Derbyshire County Council & Derby City Council Waste Disposal Authorities

Outline Business Case

February 2006

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Foreword

In order to develop a more sustainable approach to municipal waste management Derbyshire County and Derby City Waste Disposal Authorities ("The Authorities") and the eight partner District/Borough Councils that constitute the Authorities have worked together to produce a Joint Municipal Waste Management Strategy ("JMWMS"). The strategy sets challenging targets for reducing waste growth and aims to move waste management as far up the waste hierarchy as practicable.

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Abbreviations

The following abbreviations are used in this report:

AD	Anaerobic Digestion
BAFO	Best and Final Offer
BMW	Biodegradable Municipal Waste
BPEO	Best Practical Environmental Option
BVPI	Best Value Performance Indicators
CA Site	Civic Amenity Site
CRN	Community Recycling Network
DBFO	Design Build Finance Operate
DBOM	Design Build Operate Maintain
EA	Environment Agency
EPA	Environmental Protection Act
EfW	Energy from Waste
HWRC	Household Waste Recycling Centre
IAA	Inter Authority Agreement
ISOP	Invitation to Submit Outline Proposals
ITN	Invitation to Negotiate
IVC	In Vessel Composting
JMWMS	Joint Municipal Waste Management Strategy
LASU	Local Authority Support Unit

Abbreviations

LATS	Landfill Allowance Trading Scheme
LAWDC	Local Authority Waste Disposal Company
LPA	Local Planning Authority
MBT	Mechanical and Biological Treatment
MoU	Memorandum of Understanding
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NCA	Notional Credit Approval
NPC	Net Present Cost
NPV	Net Present Value
NWTF	New Waste Treatment Facility
OBC	Outline Business Case
ODPM	Office of Deputy Prime Minister
OGC	Office of Government Commerce
PFI	Private Finance Initiative
PIN	Prior Information Notice
PPP	Public Private Partnership
PQQ	Pre-Qualification Questionnaire
PSC	Public Sector Comparator
RDF	Refuse Derived Fuel

Abbreviations

ROC	Renewables Obligations Certificates
RPI	Retail Price Index
RSG	Revenue Support Grant
SOPC3	Standardisation of PFI Contracts 3
SPV	Special Purpose Vehicle
TLS	Transfer Loading Station
TRF	Thermal Recovery Facility
TUPE	Transfer of Undertakings (Protection of Employment)
UEL	Useful Economic Life
VfM	Value for Money
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WEEE	Waste Electrical and Electronic Equipment
WET Act	Waste and Emissions Trading Act
WID	Waste Implementation Directive
WIP	Waste Implementation Programme
WS 2000	Waste Strategy 2000

Executive Summary

Introduction

Derbyshire County and Derby City Council (the Authorities) in common with almost every other area in the UK, is in the process of confronting a potential crisis in waste management. The UK Government has committed to targets for reducing the UK's dependence on landfill and has delegated responsibility to local authorities to achieve these targets. Achieving the Authorities' duties requires a radical transformation of our waste management systems and infrastructure and/or exposes the Authorities to high and uncertain costs through the Landfill Allowance Trading Scheme (LATS).

In response to this challenge the Authorities in conjunction with Derbyshire's Waste Collection Authorities have formulated a Joint Municipal Waste Management Strategy ("JMWMS") based on joint working that identified the need for an integrated waste management system comprising waste minimisation and a commitment to maximising the recycling of waste, which will continue to be delivered through the waste collection authorities, with treatment and disposal of residual waste (following recycling) managed by the Authorities.

The Authorities have developed this Outline Business Case ("OBC") to demonstrate the need for Authority funding for the development of the capital infrastructure required to achieve a rapid improvement in household waste recycling performance and otherwise to divert waste that is currently sent to landfill.

