09/08	Wed 01/10/08
3	Site suitability reporting	10 days	Thu 02/10/08	Wed 15/10/08
4	Bioaerosol risk assessment, dust and odour and road traffic emissions	40 days	Thu 02/10/08	Wed 26/11/08
5	EfW emissions, dust and odour assessment	30 days	Thu 02/10/08	Wed 12/11/08
6	Ecological Assessment	10.5 days	Mon 22/09/08	Mon 06/10/08
7	Landscape and Visual Assessment	24 days	Thu 02/10/08	Tue 04/11/08
8	Phase I Land Quality survey	15 days	Mon 08/09/08	Fri 26/09/08
9	Utilities Assessment Stage 1	15 days	Mon 08/09/08	Fri 26/09/08
10	Utilities Assessment Stage 2	11 days	Thu 02/10/08	Thu 16/10/08
11	Flood Risk – EA Liaison and FRA Scope	3 days	Mon 06/10/08	Wed 08/10/08
12	Transport Opportunities and Constraints Assessment	9 days	Mon 08/09/08	Thu 18/09/08
13	Complete assessments	0 days	Fri 05/12/08	Fri 05/12/08



The three sites are included as 'broad locations' for waste management sites within the emerging Joint Waste Development Plan Document (please see Figure 9 on Page 31 of the Joint Waste Plan Issues and Options Consultation Document which appears as an Appendix to this OBC). In line with Defra Criterion15, the South London Waste Partnership is an active stakeholder in the development of the Joint Waste Development Plan Document (DPD), having already responded to the Sustainability Appraisal Scoping Report which was consulted on between 1st July and 5th August 08 and the Issues and Options consultation, which took place between 19th September and 31st October 2008. As outlined previously in Section 6 of this OBC, the Joint Waste DPD's Project Manager regularly attends Management Group meetings and will keep the partnership informed of sites' suitability throughout the development of the Plan. The emerging Joint Waste DPD is being prepared in line with regional policy which includes the policy that, "boroughs should protect existing waste sites and facilitate the maximum use of existing waste sites, particularly waste transfer facilities and existing landfill sites."(London Plan Policy 4A.24). Because of the support of local, regional policy and the partnership's active involvement in the development of the Waste DPD, the partnership is confident that the sites will remain within the emerging Waste DPD as suitable for the development of future waste management facilities.

The partnership and its advisers have experience of the due process involved in gaining planning for new waste facilities.

The partnership is aware of the risk of delay which planning issues can bring and has built in a 2-year delay into the affordability model (see Section 8 for more information) to mitigate this risk. The partnership has formed close liaisons with the GLA throughout the development of its earlier Expression of Interest and throughout the development of this OBC. The partnership will continue to work closely with the GLA to mitigate any planning risk from the Mayor's office.

7.2 Site identification

As detailed in the planning healthcheck, the sites identified are in existing waste management use. The three sites brought forward represent feasible locations upon which the reference project facilities can be placed.

7.3 Securing the sites

As detailed previously and in the following planning healthcheck, the three sites are in the ownership of the partnership. The leases on each of the sites allow for movement of existing services in order to be redeveloped for residual waste.

7.4 Planning Healthcheck

The Health Check is attached at appendix 11.

7.5 Design issues

The partnership is committed to ensuring that all new waste management development is designed to minimise its impact on the environment. Planning Policy Statement 1: Delivering Sustainable Development states that 'sustainable development is the core principle underpinning planning' (para 3). The London Plan has also given greater weight to the Mayors SPG on Sustainable Design and Construction, for example reference has been added to overheating, materials, energy use and water resources.

It is anticipated that the standards for design will take into account national, regional and local guidance on design quality including the DEFRA Designing waste facilities guide due for publication Autumn 2008, and;

Relevant national publications;

- The Department for Culture, Media and Sport's (DCMS) publication, Better Public Buildings
- Treasury Taskforce Technical Note 7, How to achieve design quality in PFI projects
- The 4ps publication, Achieving Quality in Local Authority PFI Building Projects.

Relevant London-wide publications;

- The London Plan (February 2008)
- The Mayor's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

- The Mayor of London's Energy Strategy 2004
- Mayor's Climate Change Action Plan 2007
- The Mayor of London Sustainability Checklist (at www.londonchecklist.co.uk)

Relevant Borough publications;

- Existing Unitary Development Plans
- Royal Borough of Kingston - Sustainable Construction Supplementary Planning Guidance (Feb 2004).
- Royal Borough of Kingston - Design and Access Statements: Supplementary Planning Advice Note (April 2008).
- Croydon – Preparing Deign Statements Advice Note (May 2005)
- Merton - Draft Sustainable Design & Construction Supplementary Planning Document (July 2007)
- Sutton - Sustainable Design & Construction, Draft Interim Planning Guidance (Nov 2007)
- Sutton - Urban Design Guide Supplementary Planning Document (Jan 2008)

The Boroughs requires sustainability issues to be addressed in Design and Access Statements illustrating how sustainable design, construction and energy efficiency have been integrated into the design. This is consistent with the supplement to PPS1 Planning and Climate Change, which promotes the use of design and access statements to explain how a development would minimise carbon emissions through elements of its design.

The key topics that bidders will need to address are;

- **Re-use -** Re-use of land and buildings
- **Natural Systems -** Maximising the use of natural systems
- **Energy -**Conserving energy, materials and water resources
- **Materials -** Conserving energy, materials and water resources
- **Water -** Conserving energy, materials and water resources
- **Pollution & Flooding -** Reducing the impacts of noise, pollution and microclimate effects
- **Comfort & Security -** Ensuring developments are comfortable and secure
- **Natural Environments -** Conserving and enhance the natural environment and biodiversity
- **Waste -** Promoting sustainable waste behaviour
- **Sustainable Construction -** Promoting sustainable construction practice

These issues can be addressed in waste developments by a variety of means, for example by: renewable energy technology; orientation and layout of buildings to maximise solar and other natural benefits; energy management systems; grey water recycling systems; sustainable drainage systems; energy efficient equipment; avoidance of air conditioning; and use of non-toxic, recycled or recyclable building materials.

The London Plan (February 2008) requires that developments need to achieve a 20% reduction in carbon dioxide emissions from on-site renewable energy generation (Policy 4A.7 Renewable energy). All development proposals that require a Design and Access Statement should therefore demonstrate as part of that statement how the 20% requirement will be met, or any site specific factors which constrain on-site generation. A Renewable Energy Standard Form (Creative Environmental Networks, 2007 - www.cen.org.uk) to help local authority officers to assess the renewable energy components of an application is likely to be required from bidders.

Bidders will be expected to undertake a preliminary assessment under the relevant BREEAM (Building Research Establishment Environmental Assessment Method) scheme, undertaken by a BRE accredited assessor (see Guidelines SDC2 and SDC3), and to indicate the costs to achieve a 'very good' rating. Planning applications will also be expected to include a commitment to submit a 'design stage certificate' before construction can start on site and to undertake post construction review (PCR).

The partnership also proposes to seek guidance from the Commission for Architecture and the Built Environment ("CABE"), and will require bidders to engage with them to review conceptual designs.

Design quality indicators (DQI) will form part of the bid evaluation criteria and will be set out in the draft Output Specification and include:

- Quality standards – a requirement to comply with British Standards and codes of practice or European equivalents, Egan principles (minimisation of construction waste, supply chain management) , approved quality manuals, good industry practice, legislation, health and safety legislation and guidance, fire safety requirements, guidelines issued by CABE, and relevant Borough policies

- Sustainability – a requirement to meet the Government's carbon emission challenge (see section below)

- Workmanship – a requirement that all persons employed in connection with the works will be skilled and experienced in their professions/trades.

Where demolition is necessary, the contractor will be expected to consider safely removing the most valuable or more contaminating materials and fittings for later re-use or processing before work commences as described by ICE and London Remade in the Demolition Protocol, 2003.

