

Appendix N1

Detailed Value for Money Assessment for Waste
Service Contract

Detailed Value for Money Assessment

Qualitative Assessment

Below is the public sector's full set of responses to the qualitative questions as set out in the revised HM Treasury Value for Money Assessment Guidance (2006) to be addressed at this, the project level assessment, stage.

Viability

For PFI to be viable the investment objectives and desired outcomes need to be translatable into outputs that can form the basis of a contract and a sound payment mechanism; for example the quality and quantity of the outputs need to be ones that can be measured. Many service areas can be described in contractual terms, but some areas will be inherently 'non-contractible' as outputs.

Table 1:

Issue	Questions	Response
Project level outputs	Is the project delivery team satisfied that a long term contract can be constructed for this project? Can the contractual outputs be framed so that they can be objectively measured?	Yes. The market for Waste PFI projects is still developing but evidence from projects that have already been completed (fifteen treatment and disposal contracts have already been signed under PFI), the advent of standard documentation and specific market feedback about the Authority's scheme all give assurance that PFI is a viable and deliverable option for this project. In addition, output based waste management disposal contracts have been let by Local Authorities to the private sector since 1990 when the Environmental Protection Act (EPA 1990) prohibited direct public sector provision. A number of soft market testing events have been held with a number of private sector providers in the waste management industry to determine, given the constraints faced by the Authority, the market's view on the most robust and operable contracting approach. The feedback obtained has been used to inform the approach set out in this OBC.
	Is the requirement deliverable as a service and as a long term arrangement?	The Authority's waste management recycling and landfill diversion requirements can be delivered as a long term contract. The proposed contract is for a period of 29.5 years, which is consistent with projected life of the infrastructure, and an affordable contract term for the Authority given the capital requirements of the contract.
	Can the contract describe the requirements in clear, objective, output-based terms?	In preparing this Outline Business Case, the public sector has developed a draft output specification and payment mechanism. These are based on identified best practice from the WIDP Waste Management Procurement Pack. The specification will measure performance on a basis consistent with the following key indicators: ► Recycling - BVPI 82a; ► Recovery - BVPI 82a; and ► LATS (WET Act) - BMW Diversion The output specification will also take be tailored to take account of the clear boundaries of risk and responsibility between the Waste Services contract and the Fuel Use contract, including tailored elements within the specifications to manage this risk. An example of this is the introduction of a fuel specification element in order to manage the risk between the two contracts.
	Can the quality of the service be objectively and independently assessed?	Yes, all of the indicators highlighted above are measurable and can be independently assessed. As the project progresses through to bidder selection and financial close, the output specification and payment mechanism will also be enhanced with a Performance Framework to ensure that quality services continue to be delivered. This will help enable the project to meet the needs of both the public sector and the residents of North London without imposing unnecessarily punitive penalties on the contractor.
	Can the contract be drafted to avoid perverse incentives and to deliver quality services?	The Payment Mechanism, Output Specification and Performance Framework will be aligned such that incentives on both the Authority and the Contractor are consistent with the objectives of the contract and the waste hierarchy.
	Is there a good fit between needs and contractible outcomes?	Yes, the output specification standards have been designed to ensure this fit takes place through the duration of the contract. The