Summary of Key Conclusions

Arising from this business case are several key conclusions including:

- The existing service provision is not sufficient to meet the JMWMS targets or the Authorities' obligations to divert waste from landfill;
- The 'do nothing' option entails dramatically higher costs of residual waste management than are currently incurred by the Authorities;
- The OBC Reference Project flows directly from and delivers the JMWMS;
- The Authorities are already at risk of exposure to LATS in the short term, although medium term requirements should be secured by the reference project;
- The Private Finance Initiative (PFI) is unlikely to provide a viable solution to achieving the Authorities' responsibilities in the short term;
- A waste treatment facility funded through public sector financing (Prudential Borrowing) and delivered via a Design Build Operate

Maintain (DBOM) contract would provide a facility in the shortest timescales and limit potential exposure to LATS;

- The costs of a DBOM solution has been assessed as approximately £44 million cheaper in present value terms than a privately financed solution delivered via a conventional Design Build Finance Operate (DBFO) contract;
- The increase in risk for the Authorities between a conventional DBFO procurement and a DBOM procurement financed by Prudential Borrowing has been quantified at approximately £2 million in present value terms, based on the premise that the Authorities will undertake appropriate due diligence of the investment proposition at the time;

Strategic Context

The JMWMS sets out the vision for the development and delivery of local authority waste management services within Derbyshire County, both for the benefit of local people and national performance. The key objectives of the JMWMS cover:

- Waste awareness and waste minimisation initiatives;
- Maximising recycling and composting effort prior to treatment of residual waste;
- Waste should be seen as a resource;
- The treatment and disposal of 'residual' waste (that proportion remaining after materials have been removed for recycling and composting) will be a key consideration, particularly in the longer term when landfill is likely to be less viable;
- Careful selection of potential future development sites for waste handling, treatment and disposal will be required. Consideration must be given to the timescales required for the planning process and public consultation stages to be completed;
- The involvement of voluntary, community and non-profit making organisations is essential in developing a sustainable MSW management strategy. Indeed Government strategy highlights the benefits of community sector involvement in waste management;
- Employment generation within the County is likely to be a key benefit.

Analysis of Existing Service Provision

The existing service is based on moderate levels of recycling by the Waste Collection Authorities and at HWRCs. All residual waste is currently sent to landfill, some direct and some via a network of transfer stations.

This service is inconsistent with the JMWMS and the wider economic and strategic drivers set out above. As a result there is a strategic need for change.

Options Appraisal

A detailed options appraisal was undertaken as part of the JWMMS development work which considered varying levels of performance from a wide range of recycling and landfill diversion options. This concluded that the high levels of recycling were desirable associated with a need to divert further quantities of waste from landfill utilising a staged approach.

- Phase 1 would seek the rapid development of a treatment plant which diverted sufficient waste from landfill to meet short to medium term targets
- Phase 2 would then deliver a more permanent solution to complete the implementation of the JMWMS and meet long-term targets.

This approach was conceived to ensure that short term risks associated with LATS were mitigated as effectively and quickly as possible, and that current market risks and inherent uncertainties associated with the Phase 1 project would be managed in the conception of the Phase 2 project.

The Preferred Option

This outline business case has undertaken further analysis of the short-listed options developed as part of the JMWMS development in order to develop the following Phase 1 reference project:

- High levels of recycling and composting through the implementation of comprehensive kerbside collection systems across the County and City, and further investment in HWRCs;
- Development of a Mechanical Biological Treatment (MBT) facility to provide pre-treatment and mass reduction of residual waste prior to landfilling. This would receive waste from Derby City and from the south of Derbyshire

This is considered to represent an affordable and deliverable solution which meets the Councils' current needs:

- It can be delivered quickly;
- It should minimise the controversy which can affect the deliverability of waste projects, for example those involving energy from waste incineration.

The options appraisal has also concluded that the reference project will be cheaper than "do nothing" comparators.

It should be noted that the reference project represent a solution which would deliver the Councils' needs. The project will be procured based on an output specification, for example defining recycling and landfill diversion requirements, and bidders may propose alternative solutions. These will then be considered in the context of the project's evaluation criteria.