In terms of construction materials, bidders will be expected to refer to the 'Green Guide to Specification' a publication produced by the Buildings Research Establishment (BRE) which assigns ratings to various materials depending in their environmental credentials. Therefore from this the value for materials can be assigned to the various elements of a building with the basic building elements rated for their use of materials. These cover the following areas:

- Frame

- Ground floor
- Upper floors
- Roof
- External walls
- Internal walls
- Foundation/substructure
- Staircase

8.0 Costs, Budgets and Finance

8.1 Introduction

This section will:

- set out the budgetary provision which the South London Waste Partnership Authorities have made for the procurement of the waste management activities included within the Reference Project (Section 8.2);
- estimate the cost (cash terms) of the Reference Project (Section 8.3);
- outline the assumptions supporting the likely bankability of the PFI element of the Reference Project (Section 8.3);
- demonstrate that the PFI element of the Reference Project represents Value for Money for the South London Waste Partnership Authorities, using HM Treasury Value for Money guidance (Section 8.4);
- outline the indicative affordability position of the Reference Project for South London Waste Partnership Authorities collectively and individually, and highlight the effect on the affordability position for sensitivities carried out on key assumptions (Section 8.5);
- compare the cost of the Reference Project with the 'Do Minimum' scenario (Section 8.5);
- outline the methodology agreed by the Authorities for apportioning the costs and income of the Reference Project (Section 8.5);
- confirm Member commitment to the indicative affordability position of the Reference Project (Section 8.6 and 8.7);
- compare the cost of the Reference Project against an alternative technology solution of EfW with CHP (Section 8.7);
- compare the cost of the Reference Project funded through Prudential Borrowing to PFI (Section 8.9); and
- outline the LATS Strategy in place between the Authorities (Section 8.10).

The collective financial appendices for this section are contained in appendix 12 and further referenced 8.1, 8.2 etc as outlined in this section.

8.2 Procurement Costs

The following provisions for internal and external procurement costs set out in table 26 are included in each of the Authorities' Medium Term Financial Plans:

Table 26 Indicative Procurement Costs for Procurement Phase

	2008-09	2009-10	2010-11	2011-12	Totals
1. Project Management / Core Team: Staff, on-costs, IT support, accommodation, etc	150,000	155,000	160,000	165,000	**630,000**
2. Communications: Miscellaneous design, print and expenses	20,000	20,000	20,000	20,000	**80,000**
3. Waste Minimisation and Recycling: Support for potential future joint initiatives	176,000	363,000	561,000	772,000	**1,872,000**
5. PHASE B - OBC to contract award -					
External advisers: Technical, Financial, Legal	250,000	500,000	750,000	350,000	**1,850,000**
Internal Service Management Support: Finance, Legal	75,000	75,000	75,000	75,000	**300,000**
Land Acquisition, Site Investigations, Planning advice	100,000	100,000	100,000	100,000	**400,000**
6. Miscellaneous Joint Work - Waste-flow modelling, Composition Analysis	50,000	50,000	50,000	50,000	**200,000**
Sub-Total	**821,000**	**1,263,000**	**1,716,000**	**1,532,000**	**5,332,000**

8.3 Costs of the Reference Project using Private Finance

A shadow bid model has been prepared to give the best possible estimate of the likely costs to South London Waste Partnership of procuring the residual waste treatment facility using PFI.

The shadow bid model has been constructed using cost inputs (for capital, lifecycle. operating costs and third party income) provided by South London Waste Partnership working in conjunction with their external technical advisers who have applied assumptions based on their extensive knowledge of the market. In addition to these cost inputs, the Authorities' external financial advisers have applied a number of other cost and financing assumptions that a PFI Service Provider may include such as project finance, bid development costs, Special Purpose Vehicle (SPV) set-up costs and tax.

The Unitary Charge is estimated at £31.6m in the first full year of operations in 2014/15.

A summary of the key PFI Reference Project financial model assumptions is provided in Appendix 12, 8.1 with the Whole Life Cost Model in Appendix 12, 8.2 all financial Appendices are collectively gathered in appendix 12 and have a reference to their section, thus 8.1, 8.2 etc. The resultant PFI Unitary Charge is summarised in table 27 below:

Table 27 PFI Unitary Charge included in Reference Project

	Nominal (indexed)
Total Unitary Charge	£920m

The financial model also includes all other non PFI costs to give the best possible estimate of the likely cost to the Authorities of procuring those waste management activities not included within the PFI. An outline of this scope is included in Section 4. The financial model has been constructed using cost inputs (including gate fees, transport costs, landfill tax, LATS fines) provided by the Authorities working in conjunction with their external technical advisers who have applied assumptions based on the actual contract rates from Phase 'A'. These costs have then been indexed, as appropriate, for each year. A summary of the non PFI financial model assumptions is provided in Appendix 9. The resultant non PFI costs are summarised in table 28 below.

Table 28 Non-PFI Costs included in Reference Project

	Nominal (indexed)
Total Non-PFI costs	£1,111m

Bankability

In terms of bankability, waste PFI has in recent years seen an increasing use of limited recourse project finance rather than corporate finance, with an enlarged group of lenders becoming familiar with the sector and its standard terms. This has coincided with a large number of new entrants to the waste market who have invested in PFI in other sectors and who have credibility with lenders.

It is recognised that the 2008 'credit crunch' has created exceptional difficulties for sponsors currently seeking to finance deals and resulted in higher debt pricing than that seen immediately before the current crisis began. However the general view in the banking markets remains that, while the market will take time to achieve renewed stability, interest in project financing of waste PFI projects remains high with pricing expected to come down from current peaks over time. In undertaking their procurement, the Authorities will work closely with their advisers to ensure that any PFI procurement is conducted in such a way to attract maximum competitive interest from lenders taking account of any potential barriers to funding that remain once the current crisis has been brought under control.

The Authorities are confident that at the point that they will be seeking funding, the market conditions will exist to ensure strong competition and deliverable finance, at rates lower than those available in the market as at October 2008.

Consequently the financial modelling assumptions used in the preparation of this OBC incorporate funding terms for senior debt which the financial advisers believe are a reasonable reflection of expected pricing for well-prepared waste PFI deals with appropriate risk apportionment and strong commercial structures once markets return to normality.

8.4 Value for Money (VfM)

In order to confirm that the preferred PFI procurement route is likely to deliver VfM, in comparison to traditional procurement, the Authorities have utilised the HM Treasury's Stage 2 "Value for Money Assessment Guidance" as issued in November 2006. The Authorities believe that the characteristics of this project indicate that the PFI procurement route is appropriate, and are confident that the proposed project meets the viability, desirability and achievability requirements set out for PFI.

The Authorities are mindful of HM Treasury guidance that the VfM for Soft Facilities Management should be considered in the qualitative assessment, but consider that for a waste treatment plant it is not appropriate to consider any services as Soft Facilities Management since all services are integral to operation of the plant.

PFI contracts will be suitable where significant risk transfer offers good value for money to the public sector. For new build projects, the contractor has responsibility for design and construction, and is in a position to price efficiently for lifecycle, continuous maintenance and for facilities management. In light of this assessment, the Authorities are of the view that since the residual waste treatment facility is new build, value for money will be maximised where only these facilities are procured within a PFI contract.

This requires the Authorities to undertake a dual approach to VfM appraisal, the two aspects of which are:

- Qualitative evaluation; and
- Quantitative evaluation.

The qualitative VfM evaluation table can be found at Appendix 12, 8.3 and the quantitative VfM evaluation can be found at Appendix 12, 8.4.

Qualitative Evaluation

The first assessment undertaken was to determine whether PFI is an appropriate procurement route for this project. This is covered through a qualitative evaluation.

HM Treasury's qualitative VfM assessment tool seeks answers to a series of questions regarding the Viability, Desirability and Achievability of the project. The questions, in each section of the assessment, lead to the Authorities making a statement confirming the suitability of PFI as the chosen investment option. In line with HM Treasury Guidance, the Authorities have provided a Stage 2 qualitative assessment, and are of the view that a PFI contract is Viable, Desirable and Achievable. This view supports the findings of the quantitative assessment which are that the project delivers VfM when compared to a traditionally procured project. The full qualitative assessment can be found at Appendix 12, 8.3, and is summarised in the table below.