Issue	Questions	Response
		Output Specification will include recycling, recovery and diversion targets that in conjunction with the Authority's other programmes contribute to the achievement of the Authority's waste strategies, Government targets and national and EU legislation. The Strategic Context and Options Appraisal chapters of this OBC illustrate that LATs targets could not be met unless this waste management project is undertaken.
	Does the project require significant levels of investment in new capital assets	Yes, the project requires significant amount of investment in terms of new capital expenditure in new and refurbished HWRCs (whilst these fall within the scope of the PFI project, it is not assumed that they will qualify for PFI credits), one MRF, an AD biowaste composting facility, refurbishment of an IVC facility and two MBT facilities. Total capital expenditure investment of £288million in nominal terms (including £6 million of development costs) is estimated.
	Are there fundamental issues relating to staff transfer? Would any transfer be free from causing any loss of core skills that have strategic and/or long term importance to the procuring authority	No staff transfer is anticipated.
	Is service certification likely to be straightforward in terms of agreeing measurable criteria and satisfying the interests of stakeholders?	The contract will be aligned to meeting the requirements of the Authority's Strategies and meeting or exceeding statutory performance levels. In doing so, the project can be judged against both measurable criteria and stakeholder interests.
	Does the project have clear boundaries (especially with respect to areas of procuring authority control)? If there are interfaces with other projects are they clear and manageable?	The project has clear boundaries. The PFI contractor will be responsible for accepting and processing all recyclable waste and residual waste delivered by the collection services of Constituent Boroughs, the point of handover being the acceptance of waste at the contract transfer stations. Interfaces with the collection services will be for the account of the public sector and regulated through the IAA.
	Can the service be provided without the essential involvement of Authority personnel? To what extent does any involvement negate the risk transfer that is needed for VFM?	The core service provided by the PFI contractor can be provided without the essential involvement of Authority personnel. Authority personnel will monitor the performance of the PFI contract and manage the interface risks between the Boroughs acting as collection agents and the PFI contractor only.
	Is the contractor able or likely to have control/ownership of the intellectual property rights associated with the performance/design/development of the assets for the new service?	It is likely that the project will rely on patented technology provided under subcontracts to the SPV via the EPC contractor. The design of the service will remain the risk of the PFI contractor.
	Will existing or planned elements within the scope of the project – or interfacing vitally with it – be complete before the start of the new service?	Obtaining control over key sites and the development of supporting transfer station infrastructure will remain the responsibility of the Authority. The programming of these work streams will be such that these elements are complete to allow the start of the new service without delay.
Operational Flexibility	Is there a practical balance between the degree of operational flexibility that is desired and long term contracting based on up-front capital investment	The meeting of the contract targets necessarily requires a substantial capital investment. The balance between operational flexibility and long-term contracting is practicable, and the PFI contract change mechanism will be relied on as one of the principal ways in which this is achieved. Furthermore, where specialist ancillary services are required to meet the varying demands of the waste management service, the Authority may procure these services outside of the PFI contract.
	What is the likelihood of large contract variations being necessary during the life of the contract?	Whilst changing environmental legislation is predicted to require changes to the contract over the term of the contract, this is manageable within the PFI change mechanism.
	Can the service be implemented without constraining the delivery of future operational objectives?	Yes. The Authority recognises that operational flexibility is of particular importance in the evolving waste management sector. The contract will draw on a number of methods to preserve operational flexibility, including (i) SOPC 4 (and waste specific derogations) compliant contract change mechanisms, taking into account the impact of change in environmental law; and (ii) a payment mechanism, based on the recent re-issued WIDP procurement pack, which encourages innovation and high

Issue	Questions	Response
		performance, calibrated to the operational and economic incentives that prevail in the market at a given point in time.
	Is there confidence that operational flexibility is likely to be maintained over the lifetime of the contract, at an acceptable cost?	Yes. The Authority is aware of the trade-offs between flexibility and cost. The documentation and evaluation methodology for the Invitation to Submit Detailed Solutions (ISDS) stage will set out the Authority's anticipated approach to cost and risk. The procurement exercise will invite bidders to put forward VfM proposals, with an adequate balance of certainty and value for money provided to the Authority.
Equity, efficiency and accountability	Are there public equity, efficiency or accountability reasons for providing the service directly, rather than through a PFI contract?	The Authority does not consider there to be any equity, efficiency or accountability reasons for providing the service directly, rather than through PFI. The waste management market is reasonably efficient with a number of private sector companies with the requisite capacity and capability to deliver this project. The market sounding events held suggest that there will be sufficient competition for this project. The procurement and delivery of this project has also been considered during the options appraisal and this indicates PFI is the most viable option in terms of VfM, deliverability, and sourcing of the finance required.
	Does the scope of the service lend itself to providing the contractor with 'end-to-end' control of the relevant functional processes? Does the service have clear boundaries?	The private sector contractor will be responsible for providing the service in return for a unitary charge which is subject to unavailability performance and deductions. The Output Specification clearly demarcates the service requirements of the contractor.
	Are there regulatory or legal restrictions that require services to be provided directly?	No.
	Is the private sector able to exploit economies of scale through the provision, operation or maintenance of other similar services to other customers (not necessarily utilising the same assets)?	The potential bidders have the experience of managing similar contracts for other Authorities in the country. Equally, the PFI contractor will be able to source third party wastes, not available to the Authority to manage the utilisation of the PFI infrastructure and to subsidise the cost of the project to the public sector.
	Does the private sector have greater experience/expertise than the procuring authority in the delivery of this service? Are the services non-core to the procuring authority?	Whilst responsibility for waste management is a core local authority function, the Authority has limited experience of managing and operating infrastructure of the nature required for the PFI contract. The private sector companies' core business is waste treatment and a number of these contractors have significant experience of delivering and operating infrastructure of this nature.
	Is a PFI procurement for this project likely to deliver improved value for money to the department as a whole, considering its impact on other projects?	Running the HMT model for this procurement does conclude that the PFI offers better value for money.
	Overall viability Overall, in considering PFI, is the department satisfied that suitable long term contracts can be constructed, and that strategic and regulatory issues can be overcome?	Taking the above into account, the Authority is satisfied that a contract structure can be arrived at which will : ▶ Meet the public sector's strategic aims and objectives for Waste Management; ▶ Deliver the project to the Output Specification; ▶ Meet landfill targets from the infrastructure proposed; ▶ Provide a flexible solution, so that changing regulatory targets can be met where necessary; ▶ Satisfy all current regulatory requirements, including HM Treasury Guidance on Accounting for PPP Arrangements, including PFI Contracts, under IFRS (the HMT Guidance)