Value for Money Analysis

The Phase 1 project is likely to involve capital investment of approximately £50 million. The options appraisal has considered various delivery mechanisms (PFI, PPP and Prudential Borrowing) and concluded that council funding of the waste treatment facility through a long-term Design Build Operate & Maintain contract is likely to optimise value for money in terms of cost and risk transfer.

Delivering the Project, Project Management and Stakeholder Engagement

The Authorities are keen to take whatever steps they reasonably can, ahead of any contract award, to manage future risks and to ensure that, as far as possible, the new contract delivers as quickly as possible. The OBC describes further the approach to procurement and identifies some of the issues that will need to be addressed as this project moves forward,

The project is in a strong position with respect to sites availability as a number of potential sites have been identified in Southern Derbyshire. In addition, land with planning approval is available in two different locations for a HWRC and transfer station. Currently no land has been identified in the north of the county, however the searches are ongoing.

The objective of the plan is to secure contract close early in 2008. The table below summarises the key milestones.

Executive Summary

Table 1.1 Project Timetable

	Stage	Date
1	Publication of PIN	26 January 2006
2	Publication of Contract Notice	June 2006
3	Bidder's Day	June 2006
4	Return of PQQs / ISOPs	July/August 2006
5	Issue of ITN	September 2006
6	Receipt of responses to ITN	15 December 2006
7	Selection of Bidders for BAFO and Issue of Invitation to submit BAFOs	26 January 2007
8	Receipt of BAFOs	9 March 2007
9	Selection of Preferred Bidder	30 March 2007
10	Financial Close	18 December 2007
11	Award Contract	30 January 2008
12	Service Delivery Commences	1 April 2008

Strategic Context

2.1 Profile of Derbyshire

2.1.1 Geographical Makeup

The County of Derbyshire covers a total land area of 263,000 hectares (ha) and is the home to the first National Park in Britain; The Peak District National Park, which lies at the southern end of the Pennines, between Sheffield and Manchester. Its boundaries spread into several other neighbouring counties and covers over 129,500ha, of which three quarters lie within Derbyshire itself. The planning policy of the Park together with the Parks geological features can influence the siting of waste management facilities. Figure 2.1 is a map of Derbyshire, displaying the locations of the Derby City Council and the eight District and Borough Councils.

There is a good transport network towards the Eastern side of the County with the M1 and regular train connections between Sheffield and Birmingham. However, toward the western side of the County, transportation links are more limited; there are no Motorways and few major trunk roads within the area. The movement of waste within (and possibly from) the County, and constraints that may be placed on this by the limitations of the existing transportation network, is an important issue.

See Appendix 1 for a Map of Derbyshire showing District/Borough Boundaries, Main Centres of Population and Transportation Routes.

2.1.2 Population and Housing

The population of the County is 961,233 averaging approximately 2.2 inhabitants per household. Derbyshire has 15 towns/cities with a population of over 10,000 most of which are in the eastern area, including Derby City (223,249) and Chesterfield (98,845). Nearly three quarters of the population are concentrated in the eastern part of the County on only a quarter of the total land area. Table 2.1 gives a breakdown per authority.

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Table 2.1 Summary of Population Data, Household Numbers and Land Area within each District/Borough

Council	Land Area (ha)	Population (B)	Households (C)	Ratio (B:C)	Population Split	
					% Urban	% Rural
Amber Valley Borough	26,418	118,200	52,098	2.3	77%	23%
Chesterfield Borough	6,582	98,845	46,000	2.1	90%	10%
Derby City	8,000	223,249	100,555	2.2	100%	0%
Derbyshire Dales	79,246	69,700	31,488	2.2	15%	85%
Erewash	10,930	110,099	46,244	2.4	68%	32%
High Peak	53,875	90,100	38,511	2.3	70%	30%
South Derbyshire	34,000	81,600	35,114	2.3	40%	60%
North East Derbyshire	27,652	96,940	42,170	2.3	65%	35%
Bolsover District	15,982	72,500	35,542	2.0	55%	45%
County Total	**262,685**	**961,233**	**427,722**	**2.2**	**64%**	**36%**