Table 29 Qualitative Evaluation Summary

Qualitative Factor	Question	Authorities Response
Viability	Overall, in considering PFI, is the accounting officer satisfied that suitable long term contracts can be constructed, and that strategic and regulatory issues can be overcome?	The Authorities are satisfied that a contract structure can be arrived at that: • Meets the strategic aims and objectives of the partnering Authorities for waste management; • States service requirements in clear output based terms; and • Will satisfy all regulatory requirements.
Desirability	Overall, is the accounting officer satisfied that PFI would bring sufficient benefits that would outweigh the expected higher cost of capital?	The Authorities are satisfied that the PFI contract will bring sufficient benefits to outweigh an expected higher cost of capital through: • Risk transfer which aims to deliver innovation, deliver assets on time and to budget and transfer future costs which could be subject to fluctuation; • Certainty of high quality service delivery during the contract term achieved through performance and payment mechanisms; and • Use of a design, build, finance and operate (DBFO) contract, which will ensure the construction and subsequent operating cost benefits are linked.
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?	The Authorities are satisfied that the procurement programme is achievable given that: • The appropriate level of internal resource is committed to the project, supported by experienced consultants who have worked together for Phase 'A' of the waste strategy; • The management of the project will be based on standard project management techniques and all staff are appropriately trained; • Soft market testing has provided positive feedback; • Procurement will maximise the benefits of a competitive process; and • The project seeks a risk sharing framework with which the private sector is familiar.

Quantitative Evaluation

The Authorities have also undertaken a quantitative assessment to support the qualitative assessment comparing the Net Present Value (NPV) of a Public Sector Comparator (PSC) adjusted for project risk, optimism bias and taxation inputs.

The quantitative assessment of value for money is based on HM Treasury's "Value for Money Assessment Guidance" as issued in November 2006, and the Authorities have utilised the Treasury VfM spreadsheet format provided, with reference to the accompanying Treasury Model User Guide. This is attached as Appendix 12, 8.4.

The two procurement methods being compared in the VfM analysis can be defined as:

PFI Option – The public sector procures through the UK's Private Finance Initiative, and lets a long term Design, Build, Finance and Operate (DBFO) contract to the private sector, who construct and maintain the asset and perform the associated service.

PSC Option – The public sector procures through a conventional approach, using direct payments for capital. For the purposes of the VfM analysis it is assumed that the public sector lets a design and build contract for the construction of the asset, then subsequently lets separate operating and maintenance contracts, leading to a greater level of risk residing with the public sector than under the PFI option.

Key Input Assumptions

The Authorities have input the values contained within the Shadow Bid Model (Appendix 12, 8.2) into the Treasury spreadsheet in Appendix 12, 8.4.

Under HM Treasury guidelines, there is no formal PSC; the PSC is effectively calculated within the HM Treasury spreadsheet based upon inputs derived from the Shadow Bid Model subject to adjustment where appropriate (Appendix 12, 8.2).

The key inputs used to derive the PSC in the HM Treasury Model, in real terms at April 2009 prices (i.e. prior to indexation) are as follows:

Capital expenditure (from Shadow Bid)	£174.9m
Lifecycle costs (from Shadow Bid)	£20.6m
Operating costs per annum (from Shadow Bid)	£12.3m
Third party income per annum (from Shadow Bid)	£4.7m

Optimism Bias

The HM Treasury spreadsheet accounts for the impact of uncertainty over project costs through input assumptions for Optimism Bias (Appendix 12, 8.4). Optimism Bias relates to the demonstrated and systematic tendency for project appraisers to be overly optimistic when considering project benefits and costs, potentially overestimating the benefits, and underestimating the 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 HM Treasury spreadsheet differentiates between two key stages of the investment decision process, namely pre- Final Business Case (FBC) and post-FBC. The FBC represents the date that the contract is awarded. The HM Treasury spreadsheet requires inputs for both pre-FBC and post-FBC Optimism Bias percentages for capital expenditure, lifecycle costs, operating costs, transaction costs and third party income.

Pre-FBC Optimism Bias

The pre-FBC Optimism Bias factor represents the potential increase in estimated costs or shortfall in estimated income between the OBC and the FBC stage. In the HM Treasury Model this is added onto both the PSC and PFI model.

Post-FBC Optimism Bias

The post-FBC Optimism Bias factor represents the potential increase in costs or the shortfall in income between the date of contract award and the completion of the asset(s) being procured. In assessing the post-FBC Optimism Bias adjustment required, the Project Team have considered the likelihood and impact of various risks in relation to their impact after Financial Close as risks that would be borne by the Authorities if the procurement at Financial Close was handed back to the Authorities to procure conventionally rather than through a PFI contract. A detailed risk quantification spreadsheet supporting this level of Optimism Bias is included as Appendix 12, 8.4 to this OBC.

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

These inputs are detailed in table 30 below. Details of how the inputs were derived are provided in Appendix 12, 8.4.

Table 30 Pre- and Post- Final Business Case (FBC) Optimism Bias

Categorisation	Pre-FBC	Post-FBC
Capital Costs	31%	20%
Lifecycle Costs	14%	3%
Operating Costs	14%	20%
Transaction Costs	10%	10%
Third Party Income	1%	1%

Indicative Results

The output of the HM Treasury Model shows that the project offers value for money through PFI of **9.75%** under a (base case) pre Tax Internal Rate of Return (IRR) of 15%.

This 9.75% represents the percentage difference in NPV costs between the PFI Option and the PSC Option. If the value is positive (which in this case it is) then, based on the input assumptions, the PFI Option is likely to offer better VfM than the PSC Option. The higher the value the greater the certainty VfM will be delivered by using PFI. Conversely if the value was negative, then conventional procurement would offer better VfM. The VfM Guidance suggests that as a rule, the indicative VfM value should exceed 5%.

Sensitivity Analysis

The HM Treasury model and accompanying guidance also recommends that the crude VFM figure be tested against a series of sensitivities to understand the impact of variables in both the assumptions used and the calculations performed by the model. A summary of the sensitivities run is set out in table 31 below.

This table shows the level of change required in the value of the different inputs to erode the difference between the cost of conventional procurement and the cost of the PFI approach. Each input is varied in isolation.

In each case the percentage sensitivity has either been added / deducted to the PSC costs in the HM Treasury spreadsheet whilst maintaining the PFI costs at the same level. In all cases these sensitivities demonstrate that the Project offers value for money.

A summary of the results from the key sensitivities analyses, commencing with the Base Case are set out below.

Table 31 Quantitative Assessment Sensitivity Results

Sensitivity	Value for Money margin
Base Case with 15% IRR	**9.75%**
Base Case with 13% IRR	12.09%
Base Case with 18% IRR	6.09%
Capital cost sensitivities at 15% IRR:	
Minus 5%	7.15%
Plus 5%	12.20%
Operating cost sensitivities at 15% IRR:	
Minus 5%	7.26%
Plus 5%	12.11%
Combined capital and operating cost sensitivities at 15% IRR:	
Minus 5%	4.51%
Plus 5%	14.44%
Break-even Point at 15% IRR:	
Capital cost break-even point	(17)%
Unitary charge break-even point	11%

Conclusion

The qualitative assessment concludes that in the Authorities' overall view procuring this project under PFI will provide value for money in terms of viability, desirability and achievability. The quantitative assessment supports this position and demonstrates a high indicative value for money percentage of 9.75% which has been tested for robustness through sensitivity analysis.

Furthermore, the break-even analysis indicates that the capital costs would have to fall by 17% for the PSC to demonstrate that PFI would not offer better value for money over

conventional procurement, and that the Unitary Charge could increase by 11% and procurement through PFI would still offer better value for money than conventional procurement.

Overall, the VfM assessment clearly demonstrates that PFI can deliver value for money for the Authorities.

