To approve the business case for Residual Waste Procurement **AGENDA NO: 5**

Cabinet Date	23 April 2008
	Julie Girling Lead Cabinet Member - Environment and Community Stan Waddington Cabinet Member - Environment
Key Decision	Yes
Background Documents	Draft Outline Business Case Joint Municipal Waste Management Strategy (2007 – 2020)
Location/Contact for inspection of Background Documents	Background papers may be inspected at Shire Hall Gloucester by contacting the officer named below or at www.recycleforgloucestershire.com
Main Consultees	Waste Project Board, Budget & Performance Scrutiny Committee, Members.
Planned Dates	The Defra deadline for submission of the Outline Business Case is 30th April 2008, a response is anticipated by end of September 2008
Divisional Councillor	All
Officer	Duncan Jordan, Group Director: Environment (01452 425523; duncan.jordan@gloucestershire.gov.uk) Jo Walker, Interim Director: Environment (01452 426270; joanna.walker@gloucestershire.gov.uk)

Purpose of Report	To seek approval to submit a detailed Outline Business Case (OBC) to Defra as an application for Private Finance Initiative (PFI) credits for the delivery of a long-term residual waste contract.
Key Recommendations	That: • The Council should pursue PFI in preference to prudential borrowing on the basis that this provides better Value for Money. • The Council submits an OBC to Defra as an application for PFI credits by 30th April 2008 and confirms its commitment to meeting the affordability gap range of £456 million to £605 million. • The Group Director Environment, in consultation with the Lead Cabinet Member, is authorised to approve the final version of the OBC

	prior to submission to Defra. • Authorise the Group Director Environment, in consultation with the Lead Member, to invite tenders for the treatment of Gloucestershire's residual waste, upon receipt of Government approval for the OBC and confirmation of the PFI credits (Revenue Support Grant), assuming the bid is successful.
Resource Implications	Waste costs are forecast to rise significantly over the next few decades, despite every effort to reduce, reuse and recycle waste. The impact of increasing landfill tax, a forecast increase in the number of households and increasing LATS costs, results in a forecast cost of circa £1,445 million to GCC to deal with its municipal waste to 2040. This assumes no investment in residual treatment is made and we continue to rely on landfill but still have optimal recycling levels (60% recycling target is met). For the purposes of the report this will be referred to as 'Status Quo'. Investment in a residual waste solution in addition to high levels of recycling (60% target) provides an alternative to the Status Quo. The OBC requires GCC to model a Reference Project*, based on Energy from Waste (configured to be able to deliver Combined Heat and Power), which results in forecasts of between £1,208 million and £1,357 million as a cost to GCC to deal with its municipal waste between 1 April 2008 and 31 March 2040. This assumes a successful PFI bid, resulting in PFI credits of £171 million over 25 years. Even the highest forecast cost provides GCC with better Value for Money than Status Quo. Defra guidance requires an OBC to have compared forecast costs to a forecast budget. Taking the approved budget for 2007/08 and extrapolating it forward by 2.5% per annum results in a £752 million budget to 2040. When you compare the forecast Reference Project costs to the forecast budget, the affordability gap is between £456 million and £605 million. It should be noted that the affordability gap range is even higher with the forecast costs of Status Quo (£693 million to £889 million). *Reference Project: For the purposes of financial modelling, GCC has to define a reference residual waste technology. This is purely for cost analysis and is not a preferred technology.

MAIN REPORT CONTENTS

1 Background

1.1 Cabinet will be aware from previous reports that GCC is facing substantial government pressures to reduce its dependence on landfill, and manage municipal waste in a more sustainable way. Latest estimates for 2007/08 identifies that about 64% of Gloucestershire's total municipal waste arisings is landfilled; equating to approximately 200,000 tonnes.

1.2 In line with the Joint Municipal Waste Management Strategy (JMWMS), Gloucestershire County Council (GCC) and the Waste Collection Authorities are already tackling this by increasing recycling and composting levels, aiming for 60% by 2020 (10% higher than the national target). However, even after recycling, composting, and carrying out waste minimisation activities, GCC is forecast to landfill between 176,000 and 263,000 tonnes pa of residual waste by 2040 (See Appendix A).

1.3 Recognising that it is neither environmentally or financially sustainable to maintain the 'Status Quo' (the landfilling of residual waste), Cabinet approved the Residual Waste Procurement Plan in November 2007. This included the approval to prepare a Business Case to determine the best procurement approach for the delivery of a long term residual waste contract for the County Council, and set out its intention to procure a landfill diversion technology using an output based specification.

1.4 A draft summary of the Outline Business Case is found in Appendix B. It brings together the background to the project; Gloucestershire's strategic waste management objectives; the Council's procurement strategy; risk management, its allocation and contractual structures; project management and governance; sites, planning and design; costs, budgets and finance; stakeholder communications; and the project timetable.

2 Does PFI represent Value for Money for the delivery of a Residual Waste Solution?

2.1 As part of the Outline Business Case (OBC), GCC has undertaken a Value for Money (VfM) appraisal based on the HM Treasury guidance, which applies to all potential PFI projects developing an OBC from January 2005. This VfM appraisal is considered a Value for Money assessment of PFI to determine the preferred funding route for the project.

2.2 Analysis using the prescribed HM Treasury methodology and electronic spreadsheet was undertaken to examine PFI versus conventional procurement. Definitions of the two approaches are outlined below:

- PFI – A privately funded (Design, Build, Finance and Operate (DBFO)) contract which includes the potential for government funding in the form of PFI credit revenue support; and

- Conventional Procurement – Publicly funded via prudential borrowing whereby GCC lets a construction contract (owning the asset), followed by a separate operations and maintenance contract. There are no government grants available to assist with the costs of the project under this procurement route.

2.3 The qualitative and quantitative analysis indicates that PFI provides 20% better Value for Money for Gloucestershire and therefore the recommendation is to submit an OBC to Defra on 30th April 2008. (See Appendix C).

3 What is the impact on GCC's budget?

3.1 The Reference Project

3.1.1 In accordance with Defra guidance, GCC is required to develop a hypothetical residual waste solution referred to as a Reference Project as part of GCC's OBC and application for PFI credits. It should be stressed that the Reference Project does not represent GCC's preferred solution. A Reference Project must however represent a credible and proven solution that is capable of being delivered both financially and technically by the private sector.

3.1.2 Promoting a particular residual waste technology would be contrary to the principles of PFI procurement. This is founded upon a contract "Output Specification" whereby the private sector is responsible for proposing both innovative and deliverable solutions that comply with GCC's requirements. This is a readily understood concept in the waste PFI market but it is worth re-emphasising for the purpose of stakeholders. Innovative and/or dispersed solutions would be encouraged through the tender documentation.

3.1.3 The Reference Project, in GCC's OBC, is based on an Energy from Waste (EfW) (often referred to as Incineration) facility which is configured to be able to deliver Combined Heat and Power. This technology was selected because it is deliverable, environmental sustainable and represents a complete solution (for example it does not depend on securing markets for refuse derived fuels from Mechanical Biological Treatment technologies). After landfill, EfW is the second most common method for dealing with residual waste in the UK. It is a well established technology and commercially proven which allows GCC to model a robust business case.

3.1.4 To ensure a deliverable solution it has been modelled as an EfW facility with necessary pipeline for heat outlets. Whilst GCC anticipates the delivery of a suitable heat off-take, it is not clear at present what this might comprise of. Consequently it is conservatively assumed that no income is derived from such heat markets so as not to present an over-optimistic affordability profile of the Reference Project.

3.1.5 The technology's capacity has been determined by detailed waste-flow modelling based on waste growth and recycling and composting performance projections over the life of the contract (up to 2040). Capital and operating costs are factored in to give the impact on the total waste budget each year over the contract life and this has been used to establish the overall cost of the waste

management service. To develop a robust Reference Project, key assumptions (such as capital and operating costs, waste growth etc) were tested to establish the sensitivity of the model to small changes.

3.2 **Status Quo versus the OBC Reference Project**

3.2.1 A key element of any business case is the need for strategic investment. In this context, the Reference Project (the need) was compared to the Status Quo. Both options assume recycling and composting of 60% of the county's household waste by 2020 and that waste growth per household reduces to zero by 2020. The Reference Project assumes that all waste not recycled or composted will be sent to a dedicated EfW facility from 1st April 2015. The Status Quo assumes all waste not recycled or composted will continue to be sent to landfill.

3.2.2 Both of these options were subject to detailed waste flow modelling (including a range of sensitivities) and then detailed financial analysis. The financial analysis considers the 32 year financial period from 1 April 2008 through to the end of PFI contract operations (31st March 2040), which includes a 25 year operational period (1st April 2015 to 31st March 2040).

3.2.3 The estimated nominal cost of the total Reference Project (including all waste management services) is forecast at £1,208 million taking account of the PFI revenue support. This is significantly lower than the estimated total cost of the Status Quo forecast at £1,445 million.