Desirability

PFI can provide better risk management and produce incentives to develop innovative approaches to output delivery. Consistent high quality services can be incentivised through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of these questions is to consider whether the benefits of PFI are likely to outweigh any additional costs and disadvantages.

Table 2:

Issue	Questions	Response
Risk Management	Bearing in mind the relevant risks that need to be managed for the programme, what is ability of the private sector to price and manage these risks?	The Authority's Reference Project forecasts construction costs to be approximately £288million in nominal terms. Given the complexities of the project and the construction programme, this is expected to entail significant construction risk. To mitigate the risk of capital cost and time over-runs, the provider will be incentivised to deliver to contract timescales because payment will be linked to the achievement of the performance specification and consequently asset operation. Any time over-run in the project will expose the provider to additional construction costs and higher landfill costs in the form of landfill tax, gate fees and LATS. The provider/contractor will carry the risk of such cost overruns once the contracts have been executed, thus transferring this risk from the public sector. The Authority and its advisers recognise the importance of adopting a pragmatic approach to risk transfer, and will allow bidders to propose alternative risk positions where this can be demonstrated to improve value for money.
	Can the payment mechanism and contract terms incentivise good risk management?	The Payment Mechanism and Performance System will incentivise good risk management on the part of the PFI contractor. Payment will be linked to the achievement of the performance specification and consequently asset operation. Risks surrounding performance may be readily translated into financial losses (through landfill gate fees, landfill tax or LATS costs), and the Payment Mechanism and Performance Regime will transfer the financial implications of these risks to the contractor where contributory performance is within the contractor's control. In addition, the payment and performance mechanisms will seek to reflect any consequential loss in the fuel use contract.
Innovation	Is there scope for innovation in either the design of the solution or in the provision of the services?	The contractual obligations will be within a framework of defined output standards and values, but will also encourage the bidder to put forward innovative solutions to meet the challenges set in the contract. It is therefore expected that, given the technology environment within which this contract will operate, innovative solutions will be forthcoming. Necessarily, innovation will need to be judged by both the contractor and the Authority in the context of bankability.
	Does some degree of flexibility remain in the nature of the technical solution/service and/or the scope of the project? Is the solution sufficiently free from the constraints imposed by the Authority, legal requirements and/or technical standards?	The principal constraints placed on the project are governed by the fuel use specification and environmental legislative compliance. Other than these the project has flexibility as to how these contract objectives are met.
	Does a preliminary assessment indicate that there is likely to be scope for innovation in the programme?	Given the performance requirements of the contract and the relatively limited track record of MBT/SRF projects in the UK, there is scope for innovation in the technical solutions proposed by contractors.
	Could the private sector improve the level of utilisation of the assets underpinning the project (e.g., through selling, licensing, commercially developing for third party usage, etc.)?	Whilst the Reference Project does not assume that third party waste will be processed in the plant, there is scope within the project to utilise surplus capacity for the treatment of further commercial and trade waste and to subsidise further the cost of the project to the Authority. The Authority will explore this further with the bidders at the ISDS stage of the procurement.
Contract Duration and Residual Value	How far into the future can service demand be reasonably predicted? What is the expected life of the assets? What are the disadvantages of a long contract length?	The service demands for the different infrastructure have been predicted on the basis of MSW arisings over the life of the contract. The life of the assets varies from 25 to 30 years with life cycle expenditure taking place at periodic intervals. The key disadvantage of a long contract length is that the life cycle expenditure must occur at period intervals to ensure that the asset obsolescence is avoided.
	Are there constraints on the status of the assets after the contracts end?	It is anticipated that the assets will revert back to the Authority at the end of the contract term at nil residual value, unless existing third party facilities are utilised by bidders, which is considered unlikely given the scale of the project.
	Given the possibility of changes to the requirement, the assets and the operating environment, is it possible to sustain value for money over the life of the contract	It is anticipated that there will be scope for technology enhancement as part of the periodic lifecycle expenditure programme, or to the extent agreed with the Authority