8.5 Affordability Assessment

Projected Budgets

The scope under Phase B is to handle the treatment and disposal of 213,000 tonnes of residual waste for the South London Waste Partnership Authorities. The plant is due to operate at full capacity in the first year of operations (2014/15). PFI Credits have been assumed to start in the first month of operations (April 2014). The overall waste budgets for the Authorities, which include the budget for Phase B, are shown in table 32 below:

Table 32 Waste Management Budgets

	LBC	RBK	LBM	LBS	Total
Total 30 Year Waste Management Budgets	£678m	£200m	£276m	£302m	**£1,456m**

The Reference Project assumes that the Authorities will transfer the provision of waste treatment and disposal to an alternative Service Provider(s). In order to examine the affordability implications of procuring long term waste management contract(s), the existing waste management budgets available for the activities included within the Reference Project have been used as part of the affordability calculations. Each Authority has provided its 2009/10 budget as the base budget and these have been projected using common principles adjusted for local operational differences over the life of the project. Table 33 shows the budget provision assumed for each Authority (at nominal prices) for the purposes of the treatment and disposal of residual waste under Phase B in this Outline Business Case as well as a comparison with the corresponding historic annual waste management budgets for the previous two full financial years.

Table 33 Previous Waste Management Budgets

Budget	LBC	RBK	LBM	LBS
2008/09 OBC)	£13.9m	£5.6m	£6.2m	£5.8m
2007/08	£13.2m	£5.2m	£4.3m	£5.4m
2006/07	£12.8m	£5.3m	£3.7m	£5.4m

Details of calculation of PFI Credits

The Authorities are applying for PFI Credits for a waste treatment facility (Reference Project assumed to be an MBT with SRF).

Using guidance issued by Defra in its OBC template v4.0 dated May 2008, the Authorities have assumed a PFI Credit equal to 50% of the capital expenditure element of the senior debt (excluding site acquisition costs). The annual PFI Revenue Support Grant is based upon the Department for Communities and Local Government (CLG) PFI RSG Annuity Model, which calculates the annual PFI RSG to be **£8.5m** per annum over the life of the Contract. The Model is attached as Appendix 12, 8.2.

The details of the capital costs included within the PFI element of the Reference Project are provided in table 34 below.

Table 34 Capital Costs for calculation of PFI Credits

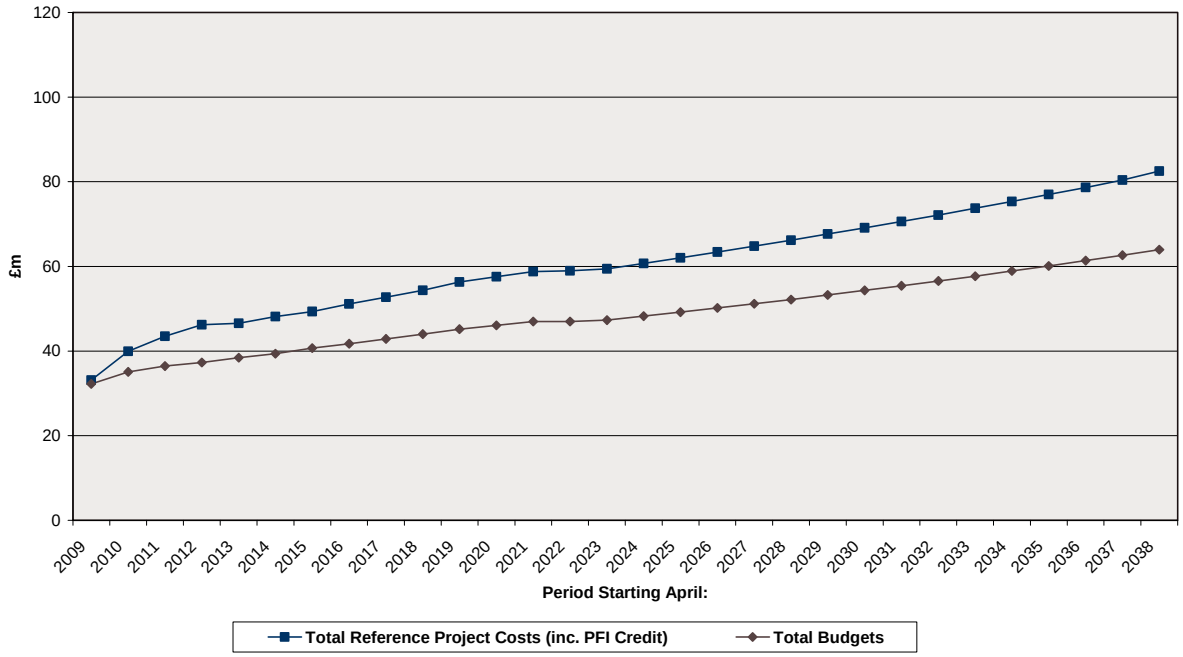
Capital Costs	2011/12	2012/13	2013/14	Total
MBT and SRF Real @ April 2009	£22.2m	£89.9m	£62.8m	**£174.9m**
MBT and SRF Nominal	£23.3m	£96.8m	£69.3m	**£189.4m**

The PFI Credit derived is **£109.1m**. The calculation is shown in Appendix 12, 8.2.

Annual Contributions

The affordability has been estimated over the life of the project by comparing the funding available to the Authorities, in the form of RSG from PFI Credits and available Authorities' budgets, with the costs of the scheme, in the form of the Unitary Charge (for activities within the scope of the PFI), and costs in respect of the activities outside the scope of the PFI, LATS fines and landfill tax. Contract monitoring costs and procurement costs have been accounted for outside of this affordability calculation (in accordance with Section 8.2). The graph below shows the affordability gap between estimated costs and income for the partnership. The tables below set out the affordability position at both partnership and individual Authorities levels.

Graph 2: Comparison of Total Budgets vs Total Reference Project Costs (inc. PFI Credit) (£m)



Cost Sharing

The costs of the Unitary Charge and income in the form of RSG from PFI Credits up to 2038/39 are to be shared between the Authorities on the basis of their share of the total residual waste delivered to the facility.

Table 35 below shows the indicative affordability (deficit) position for the Authorities for each of the early years of the project and the final year of the project, as well as the total for the life of the project. The affordability analysis in Appendix 12, 8.2 summarises the affordability (deficit) position in total for the Authorities and for each year over the life of the project.

Table 35 Indicative Affordability for South London Waste Partnership

Year	Total over life of project	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	….	2038/ 2039
	£m	£m	£m	£m	£m	£m	….	£m
Unitary Charge	920	-	-	-	31.6	32.0	….	42.5
Other Costs	1,111	43.5	46.2	46.5	24.7	25.8	….	48.1
Total Costs	**2,031**	**43.5**	**46.2**	**46.5**	**56.3**	**57.8**	**….**	**90.6**
RSG from PFI Credits	(211)	-	-	-	(8.1)	(8.5)	….	(8.1)
Projected Budgets	(1,456)	(36.4)	(37.3)	(38.4)	(39.3)	(40.6)	….	(63.9)
Total Budget	**(1,667)**	**(36.4)**	**(37.3)**	**(38.4)**	**(47.4)**	**(49.1)**	**….**	**(72.1)**
Affordability Gap	**(365)**	**(7.1)**	**(8.9)**	**(8.1)**	**(8.9)**	**(8.7)**	**….**	**(18.6)**

Tables 36 to 39 show the indicative affordability position for the Authorities individually.