Waste management options vary greatly in different parts of the county due to a number of factors, namely:

- population distribution
- geology and geography
- transport infrastructure
- conservation constraints

There are three sub-areas within Derbyshire County which have been identified to reflect the differing characteristics of each area, reflecting the four factors listed above. Figure 2.1 shows sub-areas, District/Borough boundaries and main centres of population. The sparsely populated west of the county contains less than 20% of the population, while the eastern side of the county has more than 80% of the population. The east of the county has two main concentrations of urban activity, centred on Chesterfield and Derby, respectively.

2.1.3 The Western Sub-Area (Derbyshire Dales and High Peak BC)

Strategic Context

Despite being the largest in terms of land area, the western sub-area gives rise to less than 20% of municipal waste in the county. Much of the area lies within the Peak District National Park and is, therefore, subject to particular conservation constraints. Additionally, due to the isolated nature of many towns and villages in High Peak and the Derbyshire Dales, both the collection and transportation of waste and recyclables proves costly and problematic.

Currently, municipal waste and recyclables are transported to sites outside the area because of the shortfall in local disposal and recycling facilities. The major obstacles to meeting targets within this sub-area are geographical. This particularly applies to the northwest of the sub-area where the towns are in rural settings, many of which are in the National Park. However, this area lies adjacent to the Greater Manchester conurbation offering potential for cross boundary flows of waste, although there may be regional self-sufficiency implications.

2.1.4 The North-Eastern Sub-Area (Bolsover, Chesterfield, NE Derbyshire)

The north-eastern sub-area is centred on Chesterfield and is largely urban in character. Most of the area lies on geologically exposed coalfield, which has historically been exploited for the landfill opportunities it provides. This, together with its good infrastructure and local industry, has meant almost all the municipal waste arising in the sub-area (27% of the waste produced in the county) has been disposed of within the area. The sub-area has distinct geographical features which are shared with adjoining counties such as Nottinghamshire and South Yorkshire. This therefore, provides potential for cross boundary linkages as well as intersub-area links, although there may be regional self-sufficiency implications.

2.1.5 The South Eastern Sub-Area (Amber Valley, Derby City, Erewash, South Derbyshire)

Derby City forms the centre of the south eastern sub area, surrounded by three partly rural District/Boroughs, which collectively produce more than half of the County's municipal waste (around 55%). Road transport links in the area are very good radially but accessibility across the area can be difficult. Most of the municipal waste and recyclables are currently transferred out of the area for disposal and processing, although proposed composting and recycling plans should improve this situation in 2006. There is potential for useful cross boundary linkages as well as

inter sub-area links. The sub-area is situated very close to, and has excellent transportation links with Nottinghamshire, Leicestershire and Staffordshire. Schemes which satisfy the 'proximity principle' could therefore be achieved by integrated partnership working between Derbyshire and the adjacent authorities, although there may be regional self-sufficiency implications.

The different characteristics of the sub-areas will have to be taken fully into account in the development of sustainable waste management solutions.

2.2 Historical background of Waste Management in Derbyshire

Prior to 1994 Derbyshire County Council, as Waste Disposal Authority (WDA), was responsible for dealing with the disposal of municipal waste in Derbyshire. The City Council, Boroughs and Districts as Waste Collection Authorities (WCA) dealt with collection. In 1994 waste disposal operations were obliged to go out to competition which resulted in a partnership with the Local Authority Waste Disposal Company (LAWDC) which operated as Derbyshire Waste Limited (DWL). In 1995, a 10 year contract for waste disposal services was awarded to DWL, which then became part of Waste Recycling Group.

In 1996 Derby City became a Unitary Authority and took on the roles of both a WDA and WCA.

2.3 National and European Legislation

This section outlines the key legislative and financial drivers for change in relation to waste management that have emerged in recent years and the strategic context in which the project has been developed.