Issue	Questions	Response
	utilising as appropriate, mechanisms such as benchmarking and technology re-fresh?	
Incentive and Monitoring	Can the outcomes or outputs of the investment programme be described in contractual terms, which would be objective and measurable?	The contract will set out the required standards against which service delivery can be monitored. The key contract standards will adopt SOPC 4 and the contractual terms contained within the WIDP toolkit. Performance outputs will be based on environmental reporting requirements of the Authority, in turn required by Defra and the Environment Agency. As such the outputs will be objective and measurable. Deductions for underperformance will be included in the payment mechanism, which will incentivise the service provider to provide the required levels of service. The payment mechanism will be based on the standard payment mechanism principles developed by WIDP. The principles it will follow include: ▶ Ensuring payment is made for services only when performance is achieved, in line with the output specification; ▶ Transferring risks and rewards to the provider in line with their obligations; and ▶ Providing a financial incentive to the provider, to meet the key performance indicators established for the project. Previous waste PFI deals have successfully followed this approach and operational projects have shown the outputs to be unambiguous and measurable and contractually enforceable.
	Can the service be assessed independently against an agreed standard?	Yes, it is envisaged the output specification currently under development will fully address this issue. The fundamental objective of the output specification is to improve existing performance levels to ensure the public sector can meet statutory targets for diversion, recycling and recovery. The services will be most likely assessed against these targets as a primary measure.
	Would incentives for service delivery be enhanced through a PFI payment mechanism?	Yes, the Authority's approach to monitoring performance through the operational period of the contract will help ensure, in conjunction with the payment mechanism, that meeting service levels are incentivised at all stages of the contract.
Lifecycle Costs and Residual Value	Is it possible to integrate the design, build and operation elements of the project?	Yes, it is intended that the project will be sourced on a DBFO basis for the contract period. Given the high-technology and industry-specific skills involved, it will be necessary for the public sector to procure the design and build as well as the service elements of the project together. The integration of the design, build and operation of the project also reflects historical procurement within the waste sector, and is core to procuring a realistic contract.
	Are there significant ongoing operating costs and maintenance requirement? Are these likely to be sensitive to the type of construction?	Yes. There will be significant operating and maintenance costs throughout the term of the contract to ensure the capital assets and services are maintained to the required standard. It is recognised that maintenance costs will be influenced by the quality of the original construction and bidders will need to find a suitable balance (between capital and maintenance costs) in their bids. In addition, the processing efficiency will also depend on the type of technology deployed.
Overall Desirability	Overall, is the accounting officer satisfied that PFI would bring sufficient benefits that would outweigh the expected higher cost of capital and any other disadvantages?	The Authority is satisfied this PFI contract will bring sufficient benefits to outweigh an expected higher cost of capital through: ▶ The risk transfer of future performance and costs which could be subject to fluctuation; ▶ Certainty of service delivery during the contract term; ▶ The use of a DBFO contract, which will ensure the construction and subsequent operating cost benefits are linked.

Achievability

While PFI may allow a more efficient and effective combination of public and private sector skills, determining the rules that will govern the relationship between the two sectors does involve significant transactions costs. In particular, the procurement process can be complex and involve significant resources, including senior management time which may be required for project development and the ongoing monitoring of service delivery. Authority capacity and capability, together with private

sector deliverability will have direct consequences for procurement times and the level and quality of market interest. PFI needs a robust competitive process to deliver fully its benefits and so the choice of procurement route should be informed by an assessment of the likely market appetite.

Table 3:

Issue	Questions	Response
Market Interest	Is there evidence that the private sector is capable of delivering the required outcome?	The Authority believes that projects delivered to date, when added to those currently in procurement demonstrates the capability of the private sector to deliver projects of this size and scope. The waste management market has, furthermore seen a number of new entrants in recent years that will, it is believed, have an interest in bidding for this contract.
	Does a significant market with sufficient capacity for these services exist in the private sector?	See response above.
	Is there likely to be sufficient market appetite for the projects in the programme? Has this been tested robustly? Is there any evidence of market failure for similar projects?	To address the market's appetite for the project, a market research initiative was conducted in June 2008, with the objective of gathering information from industry on the suggested long-term approach to integrated contract working on municipal waste in North London. The results of this sounding are summarised in section 4 of this OBC. Considerable interest was expressed in the project from the majority of the core waste PFI stakeholders, including established waste management operators, Constituent Borough officers, the GLA and members of the Thames Gateway Development Corporation. In the light of the outcomes of the market testing exercise the project scope, structure and procurement approach have been refined to reflect the concerns of industry. Furthermore an active site and planning strategy has been implemented, which should further increase interest in the project. The Authority fully expects that these measures will facilitate a strong competition for the project and an even playing field for potential bidders.
	Have any similar projects been tendered to market? Has the procuring authority's commitment to a PFI solution for this type of project been demonstrated?	Fifteen waste projects including, processing, treatment and disposal contracts have already been signed under PFI. A number of projects of a size comparable to the North London project have either reached financial close or are at the latter stages of procurement (Lancashire and Greater Manchester). The Authority has senior officers and members groups already in place with specific responsibility for this project, all of whom have waste expertise. These lead officers are being supported by in house staff with experience of PFI projects across a number of sectors and external consultants who have successful track records in assisting with the delivery of projects in this sector.
	Does the nature of the deal and/or the strategic importance of the work and/or the prospect for further business suggest that it will be seen by the market as a potentially profitable venture?	The private sector contractor will be expected to generate returns commensurate with the risks of the project and the appetite of the bidder to participate. Projects such as these are core business for the majority of waste companies, and given the scale and location of the project the Authority is confident that the market will see the project as an important opportunity.
	Does the Authority have the skills and resources to define, deliver and support the service throughout the procurement and the subsequent delivery period?	This project has assembled a core PFI team to support the key officers. A full time project manager has been appointed supported by a highly experienced team. Additional details are set out at section 6 of this OBC. The Authority has extensive experience of managing major waste projects, including the current contracts for waste disposal at Edmonton and third party contracts for provision of recycling and composting services. Therefore the Authority is well placed to effectively manage a project of this nature and is familiar with PFI as a procurement route. External advisers are in place through to financial close. The Authority's financial projections contain sufficient funding to ensure this level of support can be maintained through to contract/financial close, and where appropriate up to the point when the facilities become operational.
Overall achievability	Overall, is the accounting officer satisfied that a PFI procurement programme is achievable, given an assessment of the market,	In consideration of the points above, the Authority is satisfied the procurement programme is achievable, given that : ► The right level of resource and expertise has been committed to the project. This is supported by experienced consultants;

Issue	Questions	Response
	Authority resources and the attractiveness of the proposal to the market?	► The Authority has extensive experience of managing major waste projects including the current contracts for waste disposal and recycling; ► A review of the project management arrangements for this project has recently been undertaken. This has resulted in the establishment of a high level officer group and a waste PFI project team; ► Soft market testing has provided positive feedback. Considerable interest has been expressed in the project from all sectors of the market place; ► The project seeks a product with which the private sector is familiar; ► Risk sharing will be based on established standards, which the private sector is familiar with.

Soft Services Assessment

An important element in some PFI projects is the inclusion or otherwise of soft services. In the context of the waste sector and this project, 'soft' (services which exclude a material capital requirement) service provision within the scope of the PFI project includes the transport of waste, and the operation transfer station facilities. Whilst these service elements may be considered soft services, they nevertheless form a core part of the overall service, enhancing value for money risk transfer from the point of view of the Authority and should not be separated from the provision of the infrastructure in the contract. These services, as a consequence of the EPA 1990 have traditionally been outsourced to the private sector, and consequently there is no history of in-house provision. On this basis, a soft services assessment for stage 2 has not been undertaken.

Quantitative Assessment

Below is a summary of the key input assumptions used in the PFI Value for Money Quantitative Assessment generic spreadsheet issued by Treasury (the Treasury spreadsheet)

Table 4:

General

Variables	Description	Assumptions and Factors
Timings	The contract period is restricted to intervals between 6 and 40 years The spreadsheet allows the user to consider a situation where service begins prior to the end of the major capital expenditure period. The percentage of the unitary charge paid in this short period should be entered in the Unitary Charge box, cell F76	The contract period for this proposal is modelled at 29.5 years. For the purposes of the VfM analysis, this is assumed as being 29 years as the HMT FM model assumed full years. The construction period for this project is 3.5 years. For the purposes of the VfM analysis, the construction period is assumed to be 3 years as the HMT VfM model assumes full years for construction. In the initial 3 year capital expenditure period of this project, a proportion of the annual unitary charge is paid on the progressive completion of the phased infrastructure programme (when HWRCs, the MRFs and the AD plant come on line)
CapEx Escalator	This escalator increases the projected level of Capital Expenditure during the main construction period at the start of the contract.	The Capital Expenditure escalator is assumed at 4% per annum. The escalator is based on advice from the Authority's technical advisors (Ramboll AEA).
OpEx Escalators	The OpEx (employment) escalator is applied to all wage related costs, whilst the OpEx (non-employment) escalator is applied to all non-wage operating expenditure, lifecycle costs and third party income.	The OpEx (employment) escalator is assumed to be 4% per annum (2.5% + 1.5% to reflect average earnings increase over RPI) and OpEx (non-employment) escalator is assumed at 2.5% (to reflect long term RPI).
Unitary Charge Escalator	Applied to the unitary charge in full and shown as the percentage of the OpEx (non-employment) escalator.	This has been assumed at 50%.
Real	This is the Green Book discount	Currently set at 3.5%, being the Treasury real discount rate.