Table 36 Indicative Affordability for LBC

Year	Total over life of project	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	….	2038/ 2039
	£m	£m	£m	£m	£m	£m	….	£m
Unitary Charge	371	-	-	-	13.8	13.8	….	16.9
Other Costs	462	17.8	19.3	19.3	9.7	10.4	….	20.1
Total Costs	**833**	**17.8**	**19.3**	**19.3**	**23.5**	**24.2**	**….**	**37.0**
RSG from PFI Credits	(85)	-	-	-	(3.5)	(3.6)	….	(3.2)
Projected Budgets	(677)	(16.9)	(17.3)	(17.8)	(18.3)	(19.0)	….	(29.7)
Total Budget	**(763)**	**(16.9)**	**(17.3)**	**(17.8)**	**(21.8)**	**(22.6)**	**….**	**(32.9)**
Affordability Gap	**(70)**	**(1.0)**	**(2.0)**	**(1.5)**	**(1.6)**	**(1.5)**	**….**	**(4.1)**

Table 37 Indicative Affordability for RBK

Year	Total over life of project	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	….	2038/ 2039
	£m	£m	£m	£m	£m	£m	….	£m
Unitary Charge	142	-	-	-	4.6	4.7	….	6.7
Other Costs	118	5.3	5.6	5.8	2.8	2.9	….	4.8
Total Costs	**260**	**5.3**	**5.6**	**5.8**	**7.4**	**7.6**	**….**	**11.5**
RSG from PFI Credits	(33)	-	-	-	(1.2)	(1.3)	….	(1.3)
Projected Budgets	(200)	(5.2)	(5.3)	(5.5)	(5.6)	(5.8)	….	(8.5)
Total Budget	**(232)**	**(5.2)**	**(5.3)**	**(5.5)**	**(6.8)**	**(7.1)**	**….**	**(9.7)**
Affordability Gap	**(28)**	**(0.1)**	**(0.3)**	**(0.3)**	**(0.6)**	**(0.6)**	**….**	**(1.7)**

Table 38 Indicative Affordability for LBM

Year	Total over life of project	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	….	2038/ 2039
	£m	£m	£m	£m	£m	£m	….	£m
Unitary Charge	197	-	-	-	6.3	6.5	….	9.2
Other Costs	277	10.4	10.5	10.6	6.1	6.3	….	12.2
Total Costs	**474**	**10.4**	**10.5**	**10.6**	**12.4**	**12.8**	**….**	**21.4**
RSG from PFI Credits	(45)	-	-	-	(1.6)	(1.7)	….	(1.8)
Projected Budgets	(277)	(6.6)	(6.8)	(7.0)	(7.1)	(7.3)	….	(12.9)
Total Budget	**(322)**	**(6.6)**	**(6.8)**	**(7.0)**	**(8.7)**	**(9.0)**	**….**	**(14.7)**
Affordability Gap	**(152)**	**(3.8)**	**(3.7)**	**(3.7)**	**(3.7)**	**(3.8)**	**….**	**(6.8)**

It is important to note that the budgets shown for Merton exclude the effect of significant technical adjustments, which have been provisionally included in the Medium Term Financial Strategy but are currently being reviewed as part of the 2009-10 estimate process.

Table 39 Indicative Affordability for LBS

Year	Total over life of project	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	….	2038/ 2039
	£m	£m	£m	£m	£m	£m	….	£m
Unitary Charge	209	-	-	-	6.8	7.0	….	9.7
Other Costs	255	10.0	10.8	10.8	6.1	6.2	….	10.9
Total Costs	**464**	**10.0**	**10.8**	**10.8**	**12.9**	**13.2**	**….**	**20.7**
RSG from PFI Credits	(48)	-	-	-	(1.8)	(1.8)	….	(1.9)
Projected Budgets	(302)	(7.7)	(7.9)	(8.2)	(8.3)	(8.6)	….	(12.9)
Total Budget	**(350)**	**(7.7)**	**(7.9)**	**(8.2)**	**(10.1)**	**(10.4)**	**….**	**(14.8)**
Affordability Gap	**(114)**	**(2.3)**	**(2.9)**	**(2.7)**	**(2.8)**	**(2.8)**	**….**	**(5.9)**

Additional Authority Contributions Required

The annual estimated Affordability position, attached as Appendix 12, 8.2 shows the annual "affordability gap" required to be financed by the Authorities.

For this Reference Project, procured through PFI, this will leave an affordability gap in the first full year of operations (2014/15) of £8.8m in total to be financed by the Authorities.

The estimated affordability position will be reported to each individual Authority's Executive/Cabinet Board and it is anticipated that each Executive/Cabinet will approve the contribution at this level, and therefore sign the necessary affordability letters of support. A full copy of the reports, and minutes of the meetings of Executive/Cabinet will be forwarded to Defra at the earliest opportunity.

The table below summarises the overall funding position for the reference MBT and SRF solution for the Authorities:

Table 40 Funding for Reference Project

PFI Project Cash Flows	£m
Headline Nominal Unitary Charge in the first year of operations (2014/15)	31.6
NPV of Unitary Charge Cash Flows (discounted 6.09% nominal; 3.5% real)	344
Total Unitary Charge over the life of the Contract	920
Other costs (including collection etc)	1,111
Total Costs	**2,031**
Financed from:	
PFI Revenue Support Grant at FBC (£109.1m PFI Credits)	211
Waste Management Budgets	1,456
Total Financing Sources	**1,667**
Net cost to be Financed by the Authorities	**365**

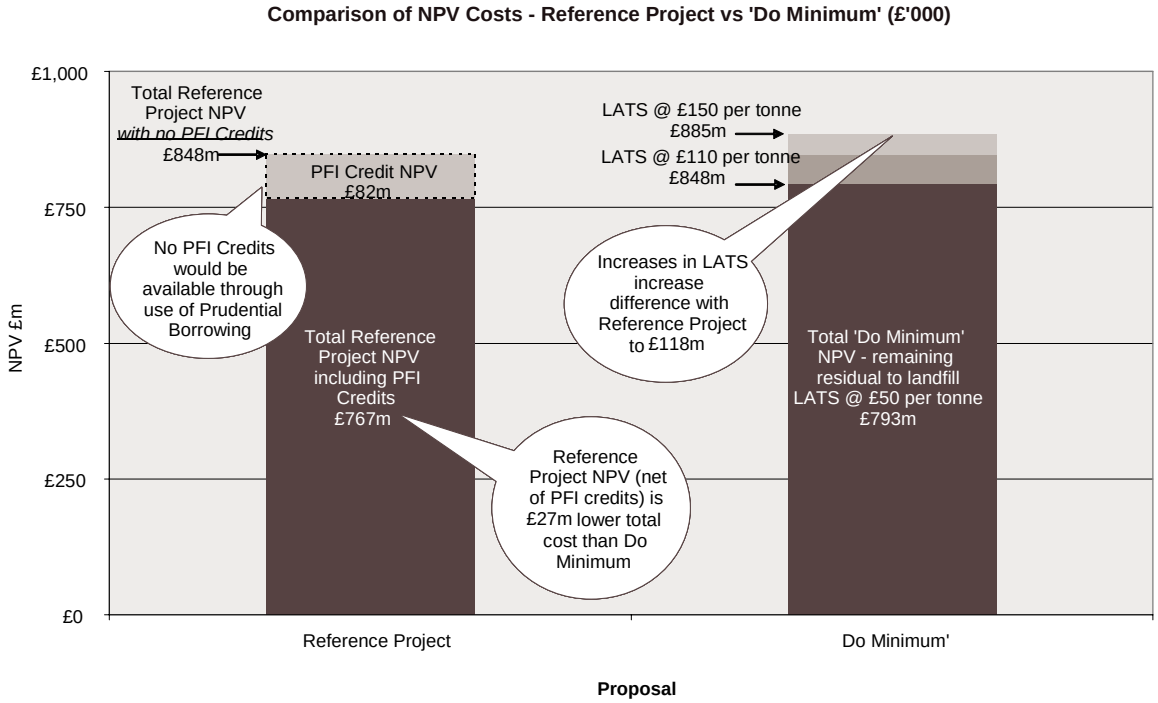
Comparison with 'Do Minimum' scenario

Table 41 below compares the income and costs of the Reference Project with the income and costs associated with the 'Do Minimum' scenario over the 30 year period.

'Do Minimum' for the Authorities means the same levels of recycling and overall improvements to performance through the planned service improvements as for the Reference Project. However, it is assumed that all remaining residual waste will be sent to landfill, and therefore subject to the uncapped risks surrounding landfill gate fees, tax and LATS.

Table 41 Comparison with 'Do Minimum'

	a	b	(b-a)	c	(c-a)
	Reference Project	'Do Minimum' only	Difference	'Do Minimum' only LATS @ £110	Difference
Budgets (NPV)	£623m	£623m	£0m	£623m	£0m
Costs (NPV)	£767m (net of PFI credit)	£793m	£26m	£848m	£81m
Affordability Gap	£144m	£170m	£26m	£225m	£81m



The graph shows the total Reference Project NPV of £767m (being the total NPV of £848m less the PFI Credit NPV of £82m) compared against the total 'Do Minimum' NPV of £793m. The graph also demonstrates the rapid increase in 'Do Minimum' NPV by performing a sensitivity on LATS prices.