2.3.1 The EU Landfill Directive

The fundamental principle behind the development of the EU Landfill Directive is to reduce the contribution of landfill activity to the generation of methane, a powerful greenhouse gas contributing to climate change. To achieve this, the EU Landfill Directive sets out challenging targets for the reduction of biodegradable waste ("BMW") sent to landfill as follows:

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- By 2010* to reduce BMW landfill to 75% of that produced in 1995;
- By 2013* to reduce BMW landfill to 50% of that produced in 1995; and
- By 2020* to reduce BMW landfill to 35% of that produced in 1995.

(* Includes a four-year extension to the EU Landfill Directive targets for the UK)

The Government has introduced the Waste and Emissions Trading ("WET") Act 2003 to transpose a number of elements of the EU Landfill Directive into UK law. The WET Act 2003 sets maximum limits on the amount of biodegradable waste that each WDA can landfill. In the event that WDAs exceed their limits, they are potentially liable to pay a fine of up to £150 per tonne on biodegradable waste that is landfilled over and above the limits.

2.3.2 National Waste Strategy

Waste Strategy 2000 is the Government's waste strategy for England and Wales and has the overall intent of achieving a holistic, sustainable and integrated approach to dealing with waste and meeting the EU Landfill Directive. To this end, the Government has established the following national targets:

Table 2.1 National Waste Strategy 2000 Targets

	2005	2010	2015
Recovery of MSW[1]	40%	45%	67%
Household waste recycling and composting	25%	30%	33%

Government has also set each local authority statutory recycling performance standards. The statutory standards apply to waste collection and waste disposal authorities for the years 2003/04 and 2005/06, and are measured on the amount of household waste recycled and composted (BVPI 82a+b). The standards were calculated for each authority based on the recycling and composting rates achieved in 1998/99. It is envisaged that further standards will be set for 2010/11.

[1] In this context recovery includes recycling, composting, other material recovery (e.g., anaerobic digestion) and energy recovery.

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2.3.3 Local Government Act 1999

The Local Government Act 1999 places a duty of best value on local authorities "to make arrangements to secure continuous improvements in the way they exercise their functions having regard to a combination of economy, efficiency and effectiveness". In order to achieve this, local authorities are obliged to:

- Review services to ensure that best value is being secured;
- Publish comparative data on how they are performing; and
- Meet statutory performance standards set by Government for particular services/activities.

More generally, the Authorities have recognised the need to deliver value for money on waste for the local taxpayers and service users. This perspective is central to the Authorities procurement strategy and the options around the role of the private sector in procurement of waste management services.

2.3.4 Landfill Taxation

The current rate of Landfill Tax for "active" waste is £18 per tonne, representing a cost to the Authorities of circa £6.9 million in 2004/05. The Government has already confirmed that the Landfill Tax escalator will increase from £1/tonne/year to £3 per tonne each year as from 2004/05 until landfill tax reaches a rate of £35/tonne. Landfill taxation, together with LATS requirements, should make options such as recycling, composting and MBT, more cost effective than landfill disposal.

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2.4 Strategic Approach

The move to find more sustainable ways of managing our waste, supported by the substantial UK and EU legislation, is driven by a fundamental desire to change waste into a useable resource, to minimise waste arisings and maximise recycling and composting. This approach facilitated the formulation of the JMWMS, which is based on partnership working between the Derby City Council, Derbyshire County Council and the District/Borough Councils.

The JMWMS sets out the vision for the development and delivery of local authority waste management services within Derby City and Derbyshire. It has been designed to meet all known and anticipated duties of the District/Borough Councils and is an overall approach based on the aim of managing the Authorities waste high in the waste hierarchy. The key objectives of the JMWMS are detailed below together with the major aspects and output requirements designed to meet these objectives.