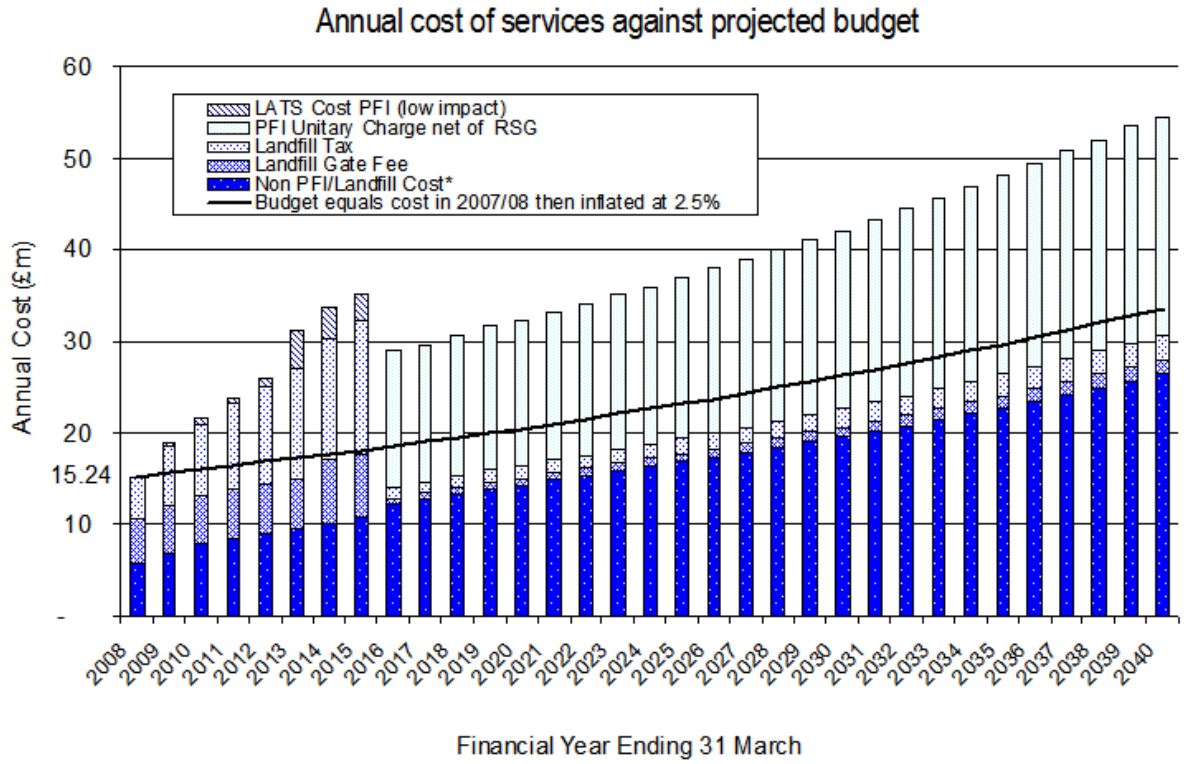
3.2.4 The estimated PFI credit for the Reference Project has been calculated at £92 million which equates to 50% of the related capital and financing costs. This figure is then used to generate an annual Revenue Support Grant (RSG) of circa £6.9 million per annum totalling circa £171 million over the 25 year operational period commencing in the year ending 31 March 2016. (See Appendix C for further detail).

3.3 **Affordability of the Reference Project**

3.3.1 The OBC is required to determine affordability of the Reference Project. The 2007/08 total approved Waste Contract budget has been taken and extrapolated over the contract period to 31st March 2040 using an inflation rate 2.5% per annum. This results in a projected budget for the Council totalling £752 million over the contract period to 2040.

3.3.2 Figure 1 below sets out the annual cost of services against the projected GCC waste contract budget over the 32 year period. The annual affordability gap can be seen as the area of the bar above GCC's budget line.

Figure 1: Affordability Gap of the Reference Project over the 32 year period.



*The "Non PFI/Landfill Cost" is the cost to the council of operating all waste disposal services such as Household Recycling Centres that do not form part of the PFI contract to treat residual waste.

3.3.3 Therefore, based on the cost of the Reference Project (£1,208m) and the level of committed budget (£752m), GCC must find a further circa £456 million (in nominal terms) over the 32 year period. This is viewed as an "affordability gap" based on best estimate assumptions.

3.3.4 From the anticipated operational commencement date of the facility in April 2015, landfill tax, landfill costs and LATS costs are minimised and eliminated respectively. The income from PFI credits also reduces the annual cost to GCC by £6.9 million once the facility is operational.

3.4 **Sensitivity Analysis**

3.4.1 GCC is required to establish a worst case affordability gap for the delivery of the Reference Project. Therefore sensitivity analysis has been performed to establish the potential impact on the cost of the Reference Project on various assumptions including capital costs, operational costs, income from third parties, and a combination of these in accordance with Defra guidance.

3.4.2 The estimated affordability gap of circa £456 million (referred to above in 3.3.3) is derived from using the base case Reference Project costs in conjunction with the "low impact" LATS profile scenario. This is considered the lower threshold affordability gap. Based on the sensitivity analysis it is estimated that the affordability gap could rise to circa £605 million (Upper Threshold). Therefore

GCC has an estimated “Affordability Gap Range” of between £456 million and £605 million. Detailed sensitivity analysis is found in Appendix C.

3.4.3 The Status Quo option would be much more expensive with the lower threshold for the affordability gap range estimated at £693 million and an upper threshold of circa £889 million.

4 Risk Assessment

4.1 Waste management is a high-risk area. Appendix D provides the risks for the project. The key project risks are included in the Council Plan and also the Level 2 Business Plan. Risks are reviewed at monthly team meetings and the latest position is presented to the Waste Project Board and reproduced in monthly highlight reports.

5 Officer Advice

5.1 Officer advice is to approve the recommendations as outlined in this report.

5.2 The Chief Finance Officer recommends that GCC proceed with the PFI procurement on the basis of a £456 million to £605 million affordability gap range between 2008 and 2040 and confirm it is committed to meet this affordability gap range.

5.3 In addition, it should be recognised that the indicative waste budget of £752m from 1 April 2008 to 31 March 2040 only represents an extrapolated 2.5% increase on the 2007/8 waste budget. This does not reflect the more realistic step change annual increases which GCC is committed to fund to deal with Gloucestershire's municipal waste. These increases have been estimated to exceed the affordability gap range referred to above.

6 Consultation Feedback

6.1 Consultation and engagement feedback is found in Appendix E.

7 Performance Management/Follow-up

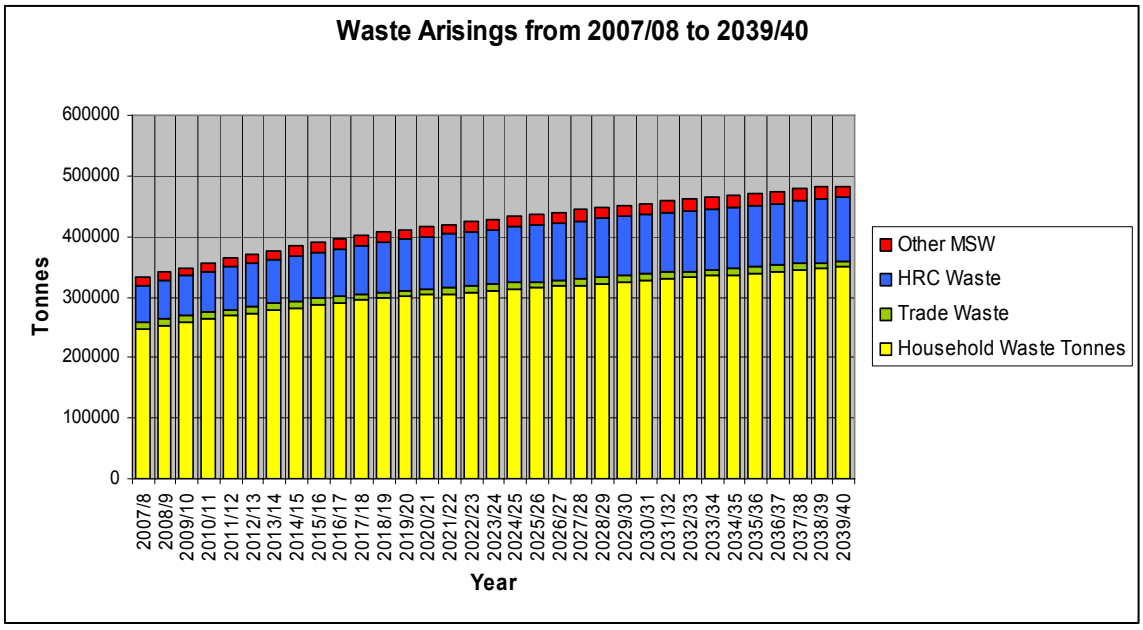
7.1 This is found in Appendix E.

Appendix A Waste Arisings and Predicted Waste Growth

OBC Reference Project and Status Quo Modelling

For the Reference Project, modelling on Gloucestershire's waste data (for household, commercial, Household Recycling Centre (HRC) and other Municipal Solid Waste (MSW)) has been undertaken, taking into consideration the objectives of the JMWMS. Modelling has been carried out to the year 2039/40. Based on several assumptions, annual municipal waste arisings are predicted to rise to over 400,000 tonnes by 2020, and grow to about 480,000 tonnes by 2040, as shown in Figure A1 below.

Figure A1 Gloucestershire municipal waste arisings from 2007/8 to 2039/40



New housing and population projections have been used. The achievement of zero waste growth per household by 2020 is met through more recycling and composting as well as reduction in waste generation and further reuse. The rise in the growth in the quantity of waste generated per household may stop by 2020, but municipal waste arisings will continue to grow in line with household growth. Based on the Reference Project and Status Quo, GCC achieves a growth rate of 1.2% by 2020 and this reduces further to 0.5% by 2040. The Joint Municipal Waste Management Strategy (JMWMS) forecasts waste arisings to continue to grow on average by 1.6% per year.