The table and graph indicate that the overall difference in costs between the Reference Project and the 'Do Minimum' option (with a LATS assumption of £50 per tonne, and a 3.5% inflator for landfill tax) is £26m (3%) in NPV terms. By varying the LATS assumption only, this

increases to a difference of £81m (11%) in NPV terms at £110 per tonne, and £119m (16%) in NPV terms at £150 per tonne.

The Reference Project has been modelled along financially prudent lines, assuming high capital costs and minimum levels of return on third party income from excess capacity and electricity sales etc, to provide the affordability envelope set out above in Section 8.5. The comparison in the table and the graph above therefore seeks to demonstrate equivalent prudent assumptions in terms of the 'Do Minimum' option also, providing sensitivity analysis on one key factor which is currently an unquantifiable risk.

It is also important to note that the 'Do Minimum' option does not achieve compliance with the required landfill diversion, so does not meet the objectives of the project. It also includes a much larger proportion of costs (54% compared with 20% in the PFI project) in relation to landfill gates fees, taxes and LATS, which are as yet uncapped and unquantifiable. It should therefore not be seen as a viable option but simply provide a financial comparison.

Sensitivity Analysis

Changes in the macro-economic environment could impact on both the price and the affordability of the project. A number of scenarios have been modelled to illustrate the possible impact on the Unitary Charge and these are illustrated in the table below.

Table 42 Sensitivity Analysis

Sensitivity	First Year Unitary Charge @ April 2009 prices £m	Change from Base Case %
Base Case with 15% IRR	29.7	0
Base Case with 13% IRR	27.8	(6.4)
Base Case with 18% IRR	31.9	7.4
Capital cost sensitivities:		
Minus 10%	27.8	(6.4)
Plus 10%	31.6	6.4
Minus 30%	24.0	(19.2)
Plus 30%	35.4	19.2
Operating cost sensitivities:		
Minus 10%	28.9	(2.7)
Plus 10%	30.5	2.7
Combined capital & operating cost sensitivities:		
Minus 10%	27.0	(9.1)
Plus 10%	32.4	9.1
Interest SWAP rate sensitivities:		
Minus 35 basis points	29.2	(1.7)
Plus 35 basis point	30.2	1.7
Two year planning delaying – excl. landfill costs of delay	31.3	5.4

These key sensitivities have been applied to the base case to identify an affordability range from **£24.0m to £35.4m** annual Unitary Charge at April 2009 prices.

8.6 Member Approval of Affordability

A number of meetings have been held with Officers, Directors, Chief Executives and Members, prior to the submission of the OBC. Information has been provided on both the process and the results of the work.

At the meeting of each of the Authorities' Executives/Cabinets, Members will give their commitment to meeting their Authority's share of the costs of the potential PFI contract over the lifetime of the contract, as set out in the OBC and the Cabinet reports themselves. Signing up to the affordability represents a recognition of the possible costs within the reference project but recognises that wider macro-economic conditions could change the unitary charge and associated overall spend. A full and final review will be made by Members prior to the Final Business Case being submitted.

8.7 Evidence

Full details of the approval of the affordability of the project by Members at each of the Authorities will be forwarded to Defra at the earliest possible instance following publication of minutes from the relevant Executive/Cabinet meetings. Furthermore, letters of support will be provided by each of the Authorities signed by the Leader, Chief Executive and Chief Finance Officer of each Authority.

8.8 Comparison with EfW Option as Reference Project

The Councils have requested for comparison purposes an affordability model which calculated costs for an EfW option which scored well in the initial options appraisal in terms of price. Subsequent to the options appraisal exercise shown in Chapter 4, the technical advisers have reconsidered the energy generating capacity of a reference EfW plant, which has resulted in an increase in the overall cost of the EfW option. The unitary charge derived from the shadow bid pricing model in the first year for the EfW option is estimated at **£32.6m** in comparison to the reference project charge of **£29.7m** (at April 2009 prices). Whilst the PFI credits are marginally higher for this EfW option (annuity of £10.1m) than for the Reference Project (annuity of £8.5m), this does not mitigate the overall increased affordability gap which would arise if the EfW option was pursued as the Reference Project, based on the assumptions used within the modelling.

The EfW option is therefore estimated to be less affordable than the MBT and SRF option as a Reference Project and will not be considered any further in terms of the Reference Project.

8.9 Comparison with Prudential Borrowing - Design, Build and Operate

South London Waste Partnership have also performed, in conjunction with their financial advisers, an initial comparison of two funding options for their reference project – publicly funded loans in the form of Prudential Borrowing, and private funding through the Private Finance Initiative (PFI). This work focused on the quantitative analysis but also considered the high level qualitative differences between the two options.

For comparison purposes, the Design, Build and Operate (DBO) contract would be typical of a project funded through Prudential Borrowing. In this case, a proportion of the risk which would be transferred under a PFI option is retained by the partnership. For example, during construction, the partnership would be exposed to construction contractor default leading to

replacement and rectification, whereas under a PFI contract this would be the responsibility of the SPV. Similarly, if there are problems with the build of the plant identified during the operating period, the partnership as the owner of the plant would bear the initial risk for rectifying the problem and funding alternative disposal provision in the interim.

Key Assumptions

The primary additional risk taken on by the partnership if financing a project through public funding such as Prudential Borrowing is financing risk (i.e. the risk borne by the funder should a company fail to deliver its agreed outputs), both through the construction and the operational period.

The risk to the project during the contract is the same as the Post FBC Optimism Bias identified in table 30 for the PFI project. For the purposes of this comparison, the overall contract period risk has been split between risks transferred under a DBO arrangement and risks retained by the public sector, as shown in the following table:

Table 43 Apportionment of Risk under DBO Arrangement

Cost Base	Post FBC OB	Private Sector %	Public Sector %
Capex	20%	60%	40%
Opex	20%	70%	30%
Lifecycle	2%	0%	100%

The risk transferred to the private sector under the DBO arrangement will be applied as a margin to the Capital and Operating expenditure costs. The retained public sector risk is shown as an additional cost outside the DBO contract price.

The main advantage seen in the DBO option is cheaper cost of borrowing. The PFI senior debt funding rate is assumed to be 7.04% and the Public Works Loan Board rate is assumed to be 5.35%; both including a 50 basis point buffer.

Results

The full quantitative results are detailed in Appendix 12, 8.4 Quantitative Value for Money Evaluation Assessment.

The quantitative results show that before the application of benefit from PFI credits, the publicly funded DBO is estimated to be 7% less expensive in Net Present Value terms and 0.3% less expensive in Whole Life Cost terms.

However, after the revenue benefit of PFI credits is factored in, the PFI solution is estimated to be 22% less expensive in Net Present Value terms and 29% less expensive in Whole Life Cost terms.

Qualitatively, the Authorities retain a proportion of the risk under publicly funded DBO contracts. It should be noted that this risk may be greater in practice than estimated, for example if the plant faced a long term shutdown due to plant failure. It would be very difficult to get the operator to accept such risks under a DBO, whereas under PFI, such a situation would be managed by the SPV, with the Council being kept whole.

Quantitatively, the results indicate that a privately funded solution through the PFI procurement process is less expensive than pursuing a DBO with prudential borrowing when taking into account funding from Defra and risk transfer, supporting this OBC.

8.10 LATS Strategy

The strategy is attached at appendix 13.

The strategy allows for each authority to retain autonomy over the use and purchase of LATS. A protocol and mechanism for the joint purchase of LATS is outlined in the strategy, all with the fundamental aim of benefitting from economies of scale in LATS transactions.

9.0 Stakeholder Communications

9.1 Analysis and Identification of Major Stakeholders in the Process

The partnership appreciate the importance of timely and judicious engagement with all of its stakeholders. The good relationships we enjoy with key stakeholders, such as the GLA, are testimony to how stakeholder relations have been managed thus far. Nevertheless, the partnership is aware that continued engagement and the dissemination of information involve delicate considerations and while this is underpinned by the need for stakeholders to feel informed, it recognises that incomplete or developmental positions are not necessarily best communicated to all audiences simultaneously.