2.4.1 Key objectives of the JMWMS

- To meet landfill allowance and bio-diversion targets as set out in the LATS and the requirements of the EU Landfill Directive;
- To meet a target for recycling and composting of household waste by 2005/06 of 26.5% and 50% by 2020.
- To reduce the growth in MSW arising to zero by 2016;
- To develop an approach that takes account of new and emerging technologies;
- To adopt partnership waste management working arrangements at a strategic and operational level between all of the Authorities and other partners;
- To develop an effective interface between waste collection systems, processing, and treatment and disposal systems to ensure best value is delivered by WCA and WDA services.

2.4.2 Strategy Implementation

To achieve the objectives set out in the JMWMS, the preferred approach for the future management of waste within Derbyshire will need to encompass the following aspects and output requirements.

- Waste awareness and waste minimisation initiatives

- Maximising recycling and composting effort prior to treatment of residual waste.
- Waste should be seen as a resource.
- The treatment and disposal of 'residual' waste (that proportion remaining after materials have been removed for recycling and composting) will be a key consideration, particularly in the longer term when landfill is likely to be less viable.
- Careful selection of potential future development sites for waste handling, treatment and disposal will be required. Consideration must be given to the timescales required for the planning process and public consultation stages to be completed.
- The involvement of voluntary, community and non-profit making organisations is essential in developing a sustainable MSW management strategy. Indeed Government strategy highlights the benefits of community sector involvement in waste management.
- Employment generation within the County is likely to be a key issue.

2.5 Legal Powers

The vires context in which this procurement exercise is being conducted is as follows:

- The Authorities are waste disposal authority's under the EPA 1990 (section 30), and to make arrangements for such in accordance with the provisions of that Act and in particular section 51 (disposal) thereof;
- The Authorities have a duty under section 3 of the Local Government Act 1999 to make arrangements to secure best value in the manner in which its functions are exercised;
- The Authorities are under a duty to ensure the economic, social and environmental well being of their areas under section 2 Local Government Act 2000;
- Under section 1 of the Local Government (Contracts) Act 1997 and section 111 Local Government Act 1972 the Authorities have power to enter into contracts for the purposes of or in connection with the discharge of its functions;

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- The Authorities have power to certify the contract pursuant to section 3 Local Government (Contracts) Act 1997; and
- The contract is being tendered in accordance with the provisions relating to the negotiated procedure for services contracts pursuant to Regulation 10 of the Public Services Contracts Regulations 1993.

Analysis of Existing Service Provision

3.1 Introduction

This section provides analysis of the existing service delivery arrangements for the Authorities including: waste arising and composition; collection; disposal, recycling schemes; and waste management initiatives.

3.2 Waste Arisings

In 2004/05, approximately 516,800 tonnes of MSW was produced in the Authorities' areas. Of this total, Derbyshire County accounted for 394,000 tonnes, whilst Derby City produced 122,800 tonnes. Over 74% of this total is made up of regular household collections, with the total household waste burden accounting for nearly 95% of all MSW arisings within the County. Table 3.1 outlines the total MSW arising in Derbyshire and Derby City and Table 3.2 recycled tonnage.

Table 3.1 **2004/05 Municipal Waste Arisings**

Description	Amber Valley	Bolsover	Chesterfield	Derby City	Derbyshire County	Derbyshire Dales	Erewash	High Peak	North East Derbyshire	South Derbyshire	Total	%
Regular Household Collections	44,200	28,400	34,800	77,100	-	22,500	37,900	28,400	36,900	21,300	331,500	64
Other Household Collections	300	2,200	300	800	-	100	1,700	500	1,300	200	7,400	1
Bring Facilities	1,900	400	1,700	3,900	-	2,800	2,100	1,900	600	1,500	16,800	3
Kerbside & other 3rd party recycling	5,500	2,400	8,600	12,200	-	3,000	11,600	2,200	5,100	8,000	58,600	11
HWRCs	-	-	-	**21,400**	**52,800**	-	-	-	-	-	**74,200**	**14**
Total Household Waste	**51,900**	**33,400**	**45,400**	**115,500**	**52,800**	**28,400**	**53,300**	**33,000**	**43,900**	**31,000**	**488,600**	**95**
Trade Waste	4,100	2,000	4,000	7,200	-	2,400	600	3,900	2,400	1,300	27,900	5
Total Municipal Waste	**55,900**	**35,400**	**49,400**	**122,800**	**53,100**	**30,800**	**53,900**	**36,900**	**46,300**	**32,300**	**516,800**	**100**