Residual Waste Arisings

Based on the Reference Project modelling, by 2020, (assuming the 60% recycling and composting target is met), there will still be 154,000 tonnes per annum of residual waste by 2020. This will gradually rise to 176,000 tonnes per annum by 2040. However, if municipal waste continues to grow at 1.8% per household, by 2040, residual waste arisings will reach 263,000 tonnes, generating 86,000 tonnes more than anticipated.

Appendix B Executive Summary of the Outline Business Case

[This is a draft copy. All numbers and text may be subject to change]

1 Introduction

1.1 Following approval of its Expression of Interest, GCC is submitting its OBC to the Waste Infrastructure Development Programme (WIDP) for Private Finance Initiative (PFI) credits to support the implementation of our long-term residual waste treatment solution.

1.2 This document presents the Gloucestershire County Council's (GCC) Outline Business Case (OBC) for the development of capital and investment in waste management services in the county of Gloucestershire.

1.3 The Reference Project encompasses the services associated with managing Municipal Solid Waste (MSW) (this includes household waste and other wastes that are collected by, or on behalf of, a local authority) including transfer, recycling, composting, the treatment of residual waste (recovery) and landfill disposal, but not collection. Waste collection continues to be the responsibility of the Waste Collection Authorities and although collection schemes are considered in the Reference Project, this service is not included in these contracts.

1.4 In accordance with Defra guidance, the OBC has been developed around a reference residual waste technology, to enable costs to be evaluated, and is located on a reference site. Consistent with Defra guidance, the proposed approach for procurement will be that the Council adopts the principle of a neutral stance on both technology and sites; in order to encourage competition and ensure that the most environmentally sustainable and affordable solution is identified.

1.5 Whilst the reference technology is Energy from Waste (EfW) with the ability to provide Combined Heat and Power (CHP), GCC is keen to ensure that the procurement process encourages the submission of a full range of technology solutions, including but not limited to the list of technology solutions approved by Cabinet in October 2007.

1.6 The reference site suitable for the delivery of a residual waste solution has been selected by carrying out a comparative site assessment using criteria based on PPS10, regional guidance and local planning policy. The study ranked the sites based on planning criteria and deliverability criteria.

1.7 The Gloucestershire Joint Municipal Waste Management Strategy (JMWMS) includes targets for achieving recycling and composting levels of 60% of household waste by 2020, 10% higher than the national target. However this still leaves an estimated 176,000 tonnes of non recycled waste (in 2040) that requires some form of treatment to divert this waste from landfill (residual waste).

1.8 The strategic aims and objectives of the Reference Project mirror those set in the JMWMS and are designed to meet and exceed statutory obligations for recycling and composting and diversion of municipal waste from landfill to meet the Landfill Allowance Trading Scheme (LATS targets). The following sections of this Executive Summary provide: the context for change, our previous PFI experience, an overview of our JMWMS and our Residual Waste Procurement Plan (RWPP); the options considered; the components for our long-term and interim solutions, risk management, stakeholder engagement, governance arrangements and the basis for our OBC.

1.9 GCC is submitting this OBC with support from Cabinet, and the Waste Project Board (WPB), which is composed of key cabinet members and chief officers.

2 Background

2.1 Profile and strategic context

2.1.1 Gloucestershire is located within the northern extremity of the South West of England. Gloucestershire is bounded by Monmouthshire to the west, Herefordshire, Worcestershire and Warwickshire to the north, Oxfordshire to the east and Wiltshire and South Gloucestershire to the south.

2.1.2 The County is substantially rural in nature with the main urban development in Cheltenham and Gloucester. The River Severn divides the County, focusing east/west journeys to major bridging points. There are good north/south road connections as the county is bisected by the M5 and the main east/west road being the A40. The green and rural landscape is a key county asset; Areas of Outstanding Natural Beauty (AONB) account for 51% of the county area.

2.1.3 The county supports a population of about 580,000 who generate over 324,000 tonnes of household waste per annum. The population of Gloucestershire has been growing at an average of over 2,000 people per year, mainly based on net in-migration with more people coming into the county than leaving each year. By 2029, population is predicted to reach 650,000, with the largest increases in Stroud and Gloucester.

2.1.4 While the population is growing at a relatively steady rate, the number of households has been growing at twice the rate, reflecting the trend toward smaller household sizes and expected to increase by over [25]%.

2.1.5 Much of the in movement of people to live in Gloucestershire reflects the prosperity and strength of the local economy, bringing with it associated job creation. For many years, unemployment in the County has been only around two-thirds of the national average. Gloucestershire's sound economic performance reflects the balance of manufacturing industry (much of it associated with aerospace) and services, with local headquarters of large companies (such as Cheltenham and Gloucester Building Society) and public sector organisations (such as GCHQ) as well as good representation in growing sectors, such as creative industries.

2.2 Waste Arisings

2.2.1 Historically, growth in municipal waste arisings has risen by about 3% per year. Total MSW arisings in 2006/7 were about 323,000 tonnes, of which household waste accounted for 300,000 tonnes.

2.2.2 However it is forecast that with the implementation of waste minimisation schemes and government initiatives that waste growth at the household level can be reduced to zero by 2020. GCC plans to reduce residual waste arisings in line with the targets set out in the National Waste Strategy for England 2007.

2.2.3 Recent modelling of future waste growth by Entec predicts that the annual change in total municipal waste arisings will reduce from current levels to about 1.2% by 2020. There will still be some growth in the system and this will be mostly due to the increase in numbers of households Gloucestershire. From 2020 to 2040 the annual increase in waste arisings will continue to reduce.

2.3 Current Waste Arrangements

2.3.1 Gloucestershire is a two-tier authority; GCC is the Waste Disposal Authority (WDA) and there are six District Councils who are the Waste Collection Authorities (WCAs).

2.3.2 GCC is responsible for the disposal of municipal waste collected by the district councils; the provision of Household Recycling Centres (HRCs) for the public to deposit household waste and recyclable materials; and the management of closed landfill sites previously operated by GCC. In addition, GCC is also required to lead the preparation of the JMWMS and issue recycling credits to recyclers of household waste.

2.3.3 GCC's six District Council partners, collectively known as the 'Gloucestershire Waste Partnership', are:

- Cheltenham Borough Council;
- Cotswold District Council;
- Forest of Dean District Council;
- Gloucester City Council;
- Stroud District Council; and
- Tewkesbury Borough Council.

2.4 Current Collection arrangements

2.4.1 Gloucestershire's Waste Collection Authorities (WCAs) are responsible for the collection of household waste and recyclable materials (and in most cases, commercial waste upon request from the waste producer) and for the transport of this waste to GCC's waste facilities. The WCAs also provide recycling facilities for segregated material in the form of bring banks. One WCA (Cheltenham) manages its own Household Recycling Centre.

2.4.2 There is some commonality in the way that dry recyclables are collected by the WCAs in Gloucestershire. Each WCA provides a kerbside recycling service for paper, glass and cans, which are manually sorted at the kerbside and loaded on to a vehicle. Some collect additional materials such as plastic bottles, textiles and batteries. Five WCAs have introduced kerbside garden waste collection schemes, although the service varies: two scheme offer a free service and the remaining three charge for the service.

2.4.3 Each WCA provides a weekly collection of residual waste in black bags or in wheelie bins but moves towards the fortnightly collection of residual waste are being considered by some authorities. In parallel, some of the WCAs, in parallel, are introducing kerbside kitchen waste (compostable food) collections in 2008.

2.5 Current Disposal Arrangements

2.5.1 To manage the current waste arisings within the county, GCC's contractors use a number of existing facilities throughout the county. The waste disposal service currently comprises:

- five Household Recycling Centres;
- three windrow composting sites;
- two transfer stations;
- two active landfill sites;
- WEEE (Waste Electrical and Electronic Equipment) and ELFFs (End of Life Fridges and Freezers) storage and recycling; and
- a number of other ancillary facilities.

2.5.2 GCC, in partnership with the WCAs, is pursuing the "3Rs": reduce, reuse, recycle. GCC is therefore procuring in-vessel composting capacity to treat kitchen waste (and any co-mingled garden waste) collected by the WCAs. This will also assist GCC in meeting its LATS targets limiting GCC's LATS exposure to between 10,000 tonnes in 2009/10 to 40,000 tonnes in 2014/15.

2.6 Performance of Services

2.6.1 Recycling performance in Gloucestershire has improved in recent years rising from 16% in 2004/5 to 19% in 2006/7. Better collection services in the districts including widening the range of recyclables collected separately and sorted at the kerbside as well as a good coverage of bring banks has contributed to this improvement. Composting of collected household garden waste has rapidly increased from 8% in 2004/5 to 14% in 2006/7, and has made a major contribution to the total recycling performance in recent years. Combined the County's recycling and composting rate increased 9% in three years to 33% in 2006/7. It is estimated that this has now reached [36%] in 2007/8.

2.6.2 In the future, other service improvements such as the introduction of alternate weekly collections (to boost recycling rates), kitchen waste collections and a continually improving waste minimisation programme (real nappies, home composting, smart shopping, and promotion of voluntary sector initiatives) will help push up recycling rates further.

2.6.3 Reliance on landfill as a method of disposal of MSW has declined in recent years. Through the service improvements outlined above, more waste has been diverted from landfill and hence in turn less Biodegradable Municipal Waste (BMW) has been landfilled.

3 Strategic Waste Management Objectives

3.1 Strategy Development

3.1.1 The Joint Municipal Waste Management Strategy (JMWMS) has been produced to comply with the Waste and Emissions Trading Act 2003, which requires two-tier

authorities to produce a joint strategy for waste management. The JMWMS determines how municipal waste will be managed in Gloucestershire up to 2020, and replaces the existing strategy published in April 2002.