The partnership has already identified and engaged all of the following groups in the Phase 'A' procurement.

- Mayor of London/GLA Office;
- London Councils (formerly Association of London Government);
- neighbouring Boroughs (through SLWDG) in London and Surrey County Council;
- potential bidders – waste management companies, construction and project management companies and technology providers;
- internal stakeholders (legal, financial and planning colleagues);
- community sector;
- Members (executive, majority group and opposition);
- senior management;
- Government departments and Agencies (Defra, WIDP, GoL, 4ps etc);
- residents and businesses (through MWMS consultations); and
- the Environment Agency

The partnership are aware of the need to continue dialogue with these groups and to consult widely on technology choices and site options for future residual waste facilities. These consultations will inform the JMWMS and JWDPD. The partnership will also be looking to develop engagement with the media and local MP's in Dec 2008/Jan 2009.

A key relationship is with the Mayor's office (GLA) with whom we have a historically good relationship. The partnership are keen to maintain this relationship and work with the GLA in understanding the regional policy environment as it develops. To that end the partnership continues to have open dialogue about its future plans and seeks to accommodate the emerging policies within the GLA.

On the 16th of October 2008 representatives of both the GLA and London Councils were presented with a brief history of the partnership and the key elements of our OBC. Representatives were invited to ask questions about the reference project and our intentions. After a productive discussion both the GLA and London Councils were able to confirm their support for our approach to the OBC and subsequent procurement and re-affirmed the value of ongoing dialogue.

The partnership has signed off a Communications Strategy appendix 14 (Sept 08) for the purposes of managing the Phase 'B' PFI procurement and the Phase 'A' contracts commencement. The SLWP's Lead Communications Officer from Merton co-ordinates press and communications officers from each of the boroughs and reports to the Management Group and for accuracy liaises with the Project Director over key issues.

The Communications Officer Group, with representatives from each of the partnership boroughs meet regularly to ensure consistency in the delivery of key messages and coordinated planning. Press opportunities are anticipated in advance and media relationships are managed with the aim of stressing the very positive work being done by the partnership. These are also managed in advance, with the partnership taking a 'front foot' approach to media relations.

The lead Communications Officer follows a protocol of informing the Project Director of any media related enquiries. Freedom of Information requests are similarly handled by passing on the request in the first instance to the Project Director who will provide or source the appropriate media and FOI responses.

The partnership believes in timely and judicious delivery of information to its stakeholders. For this reason the partnership is looking to expand the range of stakeholders in what is clearly a procurement of considerable political and local interest. Local MP's are to be engaged in the autumn/winter of 2008/09 to brief them of the ongoing plans for waste management in the area.

Journalists will also be invited to a press briefing to explain the partnership and its role in securing new waste management infrastructure. It is expected that a productive working relationship with all stakeholders can be had from the outset. The partnership is aware of the sensitivities around waste management and are keen to avoid seeming furtive by openly and honestly addressing key stakeholder issues.

The partnership's commitment to communicating with stakeholders is evidenced in the commitment to producing a full Strategic Environmental Assessment (SEA) during 2008/2009. This will feed into the Joint Waste Management Strategy 2009. This will ensure high quality engagement with residents across key waste issues. It is anticipated that this will involve forming community liaison panels and education and discussion on residual waste technologies.

Engagement over planning issues is already under way and will continue to the production of the Joint Waste Development Planning Document in September 2011. The full timetable for this document and its attendant consultations is included in sections 8 and 10 of this OBC

9.2 Stakeholder Buy-in to the Project

The SLWP has sought to engage key stakeholders at an early stage in the overall procurement process, recognising that stakeholder buy-in will be key to moving the process forward swiftly and efficiently. This is particularly true of early Member engagement and the engagement of key Officers in the councils such as Finance Directors.

Political buy-in has been a key to the success and speed of the partnerships 2007/08 procurements. Members have gone on record [i] to express their appreciation of the work done by the Officers during the Phase 'A' procurement and in turn Officers continue to engage and educate members in the detail of the OBC/PFI process. The latest in a series of workshops/briefings took place in September 2008 and was attended by Joint Waste Committee lead members from each of the four boroughs. The aim of the workshop was to cement the commitment of members to the PFI route with the associated costs. This was achieved through understanding the PFI process and getting to grips with the key details/issues of the OBC.

Planning Officers from the four Boroughs are already working together as the South London Boroughs' Joint Waste Planning Group. This interaction has increased further in supporting the procurement process and providing input to the work already carried out on sites and planning issues. In addition to planning, internal Officer support has been provided by specialists in procurement, legal, financial and technical issues who have all participated in workshops specifically to discuss issues associated with this procurement.

LBS has also promoted the role and objectives of the SLWP at two specific Beacon (Waste & Recycling) events that were attended by delegates from both the private and public sector.

The waste management industry, including a number of prominent waste management companies and specific technology providers have demonstrated an extremely high level of interest in the proposals developed by the SLWP. Additionally, many Bidders who engaged in the Phase 'A' procurement expressed a high level of interest in the subsequent procurement of Phase 'B' facilities.

Residents and businesses have been formally consulted during the development of Waste Strategies for each of the individual Boroughs. The local population continues to be kept informed of developments to waste services through press releases, information on the Boroughs websites and publicity campaigns as new waste facilities come online.

The SLWP intend to explore the creation of a website which could both provide a public face and provide discrete access to documentation and clarification through the procurement process. This would provide a valuable audit trail of discussions for both the partnership and bidders.

Further consultation will take place in September / October 2008 during development of the Joint DPD. It is intended that this statutory consultation will be augmented by the implementation of a Communications Strategy for the. Consultation and community involvement have been highlighted as key issues in the first draft, and consideration is now being given to running a series of road shows in summer/Autumn 2008 to explain the options to members of the public and collecting feedback.

The community sector has been engaged since November 2006, through discussions between the London Community Recycling Network and the SLWDG, which has explored opportunities for community sector involvement in future contracts (e.g. HRRC management).

The SLWP is actively engaged with 4ps network meetings, and is currently working with WIDP. Meetings have taken place with Defra to discuss issues regarding partnership working and the partnership is also involved in discussions over the development of JWAs as part of the Local Government Bill.

9.3 Further Market Soundings Conducted or Planned

The partnership is in the process of writing to a number of interested bidders to invite them to a soft market testing event in February 2009.

Indications from the Phase ‘A’ procurement suggest a high level of interest in the partnership. SLWP hope to meet again many of the organisations that bid through the phase ‘A’ procurement and of course many new organisations.

10.0 High Level Timetable for the Procurement

10.1 Introduction

Three high level timetables are included:

- Procurement timetable.
- Joint Waste Development Planning Document timetable.
- Construction timetable.

These timetables are now being planned in further detail to include specific resource requirements.

The partnership will be looking to adopt the JWDPD at the earliest possible date in order to apply for planning as soon as possible and will as far as possible dovetail the procurement and JWDPD timetables in order to minimise planning risks.