General		
Variables	Description	Assumptions and Factors
Discount Rate	rate and is a hard-wired input.	
Cost		
Initial CapEx	Expenditure incurred in procuring the asset. It does not cover expenditure required to maintain the asset	The initial (real) CapEx of the project totals £264 million over a 3 year period. This is the real cost as at the financial close date of the project (being 01/10/2012). The CapEx has been developed by Ramboll AEA.
OB Pre	This represents the optimism bias between Outline Business Case and Contract signature. There is a demonstrated systematic tendency for project appraisers to be optimistic. The OB Pre is assumed to be the same for both procurement options. According for each PSC and OB pre input variable, the spreadsheet will automatically generate and OB Pre input with the same value for the PFI option.	The percentages for overall OB, OB mitigated pre-FBC, the resultant pre FBC OB and Post FBC OB are set out in the table below. Overall, OB for CapEx has been calculated using the Mott McDonald (2002) study. With the lack of comparable data available for establishing OB figures accurately for any costs other than CapEx, the percentages used reflect a reasonable estimate agreed with Ramboll AEA. Based on the VfM guidance and the Mott MacDonald (2002) study, the public sector estimates that if the public sector procures this project, approximately 25% of the overall OB costs for CapEx will have been eliminated by FBC stage. Again due to the lack of comparable data, reasonable estimates have been agreed with Ramboll AEA for OB mitigated pre FBC for the other costs centres.

Table 5:

Cost Centre	Overall OB (%)	Overall OB mitigated by FBC stage (%)	Suitable Pre-FBC OB (%)	Resulting Post-FBC OB (%)
CapEx	46.4%	25%	11.4%	35.0%
Lifecycle	46.4%	25%	11.4%	35.0%
Opex (non-employment)	25%	20%	5%	20%
Transaction	50%	20%	10%	40%
Third Party Revenue	29.1%	25%	7.1%	22%

Table 6:

Variables	Description	Assumptions and Factors
Lifecycle costs at each LC date Lifecycle intervals	The investment incurred, on an ongoing and/or periodic basis during the course of the contract period, to maintain the asset so that it remains fit for its intended purpose. The lifecycle interval for the PFI option is hard-coded as an annual cost	Ramboll AEA has derived the lifecycle costs of the project. These costs are paid at certain points throughout the project. To derive a single lifecycle cost at a given interval, the net present value of the total lifecycle costs was calculated (using the treasury real discount rate of 3.5%) and an annuity was calculated. The PSC lifecycle interval is assumed at 5 years, whereas the PFI interval is assumed as occurring annually. Both cycles commence after the 3 year CapEx period assumed for the purposes of the VfM calculations. In case of PSC, the 5 year lifecycle cost was calculated as £12.2 million and in case of PFI, the annual cost is calculated as £2.5 million with a 5 year lump sum amount of £13.6 million. It is assumed that a premium is payable under PFI as compared to CP given the differential operating cost risk transfer between these options.
OpEx Non-employment Employment per person Employee number	Represents the costs incurred by the public sector in operating the asset and or running the services that are included within the scope. Expenditure which falls outside of the scope, for example, clinical staff costs, are excluded. The Spreadsheet is hard-wired to ensure that the employment cost per person is equal for both the PFI and the PSC option.	The total OpEx costs for the 29 year project were derived by Ramboll AEA. As these costs differ each year, a net present value and annual annuity are calculated to derive a single annual cost (following the same methodology as with lifecycle costs described above.) The annual amount is calculated as £33.1 million. The operating expenditure in the PFI contract is assumed as being higher than that within the PSC, and we have therefore discounted this by 12.5% to give an annual non-employment operating expenditure amount of £29 million for the PSC. Included within the OpEx are maintenance costs, variable costs, landfill costs, existing costs and transport costs. Landfill tax and tradable permits have been excluded. To calculate the split between non-employment and employment per person costs, wage costs were calculated as a % of the average annual OpEx figure of the project (using data received from Ramboll AEA). These were calculated as 18%.