3.1.2 The Strategy has been developed by the Gloucestershire Waste Partnership (GWP), a partnership between the seven Gloucestershire waste authorities. The GWP is a voluntary body with constituent authorities that are highly committed to working together. The partnership was initially realised through the development of a Memorandum of Understanding and is responsible for the delivery and implementation of the JMWMS.

3.1.3 The National Waste Strategy for England 2007 sets a national target for 50% recycling and composting by 2020. The Gloucestershire JMWMS aims higher, pushing recycling and composting to 60% by 2020. GCC carried out a waste compositional analysis study (in 2004/05) that established that about 70% of Gloucestershire's total household waste is recyclable or compostable. The Local Government Association has signed up to provide recycling services to ensure the opportunity to recycle 70% of household waste.

3.1.4 It is planned that the final version of the JMWMS and accompanying documents are adopted by all seven authorities by the end of April 2008. GCC formally adopted the JMWMS on 10th October 2007. The JMWMS and accompanying documents have been subject to formal public consultation.

3.1.5 As part of the JMWMS, GCC has also developed a Strategic Environmental Assessment (SEA) report, which was subject to consultation prior to the publication of the National Waste Strategy for England 2007. The report was finalised in September 2007. The SEA addresses the issue of climate change, and discusses the impact of carbon and assesses all the waste minimisation, recycling and residual waste options.

3.2 Waste minimisation and Re-use

3.2.1 The JMWMS recognises that further growth in Gloucestershire's municipal waste arisings is not sustainable; both environmentally and financially. Complementary to the new National Waste Strategy for England 2007 objectives, the JMWMS sets out two key objectives aimed at tackling waste growth ("Reduction First") and consumer behaviour and society's attitude to consumption and disposal ("Changing Behaviour"). To facilitate this, a range of waste minimisation and re-use initiatives will be pursued.

3.3 Recycling, Composting and Disposal

3.3.1 Targets have been set through the JMWMS for recycling and composting that coincide with the target years set out in the National Waste Strategy for England 2007 as seen in Table 1 below. Working through the GWP, it is anticipated that the early targets will be exceeded. Under the Local Area Agreement the 2009/10 target has been set at 48%.

Table .1 Comparison of National Waste Strategy and the JMWMS targets and anticipated Reference Project recycling and composting rates.

Year	National Waste Strategy	Gloucestershire JMWMS 2007	Reference Project
	%	%	%
2009/10	40	40	45
2014/15	45	50	54
2019/20	50	60	60

3.3.2 To date, GCC has successfully benefited from recycling and composting initiatives to mitigate its LATS exposure. GCC believes there will be a LATS deficit from 2009/10. GCC is prepared to use a LATS trading strategy if it is a lower cost to the authority, than an interim solution. Table 2 below clearly demonstrates the GCC waste arisings and LATS targets. In 20012/13, GCC will either be required to buy allowances for 54,282 tonnes of biodegradable municipal waste or find an alternative solution.

Table 2 Key Years for LATS allowances, the predicted level of BMW that will be sent to landfill.

Year	LATS allowance	BMW sent to Landfill	Difference (BMW landfilled compared to allowance)
	Tonnes	Tonnes	Tonnes
2009/10	107,428	119,945	+12,517
2012/13	71,555	125,837	+54,282
2019/20	50,069	27,977*	-22,092*

(* Based on the assumption our residual waste facility is operational in 2015)

3.4 Appraisal of technology options for residual waste treatment

3.4.1 As part of the JMWMS process, the GWP carried out a detailed options appraisal for collection and disposal options. It was carried out by external consultants as part of the Local Authority Support Unit programme. A range of collection options were identified and assessed to determine optimal collection systems for Gloucestershire. A range of residual waste treatment options were then assessed and it was determined that if markets for products materialised, all options would assist the GWP to meet its LATS targets and divert municipal waste from landfill.

4 Procurement Strategy and Reference Project

4.1 Overall Strategy for Procurement

4.1.1 To provide the required services and infrastructure needed to deliver the JMWMS for Gloucestershire, GCC has developed and is in the process of delivering its procurement strategy.

4.1.2 In 2005 GCC terminated a PFI procurement process for the delivery of a series of integrated waste management services. GCC terminated this process because of the excessive costs and inherent risks associated with the bids received at the Best and Final Offer stage. Following the termination of the PFI project GCC has pursued a disaggregated service procurement strategy and has already

successfully let two major contracts, one for the management of HRCs and a second for disposal to landfill and the composting of green waste.

4.1.3 The disposal contract was awarded to Cory Environmental (Gloucestershire) Ltd for the bulking, transfer, landfill, and windrow composting of organic waste. This contract expires in 2013 with an option to extend to 2018.

4.1.4 The HRC management contract was awarded to Environmental Waste Controls (EWC) in August 2006 and expires in 2016. This contract has since been taken over by May Gurney.

4.1.5 The future services to be procured by GCC will provide the additional waste management infrastructure within the County to enable the JMWMS objectives to divert landfill, minimise the landfill of biodegradable municipal waste and manage LATS risk to be met.

4.1.6 GCC is continuing negotiations with Cory Environmental for the delivery of an in-vessel composting (IVC) service. This will divert an extra 20,000tpa – 30,000tpa of biodegradable waste from landfill.

4.2 Interim Arrangements to meet LATS

4.2.1 If the procurement of the residual waste treatment service commences in October 2008, it is unlikely that a suitable facility be commissioned prior to January 2015. This will leave about a five year potential LATS gap.

4.2.2 GCC has a limited number of options available to it to address this problem. These include LATS trading, export to merchant facilities and fast to procure technology solutions. GCC has considered a LATS trading scheme as an interim solution and has already acquired some permits for the near future. GCC is prepared to purchase allowances to ensure compliance with the LATS.

4.2.3 GCC has been discussing the potential for partnering with the West of England Partnership (WoEP) to procure an interim residual waste solution. (See section 6.2.3).

4.3 Rationale for Long Term Residual Treatment Procurement

4.3.1 Based on the Reference Project, it is estimated GCC will still generate approximately 176,000 tonnes of residual waste by 2040 even if recycling/composting rates meet the 60% target. Given the pressing LATS demands on GCC, and the strategic aim of moving away from landfill, GCC identified the need to find a way of managing its residual waste that is an acceptable, feasible, flexible, environmentally sustainable solution that ensures Value for Money.

4.4 Output Specification for the Project

4.4.1 GCC is using the DEFRA Waste Infrastructure Delivery Programme (WDIP) Output Specification (Consultation Draft) as the basis for its Output Specification which has been modified to reflect GCC's specific circumstances and requirements.

4.4.2 The contractor will be required to design, build, own and operate residual waste treatment capacity that will divert waste from landfill. Specifically, such capacity should provide a solution that is:

- full (rather than partial) and complete;
- deliverable;
- flexible;
- environmentally sustainable;
- optimal in materials and energy recovery; and
- Value for Money ("VfM") over the life for the contract.

4.4.3 Gloucestershire will also consider the acceptance of commercial waste from local businesses at the residual waste facility, as part of this contract. This is a sustainable approach and will support the local economy and job creation.

4.5 Long Listing of Technology Options

4.5.1 In accordance with the JMWMS, GCC has undertaken a detailed options appraisal of the residual waste technology solutions. In this appraisal process GCC deliberately assessed 'whole systems' to ensure that the full process and outputs/markets were considered. GCC termed these "technology scenarios".

4.5.2 GCC undertook a staged approach to appraising the technology scenarios reducing 34 technology scenarios to five.

4.5.3 On 10th October 2007, GCC Cabinet approved the five technology scenarios listed below.

- Energy from Waste with Combined Heat & Power (CHP).
- Mechanical Biological Treatment (MBT) producing a biologically stabilised material that is sent to landfill.
- Mechanical Biological Treatment (MBT) producing a fuel sent to a dedicated CHP.
- Autoclave producing recyclates and an active fibre fuel that is sent to a dedicated CHP.
- Advanced Thermal Treatment (ATT) with syngas used to produce electricity and recovery of heat energy (CHP).

4.6 Appraisal of short-listed options to identify the reference project

4.6.1 From the second stage evaluation process it was clear that no single technology scenario was clearly superior to the rest. Indeed, it was found that the order of ranking was very sensitive to a number of technical input assumptions and the relative weightings applied to the various different criteria.

4.6.2 Based on technical and financial modelling, the two best performing scenarios were MBT producing a Solid Recovered Fuel to feed a dedicated CHP and Energy from Waste (EfW) with Combined Heat & Power (CHP). These technology scenarios were identified as having the potential to represent GCC's Reference Project. Further climate change impact modelling was undertaken on the two scenarios, and the stand alone CHP option was the best performing technology scenario It was therefore decided that stand alone CHP would be the most appropriate option to take forward as GCC's Reference Project.

4.6.3 Whilst GCC anticipates the delivery of a suitable heat off-take, it is not clear at present what this might comprise of. Consequently it is conservatively assumed that no income is derived from such heat markets so as not to present an over-optimistic affordability profile of the Reference Project. Therefore, the Reference Project is based on EfW with the ability to convert to CHP when heat markets materialise.

4.6.4 As set out in table 3, GCC's Reference Project modelling shows that a facility capacity of approximately 176,000tpa will be required by 2040. This is consistent with GCC meeting a 60% recycling and composting target by 2020. Due to issues such as scale and planning risk we have modelled a Reference Project on one site. If however, a bidder chooses to propose dispersed facilities or a multi-technology approach, GCC would consider such an approach, against the criteria in the evaluation framework.