10.2 Timetables

Table 44 High Level Procurement Timetable

Action	Date
Advisers to PFI procurement appointed	July 2008
Phase A contracts signed and commenced	1 Sept 2008
Members briefed / OBC + affordability worskshop	September 2008
OBC Approved by Councils	October 2008
Latest stakeholder engagement GLA/London Councils	Sept/ Oct 2008
Submission of OBC to Defra	October 2008
Joint Waste DPD – Issues and options consultation	September / October 2008
Defra Approval of OBC	December 2008
Soft market testing	December 2008
Notice to Mayor	December 2008
PRG Approval of OBC	February 2009
OJEU Publication Date	March 2009
Issue of Descriptive Document	March 2009
Return and Evaluation of PQQ	May 2009
Issue of Invitation to Submit Outline Solutions	July / August 2009
Return date for Outline Solutions	Sept 2009

Action	Date
Invitation to continue Dialogue to ISDS	October 2009
Issue of Invitation to Submit Detailed Solutions	Jan 2010
Return date for Detailed Solutions	March 2010
Invitation to continue dialogue to 'Refined Solutions'	April 2010
Submission of refined solutions	July 2010
Dialogue fine tuning	August – October 2010
Call for final tender	October 2010
Return of final tender	November 2010
Final Business Case submitted	December 2010
Award of preferred Bidder	January 2011
Planning Preparation and submission (inc contingency delay)	tbc no later than Nov 2011
Financial Close	March 2011
Construction (including contingency delay)	No later December 2012
Operation of Facility	No later than December 2015

Table 45 Joint Waste Development Planning Document Timetable

Timescale	DPD Stage
Autumn 2008	Public consultation on Issues and Options from 19th September to 31st October 2008
Winter 2008	Work to establish a preferred shortlist of waste management sites and locations
Spring/summer 2009	Sustainability Appraisal of preferred sites and locations. Discussion of preferred sites with statutory bodies and other stakeholders as necessary. Agreement of preferred sites and locations by each council's decision-making body.
Autumn 2009	Consultation on preferred sites and locations for waste management facilities and preferred waste policies.
Winter 2009	Work to establish Joint Waste DPD and agreement of this by each council's decision-making body.
Spring 2010	Publication of Joint Waste DPD in February/March 2010.
Summer 2010	Submission of Joint Waste DPD in July 2010.
Autumn 2010	Await details and dates of examination process.
Winter 2010	Independent Examination anticipated in December 2010* January / February – expecting Examiner's Report*
Summer 2011	Changes in line with Inspector's Report and reports to each borough's

	decision-making bodies*
September 2011	Adoption*

Planning timetable

The timetable assumes a period of 9-12 months would be adequate in terms on preparing the planning application and EIA for submission during the bidding process. This includes about 4 months to carry out specific site investigations. It is intended that background site studies and investigations will be scoped with input from the Planning Departments and Environment Agency and progressed in the next 2 years preceding selection of a preferred bidder, in order to facilitate the planning and permit application process.

A further 12 month period from planning submission to issue of planning permission is timetabled, including an allowance 3 months for judicial review lodging period. This is based on the application between granted planning permission without the need for a Public Inquiry.

Permitting timetable

The operator(s) of the new waste treatment facilities will apply for the relevant authorisation to operate, as required by the Environmental permitting (England and Wales) Regulations 2007 (SI 2007 No. 3538). The type of Environmental Permit required for each facility will be determined based on the site-specific details of the proposed activities, i.e. whether they comprise an installation (which carries out activities listed in Schedule 1 to the Regulations and any activities that are technically linked) or a waste operation (defined in regulation 2 by reference to the recovery and disposal operations in the Waste Framework Directive). For the Reference Project all facilities would require a bespoke (Tier 3) Environmental Permit due to the nature of the proposed activities and/or the quantities of waste to be accepted annually.

The Environmental Agency (EA) have been actively engaged in the Phase 'A' contracts, and the objectives of this PFI procurement have been outlined. It is anticipated that a formal permit application will be made by the appointed contractor in conjunction with the planning application process sometime in late 2010 or early 2011. Securing the necessary permit should not be high risk given that the contractor will be comfortable that their proposed technology is capable of being permitted.

The timetable assumes a period of 2 months would be adequate in terms on preparing the actual Environmental Permit for submission. This assumes the background data and technology data will have been produced during the bidding and planning process.

A further 12 month period from submission to issue of the Environmental Permit is timetabled (compared to statutory 4 months determination, or approximately 5 months if the Public Participation Directive applies). This allows for typical issues which can delay issue of an EP include financial provision, technical competence, relevant convictions (if a post-conviction plan needs to be submitted and approved), and planning permission (which must be in place before an EP can be issued). If the EA requires more information to determine the application it may issue a Schedule 7 Notice, the time given for the applicant to provide this information varies, but is typically between 2 weeks and 2 months.

Table 46 Construction timetable

Full site design, pre-engineering and groundworks (10 months)
Main construction (24 months)

Hot commissioning with partnership waste (3 months)
Full Facility Operations

11.0 Glossary

BMW	Biodegradable Municipal Waste
BREEAM	
BVPI	Best Value Performance Indicator
CABE	Commission for Architecture and the Built Environment
CHP	Combined Heat and Power
DBO	Design, Build, Operate
DBFO	Design, Build, Finance, Operate
DPD	Development Plan Document
EAS	Environmental Awareness Strategy
EP	Environmental Permit
EoI	Expression of Interest
HoT	Heads of Terms (of Agreement)
HRRC	Household Reuse and Recycling Centre
ISOS	Invitation to Submit Outline Solutions
ISDS	Invitation to Submit Detailed Solutions
ISRS	Invitation to Submit Refined Solutions
IVC	In Vessel Composting
JPS	Joint Procurement Strategy
JWA	Joint Waste Authority
JWS	Joint Waste Statement
JWDPD	Joint Waste Development Planning Document
JMWMS	Joint Municipal Waste Management Strategy
LATS	Landfill Allowance Trading Scheme
LBC	London Borough of Croydon
LBM	London Borough of Merton
LBS	London Borough of Sutton
MBT	Mechanical Biological Treatment
MoL	Mayor of London
MoU	Memorandum of Understanding
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MWMS	Municipal Waste Management Strategy
OBC	Outline Business Case
OJEU	Official Journal of the European Union
PQQ	Pre-Qualification Questionnaire
PPS	Planning Policy Statement
PSC	Public Sector Comparitor
RBK	Royal Borough of Kingston
SLWP	South London Waste Partnership
SMT	Soft Market Testing
SOPC	Standard Operating Contract
SPV	Special Purpose Vehicle
SRF	Solid Recovered Fuel
UDP	Unitary Development Plan
WIDP	Waste Infrastructure Development Programme
WIP	Waste Implementation Programme

12.0 Appendices

Appendices and tables

Section	Number	Description
1	1	Inter Authority Agreement
1	2	Joint Waste Statement
1	3	Project Risk Register
1	4	Risk Allocation Matrix
2.1	5	Key characteristics of the boroughs
4	6	Long List Options Report
4	7	Short List Options Report
4	8	Full Economic Cost report
4	9	OBC Modelling Assumptions
5	10	FRS5 Accounting Opinion Letter
7.4	11	Planning Health Check
8	12	Collective Financial Appendices (contains 6 appendices)
8.9	13	LATS Strategy
9	14	Communications Strategy
	15	Final CHP/SRF study report (to be completed Nov/Dec)
7	16	Collective further Sites / Planning appendices (to be completed Nov)
	17	Affordability Letters from each partner borough (to be forwarded Nov)

Tables

Number	Description
1	Predicted Waste arising
2	Collection arrangements
3	Contractual arrangements
4	Kitchen Trial Results
5	Compositional Data
6	NI's as part of the LAA
7	Performance of the ref project against N192
8	Kitchen Waste Yields from the RP
9	Performance of the ref project against N191
10	Performance of the ref project against LATS allowance

Number	Description
11	Performance of the ref project against NI 193
12	OBC contractual assumptions
13	Long List Technology Options
14	Long list Options scoring criteria and weightings
15	Summary of short listed options
16	Summary costs of short listed options
17	Summary performance of short listed options
18	LATS performance of the Short-list options
19	Reference technologies used in WRATE modelling
20	Total Short-list Weighted Score and Rankings
21	Results of Analysis of Full Economic Cost (FEC) of the Short-list
22	Full Economic Cost for the Short-list
23	Example Reference Plants for the Short-listed Options
24	Combined Technical and Financial Appraisal of the Short-listed Options
25	Key facilities included within the Reference Project
26	Indicative procurement costs for procurement phase
27	PFI unitary charge for reference project
28	Non-PFI costs included in reference project
29	Qualitative Evaluation Summary
30	Pre and Post FBC optimism bias
31	Quantitative Assessment sensitivity results
32	Waste Management Budgets
33	Previous waste management budgets
34	Capital costs of PFI credits
35	Indicative affordability for SLWP
36-39	Indicative affordability for each borough
40	Funding for Reference Project
41	Comparison with ‘Do Minimum’
42	Sensitivity Analysis
43	Apportionment of risk under DBO arrangement
44	High level procurement timetable
45	High level JWDPD timetable
46	High level construction timetable