Variables	Description	Assumptions and Factors
		Average annual wages per employee were also calculated as £38,000 for (based on the cost input data provided for the project by Ramboll AEA) The employment costs are therefore calculated as 18% of the NPV of total OpEx of £614.9 million. This equals £110.0 million. Assuming an average £43,591 cost per employee gives a total number of employees of 2,524 for the life of the concession. The non-employment costs equal 82% of the NPV of total OpEx. This equals £504.9 million.
Transaction costs	These represent the costs incurred by (i) the private sector (hard-wired into the spreadsheet) and (ii) the public sector, in reaching contractual agreement. The PFI costs have a minimum level of £750k as the relationship is not necessarily linear.	The transaction costs have been assumed at £2 million under the PSC and £5 million under PFI, based on the size and complexity of the procurement and costs incurred on other waste PFI projects as advised by Ramboll AEA.
Third Party Income	This represents any income stream which may result from the procurement which will reduce the unitary charge	Ramboll AEA derived the third party income data for the project (for recycles, electricity income and trade waste.) An annual amount of income is calculated following the same methodology as with lifecycle costs (as described above). The annual amount calculated is approximately £9.2 million. As with lifecycle costs, the third party income stream only commences after the initial 3 year CapEx period has finished.
Flexibility Scope change year Probability factor Level of Scope change Premium flexibility factor	The year in which a major scope change is most likely- this should be the same for the for PFI and PSC so the PFI cells update automatically The probability factor represents the user's best assessment of the likelihood of change. Again the PCI cell is hard wired to update automatically when the number is entered for the PSC option The level of the scope change should be entered as a percentage of the initial capital expenditure. Again the PFI cell updates automatically. The premium is only applied with the PFI option as this is the charge to enter into change notice. It is assumed that for the conventional procurement that the work will be competitively tendered.	The year of any likely change in project scope has been assumed at year 6 as advised by Ramboll AEA. This is because the public sector faces stringent diversion targets from 2017 onwards (5 years following financial close) and any change in scope is likely to occur from this point onwards. An 80% probability of a change in scope in the project has been assumed as advised by Ramboll AEA, based on the changing legislative environment for handling waste and other related environmental issues (for example, emissions from thermal treatment of waste.) A significant change in project scope is assumed if a change were to actually occur. A percentage of 50% is therefore deemed appropriate, based on advice received from the Authority's technical advisor (Ramboll AEA) The significant change envisages new facilities and major upgrades to the existing facilities. A premium under PFI of 10% has been applied as advised by Ramboll AEA, to reflect the risks borne by the private sector.
Indirect VFM Factors	The Green book requires public bodies to identify both costs and the benefits which arise from public investment and to monetise where possible intangible benefits. These should be entered into the Spreadsheet here in NPV terms	For the purpose of the VfM analysis, it has been assumed that the PFI will not deliver indirect VfM benefits.
Tax	An estimate is made to reflect the additional tax take that accrues to Government under the PFI option in line with the Green Book	The tax adjustment is 5%. This is based on applying Treasury green book guidance to derive the adjustment. The guidance assumes a starting tax adjustment of 2%. This is then compounded according to the specific nature of the project. In the case of this project, less than 50% of the lifecycle funds will be used for new build or improvements to the original CapEx. This adds 0% to the initial 2%. The second factor to consider following on from this is whether the project is likely to be on revenue or capital account for tax purposes. It is anticipated that the private sector will have a trade of building, financing and operating the facilities on behalf of the Council. This would suggest, according to the Green Book Guidance, a revenue account treatment for tax purposes. This adds 1% to the initial 2%. The final factor to consider is the degree of riskiness inherent in this project sector (i.e., the waste management industry). Given the non-standard elements of current waste PFI projects (both signed and in procurement) and the uncertainty over new technologies in the industry, the private sector is likely to view this

Variables	Description	Assumptions and Factors
		project as relatively risky. A factor of 2% has therefore been added. The final tax adjustment, therefore, comes to 2%+1%+2% giving a final adjustment of 5%.

PFI Funding		
Gearing	This represents the share of the total financing requirement which is funded by debt	The level of senior debt as a percentage of the total project funding is 79.7%, based on a prudent level of gearing acceptable to the current market.
Sterling Swap rate	Consult the CPF team in treasury if you are unsure which figures to use here.	The Sterling Swap rate is assumed as 4.60%
Credit spread		A credit spread of 25 basis points has been applied.
Bank Margin		The bank margin has been set at 296 basis points (being the weighting mid point of the range of margins from 275bps to 330bps). The figures reflect the market and are prudent.

PFI Value for Money Quantitative Assessment: Input and Assumptions sheet

Note: as per the 'Value for Money Assessment Guidance', procuring authorities should provide a table listing the assumptions behind each of the inputs. This table can be used as a template for this.