Table 3 sets out the proposed Reference Project residual waste facility

Proposed Facility	Number of Proposed Facilities	Nominal Capital Expenditure	Capacity of Facility
Energy from Waste (potential for Combined Heat and Power)	1*	£605m	176,000 tonnes

*Only a reference project and does not define GCC's preferred approach.

5 Risk Management, Risk Allocation and Contractual Structures

5.1 Risk management and risk allocation

5.1.1 Risk management is seen as a fundamental part of GCC's Business Planning process and GCC recognises the significance of identifying and mitigating risks associated with the delivery of waste management services and in particular the procurement and delivery of the residual waste treatment solution. Corporately GCC has a Risk Manager who has developed a corporate guidance for risk management.

5.1.2 This approach is used to establish, monitor and review risks and opportunities. The residual waste procurement project has developed a risk register which holds a record of all current risks, foreseeable risks and opportunities. These are reviewed and monitored against the activities of the Project. Such risks will be reviewed in line with SoPC4 (Standardised PFI Contract) and allocated to the party which GCC is of the view is best able to manage the risks.

5.2 Project Agreement and Other Contractual Documents

5.2.1 The procurement will be in accordance with the Public Contract Regulations 2006 using the competitive dialogue procedure and the Environmental Protection Act 1990. The project agreement will comply with the current version of Standardisation of PFI Contracts ("SoPC4") and the current waste sector derogations.

5.2.2 Project specific issues will be managed and incorporated in the drafting of the Project Agreement. In the event derogations are needed which are not in the then current waste sector derogations, there will be close liaison with WIDP and DEFRA.

5.3 Payment Mechanism

5.3.1 GCC proposes to adopt the WIDP payment mechanism as a basis for its waste management project. The project team is planning a number of internal procurement workshops to draft the payment mechanism in detail for the Invitation to Negotiate (ITN) and has recognised the following as areas for development:

- Tonnage adjustments specific to individual waste management processes likely to be included in the Reference Project;
- A diversion bonus to provide incentive to the contractor to divert from landfill in accordance with the waste hierarchy;
- A performance bonus and deduction system that is based on an equitable share of upside and downside risk; and
- An excess profit share mechanism that differentiates between profits derived through performance of the contract and those resulting from market economics, e.g. windfall gains from Renewable Obligation Certificates.

5.3.2 The payment mechanism is both a method for payment and a way to incentivise performance. As such, the payment mechanism will be linked to the service outputs defined in the Output Specification and deductions will be applied when Output Specification standards are not achieved. The payment mechanism will be supported by an effective performance-monitoring system to ensure performance meets the required standards.

5.4 Performance Monitoring by the PFI Contractor.

5.4.1 Unless there is an effective system of monitoring in place, it will not be possible to know how well the PFI contractor is performing or to know if payments and deductions are justified. It is important for the contract to be self-monitoring as far as possible so as to reduce the burden on GCC. It is anticipated that staff from the council will be responsible for confirming the monitoring reports derived by the PFI contractor.

5.5 Markets for Products

5.5.1 As the selected Reference Project is a conventional energy from waste thermal treatment plant, the key process outputs are bottom ash, fly ash, electricity, and heat. This is a proven and banked technology with well-developed and low-risk outlets for all of the above. We recognise that in CHP mode, reliable heat markets need to be established. GCC is exploring the viability of current and future heat off-takers within an economic distance from the reference site.

5.6 Balance Sheet Treatment

5.6.1 The PFI transaction is intended to be structured such that a sufficient balance of property related risks are transferred to the PFI contractor to enable the transaction to be treated as off balance sheet by the public sector and meet the current criteria for PFI support.

6 Project Team and Governance

6.1 Governance Arrangements & Project Management

6.1.1 GCC previously undertook a waste PFI procurement which was successfully managed up to Best and Final Offer stage. Lessons learnt from this PFI procurement have been used to develop the current governance arrangements and influenced the improvement of in-house expertise.

6.1.2 Robust project management and governance arrangements for the residual waste procurement project have been developed and approved by the Project Sponsor, in consultation with the Waste Project Board (WPB). GCC established the WPB which is based on good practice of PRINCE2, GCC Project Management methodology and 4Ps' guidance for PFI and PPP projects and lessons learned from the previous Waste PFI procurement.

6.1.3 The overall purpose of the WPB is:

- Responsibility for the overall management of the Residual Waste Procurement Project including update reports when necessary to Cabinet, Chief Executive, and members of Gloucestershire Overview Scrutiny Management Committee.
- Engagement with the Budget and Performance Scrutiny Committee and other stakeholders including the Gloucestershire Waste Partnership.
- To oversee monitoring and expenditure and the management of business risks.

6.1.4 As part of the governance arrangements, GCC is planning to form a stakeholder group or groups to ensure the wider community of Gloucestershire is engaged throughout the procurement process.

6.1.5 GCC has built up the waste procurement team so that during the procurement GCC can internalise advice (technical/legal/financial), and enhance organisational learning and reduce costs to GCC in the long term. The team now includes legal, financial, technical, and project management expertise.

6.1.6 The Project Sponsor, Jo Walker, provides overall ownership and leadership for the project. The Project Sponsor is the person who is ultimately responsible for the successful delivery of the project. The Project Lead plays a key role in directing and delivering the Residual Waste Procurement Project, and is a full-time position.

6.1.7 The Core Project Team is responsible for:

- Assisting the project manager to deliver the project's objectives.
- Within their technical expertise carrying out the elements of the project they are tasked with.
- Advising the Project Manager if any risks or issues arise that are likely to affect delivery of the project's objectives and be part of the risk and issue mitigation process.
- Delivering high quality and specific products as part of the procurement process.

6.1.8 The Core Project Team, working alongside its advisors and other members of the wider project team, is well placed to effectively manage a project of this nature and is familiar with PFI as a procurement route. Other interests from the county council and district councils may be brought into the project from time to time as required.

6.2 Partnership Arrangements

6.2.1 GCC has undertaken discussions with each of its neighbouring authorities regarding the possibility of any joint working opportunities. From the discussions it was clear that the other authorities are either at a different stage in their residual waste procurement projects to us, or other circumstances are prevalent which prevent further consideration of partnership opportunities at the current time.

6.2.2 Large-scale waste procurement is a complex undertaking, made more so when a number of stakeholders are involved. Increasing this complexity unnecessarily would not, in Gloucestershire's case, be value for money.

6.2.3 GCC is currently in discussion with the West of England Partnership about jointly procuring interim residual waste capacity to assist meeting our LATS targets. GCC

and the Partnership are progressing this with the expectation that the procurement will commence in summer 2008.

6.2.4 Gloucestershire has a long history of successful partnership working between the seven authorities (the GWP). The GWP meets quarterly and is a mix of waste officers, senior officers and county/district councillors. The GWP is member-led, with GCC's Cabinet Member Environment as chair. The GWP has a role for setting the strategic lead for waste management and monitoring performance against actions and targets from the JMWMS and will be a key stakeholder for the residual waste procurement project.

7 Sites, Planning and Design

7.1 Site Identification & securing a site

7.1.1 GCC, in its capacity as the WDA, has identified the inability to secure of a strategic waste site as a key risk for the authority. In February 2007, GCC commissioned consultants to carry out a 'Comparative Site Assessment for a Strategic Waste Management Facility'. This detailed comparative site assessment study reviewed the planning and operational deliverability of ten sites throughout Gloucestershire. The overall conclusion of the study was that a strategic site to the south of Gloucester allocated in the Waste Local Plan performed best against the average weighted score for the planning and deliverability criteria.

7.1.2 GCC is negotiating with the owners of the site for the purchase of 12 acres.

7.1.3 Cabinet has agreed in principle that the land should be acquired using its compulsory purchase powers once sufficient preparations have been made. In addition, GCC continues to review other sites identified in the Comparative Site Assessment study.

7.2 Planning

7.2.1 GCC adopted its Waste Local Plan (WLP) in 2004. This plan (including certain policies and site allocations) has not been saved by Government Office of South West, however the Waste Local Plan still remains a material consideration until the Waste Core Strategy (WCS) is adopted.

7.2.2 GCC has completed the planning health framework and has considered how GCC plans to address how the emerging Development Planning Documents will be managed in parallel with the residual waste procurement project.

7.2.3 GCC plans to assist the early delivery of a planning application by making a site available to the bidders (although this will not stop bidders bring forward other sites particularly where dispersed options are proposed), and preparing planning documentation and surveys. This is anticipated to reduce the time of submitting a planning application once the contract is signed.

7.3 Design

7.3.1 GCC, in its role as a developer, has adopted a sustainability matrix for construction projects. The matrix is intended to be used as a checklist for building consultants and guides them on how GCC approaches the need to construct buildings sustainably. It can also form the basis by which GCC measures continual improvement: project on project; year on year.

7.3.2 In general terms, as well as seeking to optimise GCC's environmental performance in building projects through the Supplementary Planning Document and the sustainability matrix, GCC will also have regard to official guidance such as the OGC's "Achieving Excellence in Construction" and guidance available from CABE and WRAP. GCC will also adhere to emerging Defra guidance specifically aimed at ensuring the highest design quality for waste management facilities.

8 Costs, Budget and Finance

8.1 Value for money

8.1.1 Defra has undertaken a Stage 1 programme level assessment for waste PFI projects, concluding that PFI is likely to deliver Value for Money (VfM). The OBC details the Stage 2 project level assessment aimed at verifying whether this initial conclusion to use PFI is valid for Gloucestershire.