Analysis of Existing Service Provision

Table 3.2 Tonnage Recycled 2004/05

Waste Stream	Tonnage
Household waste disposed (excluding HWRC waste)	414,400
Household waste recycled/composted (excluding HWRC waste)	75,900
HWRC site waste disposed	74,200
HWRC waste recycled/composted	34,000

Table 3.3 shows the composition of MSW in percentage terms taken from two waste compositional analyses taken in Derby in 2000 and 2001 and those reported by the Waste Strategy Unit (Office of the Deputy Prime Minister). The waste composition demonstrates the high potential for recycling and recovery of resources within the waste stream collected by the WCAs and passing through the Authorities facilities. A countywide waste compositional analysis is currently being undertaken. The results will be available in April 2006.

Table 3.3 The Municipal Waste Stream Composition

Material (%)	Derby 2000	Derby 2001	Waste Strategy Unit
Paper	11.7	11.8	17.5
Card	7.4	4.1	3.6
Card Drinks	0.3	0.4	1.6
Glass	5.8	5.3	8.4
Metal	2.5	4.8	3.4
Textiles	6.9	3.9	3.2
PET	1.7	0.6	-
HDPE	1.6	0.5	-
Rigid	2.9	1.8	-
Non-Rigid	4.3	4.7	-
Plastics (Total)	10.5	7.6	8.8
Kitchen	31.6	22.1	22.2
Garden	6.6	26.7	15.3

Wood	1.9	1	2.7
Ash, dust, rubble	3	6.7	5.9
Nappies & Sanitary	5.3	2.2	2.4
Animal	0.5	1.5	0.0

Waste in Derbyshire is currently increasing at a rate of 2.5% per annum. Based on current and forecast growth levels it is predicted that waste arisings in Derbyshire will reach 620,000 tonnes per annum by 2020. In other words there will be over 103,000 tonnes to be dealt with over and above what is currently produced.

3.3 Refuse Collection Arrangements

All Districts operate a mixed waste collection (from households and some commercial premises). Amber Valley Borough Council, Chesterfield Borough Council and Derbyshire Dales District Council employ external collection contractors. Seven of the collection authorities operate fortnightly collections. A summary of the Contractual arrangements for each WCA waste collection service is given in Table 3.4.

Table 3.4 Existing Collection Contracts (September 2005)

Authority	Material Collected	Contract Finish Date	Contract Details
Amber Valley	Dry Recyclables Organics	2012 N/A	Cleanaway, 7 year contract awarded 2005. Being reviewed at present.
Bolsover	Dry Recyclables Organics	Open Ended Not Specified	ABITIBI consolidated Recycling Europe; currently under review will have a more formal structure in 2006. In house short term trail under way.
Chesterfield	Dry Recyclables Organics	01/05/2008 July 2009	ABITIBI Cleanaway – possible two year extension at end of contract
Derby City	Dry Recyclables Organics	Not Specified Not Specified	Internal contract for dry recyclables and green waste.
Derbyshire Dales	Dry Recyclables Organics	2010	Cleanaway – includes kerbside recycling glass, paper and green waste
Erewash	Dry Recyclables	February 2010	Internal Contract

Analysis of Existing Service Provision

Authority	Material Collected	Contract Finish Date	Contract Details
	Organics	Open Ended	Internal Contract
High Peak	Dry Recyclables Organics	2008 Minimum N/A	External - Paper, Glass, Textiles and Cans Collections will commence during 2006.
NE Derbyshire	Dry Recyclables Organics	Currently under review Not Specified	ABITIBI - Paper, Glass, Textiles and Cans (rolling contract) Internal Contract no plans to change
South Derbyshire	Dry Recyclables Organics	January 2007 Not Specified	ABITIBI Internal Contract no plans to change