Input	Values		Assumptions & Rationale
Timings			
Contract period (years)		29	AEA and Council assumption
Initial CapEx period (years)		3	AEA models
Year when OpEx is first incurred (years)		4	AEA models
Proportion of UC during initial CapEx period payment		9%	Average UC in CapEx period as percentage of UC in first period following completion of CapEx period (Treasury new guidelines)
Escalators	Rates	Base Year	
CapEx escalator	4.0%	0	As agreed with NLWA , deemed reasonable
OpEx (non employment) escalator	2.5%	0	As agreed with NLWA , deemed reasonable
OpEx (employment) escalator	4.00%	0	As agreed with NLWA , deemed reasonable
Unitary charge escalator	50%	0	EY STM, base year 0 as per Treasury new guidelines - escalator as per EY STM
COSTS AND REVENUES			
Whole Life Costs			
CP			
Initial CapEx (£'000)		237,867	As per AEA inputs
Lifecycle costs at each LC date (£'000)		12,211	As per AEA inputs
Lifecycle intervals (yrs)		5	As advised by AEA in year 8.13.18, 23 and 28
OpEx (non employment)(p.a.) (£'000)		29,000	As calculated using AEA cost models and annuity basis
OpEx (employment per person) (p.a.) (£'000)		44	Deemed reasonable
OpEx (employee number)		166	Derived from total OpEx employee costs and assumed employment cost per person
PFI			
Initial CapEx (£'000)		264,297	As advised by AEA - including a 10% margin under PFI option (as advised by AEA) to reflect EPC Contractor "turn-key" price margin
Lifecycle costs at each LC date (£'000)		2,469	As per AEA inputs
OpEx (non employment)(p.a.) (£'000)		33,142	As advised by AEA, including a 12.5% margin for risk transfer
OpEx (employee number)		166	Derived from total OpEx employee costs and assumed employment cost per person
Transaction Costs			
CP		2,000	Agreed as reasonable with NLWA
PFI		5,000	Agreed as reasonable with NLWA
Third Party Income			
CP		9,233	As advised By AEA
PFI		9,233	As advised By AEA
OPTIMISM BIAS	Optimism bias pre-FBC	Optimism bias post-FBC	
Whole Life Costs			
Initial CapEx	11.4%	35.0%	As advised by AEA - see OB Assessment Paper
Lifecycle costs at each LC date	11.4%	35.0%	As advised by AEA - see OB Assessment Paper
OpEx	5.0%	20.0%	As advised by AEA - see OB Assessment Paper
Transaction Costs (CP option)	10.0%	40.0%	As advised by AEA - see OB Assessment Paper
Third Party Income (CP option)	7.1%	22.0%	As advised by AEA - see OB Assessment Paper
Flexibility			
Scope change year		6	Agreed as reasonable with AEA and the Councils
Probability factor (%)		80%	Agreed as reasonable with AEA and the Councils
Level of scope change (%)		50%	Agreed as reasonable with AEA and the Councils
Premium Flexibility Factor (PFI option)		10%	Agreed as reasonable with AEA and the Councils
Indirect VM Factors			
CP Amount NPV (£000s)		0	As per Treasury new guidelines
PFI Amount NPV (£000s)		0	As per Treasury new guidelines
Tax			
CP adjustment factor (%)		5%	From Treasury Tax matrix
PFI Funding			
Gearing (%)		79.73%	Source: 09.11.24_NLWA_WS_FINAL
Sterling swap rate (%)		4.60%	Source: 09.11.24_NLWA_WS_FINAL
Credit spread (bps)		25	Source: 09.11.24_NLWA_WS_FINAL
Bank margin (bps)		296	Source: 09.11.24_NLWA_WS_FINAL

Table 7: output sheet – indifference points (see User Guide Paras A17-A 37)**Output Box**

Scenario Name		Indicative VfM – 15% APR
IRRs	Pre Tax Equity IRR	15.00%
	Pre Tax Project IRR	9.62%
VfM		
	'Indicative' PFI VfM	7.21%
Indifference Points (IP)		
CP		
	Initial CapEx	(18%)
	OpEx (Non-Employment)	(15%)
PFI	OpEx (Employment)	(47%)
	Unitary Charge	9%
Other Values		
	CP costs (NPV)	-1,179
	PFI costs (NPV)	-1,094
	Unadjusted Annual Unitary Charge	76.9

Table 8: check**Check**

Senior Debt Fully Repaid?	TRUE
Pro Tax IRR = Target?	TRUE
Total Cash Flows = Zero?	TRUE