8.1.2 Following the approach as outlined in the updated HM Treasury VfM Assessment Guidance ("the Guidance"), as issued in November 2006 and the "Supplementary VfM Guidance for Waste PFI" prepared by Partnerships UK ("PUK") for DEFRA in September 2005, the project level assessment has considered both quantitative and qualitative factors. The quantitative analysis uses a prescribed methodology and electronic spreadsheet provided by Treasury to determine whether PFI represents indicative Value for Money when compared to a Public Sector Comparator ("PSC"), known as Conventional Procurement ("CP").

8.1.3 The qualitative assessment produced a clear indication that, in terms of viability, desirability and achievability the council is well positioned to deliver a PFI procurement for the Reference Project. The quantitative assessment also produces an indicative PFI VfM percentage of 20.08%. This means that the estimated Net Present Cost (NPC) is estimated to be 20% less under the PFI procurement when compared to the estimated NPC under conventional procurement using the HM Treasury vfm model. These assessments provide the indication that verifies the outcome of the programme level assessment that PFI can deliver VfM for the Reference Project.

8.2 Cost of the Reference Project and Status Quo

8.2.1 Further to defining the Reference Project, and the identification of the preferred procurement route, this section examines the costs of the Reference Project, and compares this to the option of maintaining the 'Status Quo', and describes the commitment the council has made in relation to its commitment to meeting the estimated affordability gap associated with undertaking the Reference Project.

8.2.2 Table 4 below shows the costs of the Reference Project, and the costs associated with maintaining the 'Status Quo' option over the 32 year period from 1 April 2008 until 31 March 2040. The purchase price of LATS permits required in the 7 years leading up to the commencement of operations on 1 April 2015 is based upon the council's "Low Impact" [1]profile. In using this profile for the comparison of Reference Project against Status Quo, it will ensure that the project is not selected based on the risk of £150 per tonne LATS penalties.

Table 4 Cost of Reference Project v Status Quo

Cost Element	Reference Project £000	Status Quo £000
Unitary Charge	646,057	0
Landfill Costs	187,927	905,643
LATS Costs	12,904	42,540
Non PFI/Landfill Costs*	532,463	496,442
Total Global Reference Project Cost	**1,379,350**	**1,444,625**

(*The "Non PFI/Landfill Cost" is the cost to the council of operating all waste disposal services such as Household Recycling Centres that do not form part of the PFI contract to treat residual waste)

Source: Ernst & Young Analysis

8.2.3 The table above demonstrates that the cost saving to the council of implementing the Reference Project, rather than maintaining the Status Quo, is circa £65 million, based on the "Low Impact" LATS trading profile assumptions. (excluding consideration of the PFI Credit Revenue Support Grant). The saving that would be made, based on the high impact LATS profile is £247million (£1,641 million - £1,394million, excluding consideration of the PFI Credit Revenue Support Grant).

8.3 Calculation of the PFI credit

8.3.1 In accordance with the current guidance from the WIDP and PUK, the calculation of the PFI Credit has been undertaken in accordance with Version 3.1 – January 2008 of the WIDP OBC Template. The calculation of the Revenue Support Grant ("RSG"), generated from the PFI Credit has been calculated in accordance with the Local Authority PFI Grant Reform that came into force in April 2005, as updated by "Local Government PFI Annuity Grant Determination (No.2) 27 September 2005".

8.3.2 Under this guidance, the RSG equates to annual grant payments over the 25 year operational life of the Reference Project of circa £6.9 million, resulting in total revenue support of circa £171 million over the 25 year operational period commencing in the year ending 31 March 2016.

8.4 Affordability Gap

8.4.1 In order to assess GCC's Affordability Gap, the total cost of the waste disposal system has been considered; this is referred to as the "Global Reference Project"

[1] Low Impact LATS profile assumes LATS allowances are available and can be purchased at reasonable prices, with costs peaking in target years only.

cost. Table 5 below shows the affordability gap for the Global Reference Project, taking into account the Revenue Support Grant provided by the PFI Credit.

Table 5 Affordability Gap analysis – "Low Impact" LATS profile

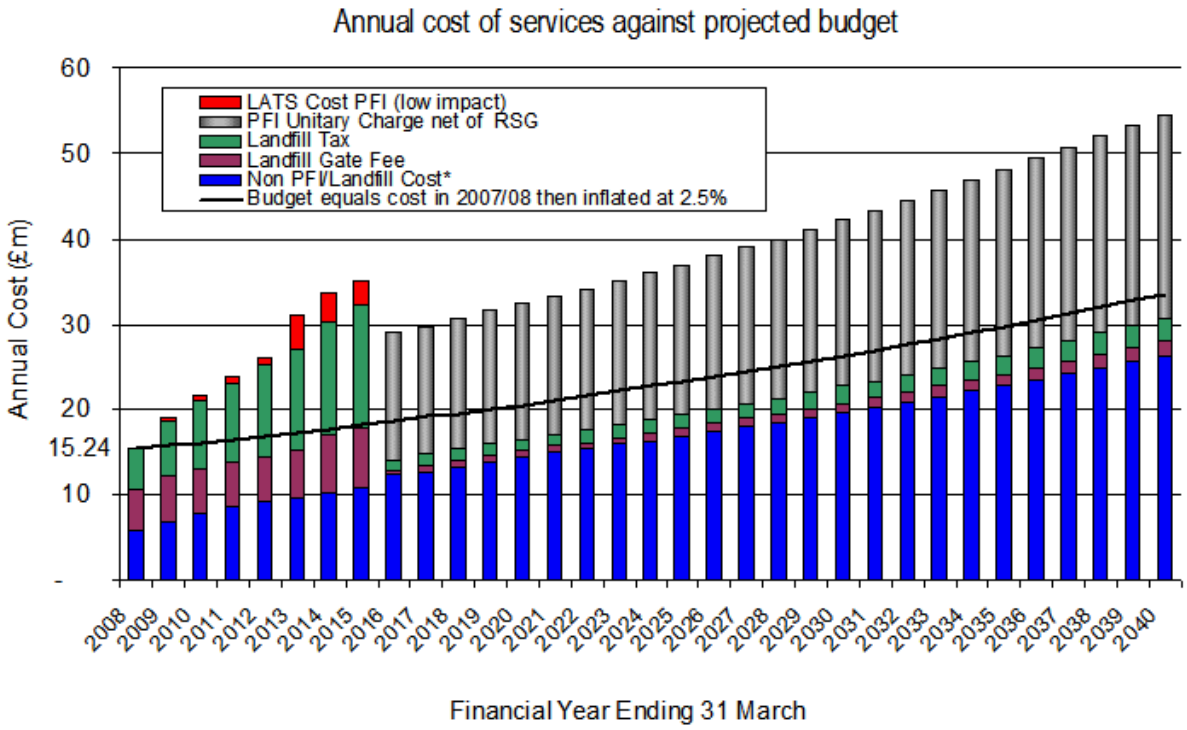
Nominal Cost	Year 5 2012/13 £000	Year 6 2013/14 £000	Year 7 2014/15 £000	Year 8 2015/16 £000	Year 9 2016/17 £000	32 Year Total £000
Unitary Charge	0	0	0	21,554	21,847	646,057
Landfill Costs	17,455	20,179	21,470	1,816	1,972	187,927
LATS Costs	4,083	3,461	2,862	0	0	12,904
Non PFI/Landfill Costs	9,583	10,127	10,703	12,219	12,762	532,463
Total Global Reference Project Cost	**31,121**	**33,767**	**35,034**	**35,589**	**36,581**	**1,379,350**
RSG Payment	0	0	0	6,569	6,857	171,419
Total Global Reference Project Cost net of RSG	**31,121**	**33,767**	**35,034**	**29,020**	**29,724**	**1,207,931**
Projected Budget	17,247	17,678	18,120	18,573	19,037	752,342
Affordability Gap	**13,874**	**16,089**	**16,914**	**10,447**	**10,687**	**455,589**

Source: Ernst & Young Analysis

8.4.2 The table above shows that the council is facing an affordability gap for the Reference Project of circa £456million (in nominal terms) over the 32 year period, using the "Low Impact" LATS trading profile. The affordability gap in the year 5 (1st year of construction in 2012/13) between the Reference Project and the projected council budget is circa £14 million. Under the High Impact LATS profile, GCC would face an affordability gap of circa £470 million (the increase in LATS cost between the low and high profiles, payable only in the period prior to operations, is circa £14 million) GCC is committed to finding the required additional resources to make the project affordable over the life of the contract. This has been demonstrated by the approval of this OBC by Cabinet on 23 April 2008 following a detailed assessment of the financial implications of the Reference Project by the Waste Project Board and the Chief Finance Officer.

8.4.3 Figure 1 below sets out the affordability gap of the Global Reference Project over 32 year period.

Figure 1 Affordability Gap over the 32 year period



(*The "Non PFI/Landfill Cost" is the cost to the council of operating all waste disposal services such as Household Recycling Centres that do not form part of the PFI contract to treat residual waste)
Source: Ernst & Young Analysis

8.5 Affordability Gap Range

8.5.1 GCC has an estimated "Affordability Gap Range" of between £456 million and £605 million over 32 years. This is based on the Global Reference Project and assumes a waste contract budget of £752 million over the 32 year period.

8.5.2 Should Cabinet agree on 23 April 2008, Defra will be informed that GCC has approved that the council proceed with the PFI procurement on the basis of a £456m to £605m affordability range and confirmed it is committed to meeting this affordability gap.

8.6 Bankability

8.6.1 The funding structure of the reference project is based on a typical PFI structure comprising 85% senior debt and 15% equity. The equity is made up of shareholder loans and share capital in the ratio 1/15:14/15. The Unitary Charge generated by the Reference Project shadow bid model is such that a commercial return, comparable with that seen in recent waste management projects, may be generated by the Service Provider whilst meeting likely debt service requirements and banking covenants of senior debt providers. As such the project is seen as being bankable.

8.6.2 Although the scale of the facilities are not considered large when compared to other waste PFI projects recently coming to the market, it is possible that a

consortia of lenders could be proposed, each taking between 15% and 25% of the total funding requirements. This is considered achievable as there have been an increasing number of banks showing strong interest in the waste management sector over the last twelve months given the level of investment required in this sector over the short to medium term.

9 Stakeholder Communications

9.1 Communications & Engagement Strategy

9.1.1 In September 2007 the WPB approved the Residual Waste Procurement Communications and Engagement Strategy designed to assist GCC through the procurement and planning process and to aid delivery of major new waste facilities. This strategy was then used as the basis for a detailed residual waste communications plan. The plan, approved by WPB (March 2008), focuses on informing, engaging and consulting with all stakeholders identified in the strategy and additional stakeholders that have been identified since.

9.1.2 Market Interest

9.1.3 One of the most significant challenges of such a procurement project is to attract and retain sufficient competition throughout the project to obtain a higher standard of solution and better value bids to ensure that the GCC provides Best Value for Gloucestershire.

9.1.4 GCC needs to promote the Gloucestershire project to prospective bidders, ensuring that it is sufficiently attractive to ensure a highly competitive procurement project. GCC decided to consult with the waste industry through a soft market testing exercise. GCC spoke individually with 22 waste management companies to gain a better understanding of the market and what makes an attractive procurement. GCC found the exercise to be very beneficial and came away with clear messages and issues to consider from the waste industry. GCC intends to maintain as much contact as possible with the waste industry over the coming months, in the lead up to procurement.

9.2 Other Relevant Authorities

9.2.1 All seven Gloucestershire authorities have developed the JMWMS, of which the GCC's Residual Waste Procurement Project falls within, and includes the delivery of a residual waste solution. District council members and officers have been kept up-to-date with the residual waste project via the GWP. The GWP has also been identified as a key stakeholder for the consultation and engagement element of the communications plan. District councils have also been engaged individually with presentations, as requested.

9.2.2 Parish Councils in close proximity to the preferred site, District Members and officers and County Members and officers have also been invited to residual waste facilities as part of the engagement process.

9.3 Public Consultation

9.3.1 Extensive public consultation was carried out as part of the development of the JMWMS. Consultation on the JMWMS included workshops with various stakeholders, the Great Gloucestershire Debate and the formation of a community panel with representatives of the general public who developed the criteria used to assess the feasibility of residual waste treatment options (See Section 4).

9.3.2 The Waste Planning Authority has also carried out extensive consultation in the preparation of the Waste Local Plan (which was adopted in 2004). Consultation on emerging GCC's Minerals and Waste Core Strategy Preferred Options has recently finished. Effort was made to ensure that stakeholders identified for both this strategy and the residual waste project, were cross-referenced and consolidated.

9.3.3 Moving forward, GCC is planning to carry out further consultation and engagement as part of the forthcoming residual waste communications plan. In May 2008, GCC will begin a two phase consultation process with all stakeholders, using various methods. The consultation will focus on aspects of the Output Specification and the evaluation criteria, building on the work carried out with the community panel (used as part of the JMWMS consultation). As part of the forthcoming communication programme, local stakeholder groups, including those with site-specific interests, will be invited to take part in workshops to help develop the Output Specification and evaluation criteria for the PFI process.

10 Timetable

10.1 Proposed Timetable

10.1.1 GCC has put in place a robust and deliverable timetable for the residual waste procurement process. As part of the risk management process, GCC will manage any risks associated with project delivery within the intended timescales.

11 OBC Approval

11.1 GCC Cabinet Approval

11.1.1 GCC is committed to finding the required additional resources to make the project affordable over the life of the contract and pursuing PFI procurement. This has been demonstrated by the approval of this OBC by Cabinet on 23 April 2008 following a detailed assessment of the financial implications of the Reference Project by the WPB and the Chief Finance Officer.

Appendix C Value for Money, and Affordability Sensitivity Analysis

Evaluating Value for Money

GCC has assessed whether the PFI procurement, and private sector finance for the Reference Project offers potential VfM over conventional procurement and public sector finance, in accordance with the HM Treasury's requirements. The table below sets out a high level summary of the qualitative advantages and disadvantages of both funding options.

Table C1 Qualitative Assessment of PFI and Prudential Borrowing

	PFI	**Prudential Borrowing**
Advantages	• Robust and rigorous procurement process. • Waste Companies and funders familiar with Design, Build, Finance and Operate (DBFO). • Technology and performance risk transfer to Special Purpose Vehicle (SPV). • HM Treasury considers DBFO/PFI to demonstrate VfM. • Process subject to lender's due diligence. • Liquid market for third party lending.	• Lower finance costs e.g. PWLB loans (saving 1% – 1.5%). • Could be procured as a Design, Build, Operate and Maintain contract. • Can facilitate asset ownership via a two contract strategy (i.e. Engineer Procure and Construct, and Operation and Maintain contracts).
Disadvantages	• Solutions may not meet expectations. • Limited contractual flexibility. • Greater risk transfer = higher financial cost. • Cost of debt higher than Public Works Loans Board (PWLB).	• No precedent for using public finance via DBFO. • Inter departmental competition for capital. • Lending risk retained by GCC. • More performance risk likely to be retained by GCC. • Reduced contractual protection. • Due Diligence costs will be born by GCC.

Source: Ernst & Young

The qualitative assessment produced a clear indication that, in terms of viability, desirability and achievability GCC is well positioned to deliver a PFI procurement for the Reference Project. In addition, PFI incorporates standardised contract documentation (referred to as SoPC) and risk transfer arrangements. Standardised documentation for prudential borrowing does not exist and the risk transfer arrangements under such procurement are also unclear. GCC would ultimately assume lending risk and project risk on all prudential borrowing funding provided to the Contractor. PFI is well understood in the market place with clearly defined procurement programmes and PFI it is the private sector's finance that is subject to the performance risk of the technology proposed.

In terms of the quantitative VfM assessment, undertaken in accordance with the "Treasury VfM model", a Value for Money percentage of 20% has been calculated,

indicating that PFI would provide 20% better Value for Money than Conventional Procurement. This figure is comfortably within the guidance benchmark of 5%. What this means is that the estimated Net Present Value Cost (NPC) is estimated to be 20% less under the PFI procurement when compared to the estimated NPC under conventional procurement using the HM treasury VfM model which takes into account the risk transfer arrangements arising under both procurement routes. Both the qualitative and quantitative assessments support and verify the outcome of the Defra programme level assessment that PFI can deliver Value for Money for the Reference Project.

Only two other authorities are considering the use of prudential borrowing, however these transactions are yet to be concluded. For both of these authorities, their application for PFI Credits to Defra was unsuccessful. GCC has already submitted an Expression of Interest to Defra for PFI funding and has been invited to submit an Outline Business Case. Early indications from Defra suggest that PFI credits are likely to be awarded to GCC if a robust business case is submitted.

Base Case Cost and Affordability of the Reference Project

Table C2 Cost Analysis of Status Quo and Reference Project (including LATS ("low impact" profile) and the Revenue Support Grant) up to 2040 (32 year period).

Cost Element	Status Quo (£'m)	Reference Project (£'m)
Non Landfill / Treatment costs	496	532
Landfill Gate Fees	326	67
Landfill Tax	579	121
Reference Project PFI Contract	N/A	646
Total excluding LATS	1,402	1,366
LATS Cost	43	13
Total Cost including LATS (low impact" profile)	1,445	1,379
RSG Payment (PFI credit)	N/A	(171)
Total Costs	1,445	1,208

Projected Council Budget

Table C3 shows the projected GCC waste contract budget as explained in the report.

Table C3: Projected Council Budget

Budget year	Year 5 2012/13 £m	Year 6 2013/14 £m	Year 7 2014/15 £m	Year 8 2015/16 £m	Year 9 2016/17 £m	32 Year Total £m
Total projected budget	17.247	17.678	18.120	18.573	19.037	752.342

Source: Ernst & Young Analysis

The GCC Medium Term Financial Strategy (MTFS) shows a significant planned rise in annual waste disposal budget over the next three years (broadly in line with the anticipated increase in waste disposal costs) but because MTFS is not part of the policy and budget framework agreed, by full council, this cannot be considered a "committed" budget. On the basis of prudence, the 2007/8 budget was used as a starting point.

Status Quo and the OBC Reference Project: Costs and Affordability

The cost of the Status Quo and the Reference Project were financially modelled. For the base case affordability position, a "Low impact" LATS scenario[1] has been used as this trading profile is considered by the Council to be the most likely to occur.

The table below sets out the affordability analysis for the Council based on the "Low Impact" LATS profile. Table C4 identifies the cost of the Reference Project in years 5 to 9, the total cost for the 32 year total and indicates the affordability gap for GCC.

Please note that some figures may not sum correctly due to rounding errors, however the underlying figures are accurate.

Table C4: Reference Project cost from years 5 to 9, and 32 year total and the Affordability Gap analysis based on "low impact" LATS profile

Nominal Cost	Year 5 2012/13 £m	Year 6 2013/14 £m	Year 7 2014/15 £m	Year 8 2015/16 £m	Year 9 2016/17 £m	32 Year Total £m
Unitary Charge	0	0	0	21.554	21.847	646.057
Landfill Costs	17.455	20.179	21.470	1.816	1.972	187.927
LATS Costs	4.083	3.461	2.862	0	0	12.904
Non PFI/Landfill Costs	9.583	10.127	10.703	12.219	12.762	532.463
Total Reference Project Cost	**31.121**	**33.767**	**35.034**	**35.589**	**36.581**	**1,379.350**
RSG Payment (PFI credit)	0	0	0	(6.569)	(6.857)	(171.419)
Total Reference Project Cost net of RSG	**31.121**	**33.767**	**35.034**	**29.020**	**29.724**	**1,207.931**
Projected Budget						

[1] Low impact means LATS trading is achievable and therefore in the early years LATS costs are low.

	17.247	17.678	18.120	18.573	19.037	752.342
Affordability Gap	**13.874**	**16.089**	**16.914**	**10.447**	**10.687**	**455.589**

Source: Ernst & Young Analysis

The table below (C5) identifies the projected cost for the Status Quo based on the same years and provides the total cost over the 32 year period. In the early years the costs per annum are identical, however, in year 8 the Status Quo option costs the authority £5.8 million more than the Reference Project.

Table C5: Projected Status Quo Cost from years 5 to 9, and 32 year total[2]

Nominal Cost	Year 5 2012/13 £m	Year 6 2013/14 £m	Year 7 2014/15 £m	Year 8 2015/16 £m	Year 9 2016/17 £m	32 Year Total £m
Landfill Costs	17.455	20.179	21.470	21.704	22.216	905.643
LATS Costs	4.083	3.461	2.862	1.857	1.410	42.540
Non PFI/Landfill Costs	9.583	10.127	10.703	11.249	11.758	496.442
Total Status Quo Cost	**31.121**	**33.767**	**35.034**	**34.810**	**35.384**	**1,444.625**

Source: Ernst & Young Analysis

Identifying the Affordability Range – Sensitivity Analysis

It is necessary to consider the impact of changes to the assumptions made for capital expenditure, operating costs and project revenues. Sensitivity Analysis was performed on these standard "downside" sensitivities to produce the worse affordability position for the Council and comprise of:

- Capital Expenditure costs are 25% higher than estimated;
- Operational Expenditure costs are 25% higher than estimated;
- Third party income is 5% lower than estimated; and
- Combination of all three sensitivities (as shown above).

In addition, a "High Impact" trading profile (after 2012/13, LATS fines at £150/tonne) has been used to define the worst case affordability position due to potential LATS purchasing requirements.

The table C6 sets out the Sensitivity Analysis results and corresponding Affordability Gaps:

[2] Years 1 to 4 relate to years leading up to the start of construction period. Years 5 to 7 relate to the construction period. Operations commence in year 8, when the RSG receipt commences.

Table C6 Sensitivity Analysis (based on High Impact LATS)

Cost Element	**PFI Reference Project** (in £m)				
Non Landfill / Treatment	532				
Landfill Gate Fees costs	67				
Landfill Tax	121				
PFI Scenario	**Base Case**	**CapEx up 25%**	**OpEx up 25%**	**Revenue down 5%**	**Combined**
Reference Project PFI	646	754	666	653	781
Total excluding LATS	1,366	1,475	1,386	1,373	1,501
LATS Cost (High Impact	27	27	27	27	27
Total including LATS	1,394	1,502	1,413	1,400	1,528
PFI Revenue Support Grant	(171)	(171)	(171)	(171)	(171)
Total Costs	**1,222**	**1,331**	**1,242**	**1,229**	**1,357**
Budget (based on 2007/8 committed budget)	**752**	**752**	**752**	**752**	**752**
Affordability Gap	**470**	**579**	**490**	**477**	**605**

N.B The base case reference project cost under this analysis is £1,222m and not the figure previously referred to (£1208m) because high impact LATS has been applied rather than the low impact LATS profile.

Appendix D Risk Register for the residual waste project

- **Market Interest**: if market is not interested in bidding for the contract, this could lead to increased contract costs due to lack of competition. This will be mitigated by putting together a good procurement package, promoting the benefits of this project to prospective bidders and ensuring a level playing field (including securing an independent waste site).

- **Affordability/Value for Money**: if the bids are more expensive than originally modelled and appropriate risk is not transferred, this will impact on future waste budgets, and on other Council service provision, making the solution potentially unaffordable. To manage this, a robust Outline Business Case has been developed to ensure good project, risk and financial management and continually monitor and report on project progress.

- **Land acquisition:** if GCC cannot secure a parcel of land for the delivery of a strategic waste facility, GCC will reduce its chance of gaining PFI funding, reduce the attractiveness of the residual waste contract to the waste market and potentially fail to deliver the project. To mitigate this, GCC will work to secure a site(s).

- **Planning**: if planning permission is not awarded, GCC will fail to deliver a strategic waste facility within the required timescale which could result in LATS fines. The strategic sites have been independently assessed including their planning prospects. Local communities will be engaged.

- **Public Opposition**: if the public do not support the solution selected during the procurement process (technologies, site etc), this will create opposition and may lead to possibly delays or even halt the delivery of the solution. A communications and engagement strategy has been developed and GCC plans to engage the community of Gloucestershire throughout the procurement process.

- **Technology:** if the technology provider cannot demonstrate that the technology and the outlets for materials are viable, GCC would reject the solution. GCC aim to develop a clear technical specification that will deliver a guaranteed closed-loop solution for Gloucestershire.

- **Procurement Delays**: if GCC cannot deliver the residual waste procurement plan in the required timescale this could lead to LATS fines and higher cost for treatment of waste in the interim. GCC will develop good governance arrangements and sound project management to ensure the project remains on-track.

Appendix E Consultation and Engagement, and Performance Management

Consultation and Engagement Feedback

Extensive waste consultation has occurred over the last year on the whole JMWMS (including the Strategic Environmental Assessment). Feedback has shown overwhelmingly that the public are against landfill and agree that waste should be seen as a resource. This feedback included support for the generation of heat and power from residual waste.

The Waste Project Board has met monthly to provide project assurance and guidance during the development of the business case. Waste Project Board will continue to be engaged throughout the procurement process.

Budget and Performance Scrutiny Committee was engaged in March 2008 on the decision to determine PFI as the preferred procurement and funding route. It is envisaged that the Budget & Performance Scrutiny Committee will engage at a strategic level at key stages of the procurement process. Its primary focus will be on the performance of the procurement exercise, effective and efficient use of resources, the management of risks and the budgetary implications of the emerging contract.

In addition, Gloucestershire County Council has worked closely with Defra through its dedicated Waste Infrastructure Delivery Programme (WIDP) transactor (a resource allocated to local authorities through a Defra funded programme). GCC will continue to work closely with Defra during the procurement of a long-term solution.

Over the next few months, as part of the residual waste communications and engagement strategy, GCC will consult various stakeholders on aspects of the Output Specification and evaluation criteria. In addition, GCC plan to form various stakeholder groups who will be engaged during the procurement project. The Gloucestershire Waste Partnership will continue to be engaged as it is a key stakeholder group.

Performance Management/Follow-up

This Project is a critical element of the County's Business Plan and as such monthly performance reports are produced and the Waste Project Board (Cabinet Members and Chief Officers) reviews and monitors performance and progress.

Performance management arrangements have been established formally through the development of a Project Initiation Document for the long term procurement process and PRINCE2 project management will be used. In addition, internal Audit are part of the core project team.

Monitoring will follow corporate and good practice project management systems. Good governance arrangements will involve monitoring through a dedicated Waste Project Board as well as by the Budget and Performance Scrutiny Committee.

Report Title	To approve the business case for Residual Waste Procurement.
Statutory Authority	Section 51 Environmental Protection Act 1990
Relevant County Council policy	Joint Municipal Waste Management Strategy 2007 – 2020
Resource Implications	The resources required for the procurement process are already allocated in the MTFS and the significant future waste budget implications are discusses in the resources section in main report.
Sustainability checklist:	A Strategic Environmental Assessment was consulted on in parallel with the JMWMS. The evaluation of the residual waste treatment technologies was based on environmental and sustainability criteria. In addition, a life cycle tool, WRATE, has been used to assess the environmental impact of the Reference Project and Status Quo.
Partnerships	We will seek to work in partnership with Districts and the community where appropriate as the project develops.
Decision Making and Involvement	Regular consultation and approval of actions/tasks through the Waste Project Board. The Budget and Performance Overview and Scrutiny Committee scrutinise the process.
Economy and Employment	There may be local employment and economic development opportunities created through the delivery of the procurement project, specifically by treating waste as a potential resource.
Caring for people	Not applicable at this stage – consultation and engagement with communities will be integral to the residual waste procurement project.
Built Environment	Issues for built environment and landscape will emerge during the planning and delivery of new residual waste treatment facilities - high emphasis placed on sustainable development issues and will be addressed during the development of the technical output specification and when developing any planning application.
Landscape	See Built environment.
Education and Information	This will be a key element to the success of the residual waste procurement project. Communication and information on waste issues, particularly within the community where the facility will be located will be vital for the project to succeed. A communications and engagement strategy has been developed and GCC intends to consult on aspects of the output specification and evaluation framework.
Equal Opportunities in Service Delivery	Fairness and Diversity will be an element of the project evaluation criteria
Human rights Implications	None
Consultation Arrangements	Further consultation on the project will be undertaken during procurement.