The levels of recycling achieved against targets for each WCA are as follows:

Table 3.5 WCA Recycling Performance

Authority	2003/04 Recycling & Composting Target (%)	2003/04 Recycling & Composting Rate (%)	2004/05 Recycling & Composting Internal Target (%)	2004/05 Recycling & Composting Rate (%)	2005/06 Recycling & Composting Target (%)
Amber Valley	10	11	17	14.6	18
Bolsover	10	8	11	10.8	18
Chesterfield	16	19	22	23.8	24
Derby City	22	15	19.9	21.4	30
Derbyshire County	12	18	18	22.8	18
Derbyshire Dales	18	20	20.6	22.5	27
Erewash	20	22	23.2	28.3	30
High Peak	10	9	10.3	10.7	18
NE Derbyshire	10	11	18	15.6	18
South Derbyshire	14	17	18.3	24.3	21

The levels of recycling in all WCAs will require significant increases in order to meet the required performance anticipated for 2004/05 and meet the specified levels in the JMWMS.

3.4 Recycling Initiatives

In the last three years all the partners have been introducing extensive kerbside recycling schemes to enable them to meet Government targets for recycling. The further development of recycling bring sites, proposals to establish four new Household Waste Recycling Centres and proposals to establish waste recycling and composting plants are all part of the partner's forthcoming plans.

3.5 Existing Contractual Arrangements

Waste Recycling Group (WRG) currently has a contract until 31st March 2008 to dispose of the majority of residual waste collected by the WCAs in Derbyshire. In Derby City, the contract is due to expire at 28th February 2008. WRG provide one landfill site directly in the north east of the county at Hall Lane, Staveley and use a subcontracted site at Erin Void (Viridor) also in the north east, as well other sites in Nottinghamshire and Leicestershire. There are also smaller contracts in place for disposal of fridges and clinical waste.

3.6 Landfill

At present, residual municipal waste is disposed of as follows:

- Amber Valley District - the majority of waste collected goes to Alfreton Transfer Loading Station (TLS) and some to Derby TLS. The majority of the waste is landfilled at Sutton-in-Ashfield, Nottinghamshire or elsewhere depending on the commercial situation.

- Bolsover District - the majority of waste collected goes to Hall Lane, Staveley and Erin (a Viridor operated site subcontracted by WRG). Some bulky collections are taken to Hopkinsons Recycling Facility at Staveley outside of the DCC contract.

- Chesterfield Borough - all waste goes to Hall Lane, Staveley.

- Derby City - all residual waste goes to Derby TLS and onward to landfill at Sutton-in-Ashfield, Nottinghamshire or elsewhere depending on the commercial situation.

- Derbyshire Dales District - approximately two thirds of the waste collected goes to Hall Lane Staveley, and one third, from the southern part of the district goes to Derby TLS and onward to landfill at Sutton-in-Ashfield, Nottinghamshire or elsewhere depending on the commercial situation.

- Erewash Borough - most waste goes to Derby TLS and onward to landfill at Sutton-in-Ashfield, Nottinghamshire or elsewhere depending on the commercial situation. Green waste and some residual waste is taken to Alfreton.

- High Peak Borough - all waste is taken to Glossop TLS and then to various landfill sites including Hall Lane, Staveley.

- North East Derbyshire District - the majority of waste collected goes to Hall Lane, Staveley and Erin (a Viridor operated site subcontracted by WRG). Some bulky collections are taken to Hopkinsons Recycling Facility at Staveley outside of the DCC contract.

- South Derbyshire District - most waste is taken to the New Albion site at Moira. Leicestershire and a minor amount taken to Derby TLS.

3.7 Current Infrastructure

3.7.1 Household Waste Recycling Centres (Civic Amenity Sites)

The Authorities receive in excess of 74,300 tonnes per annum of waste and material delivered to seven HWRCs in the County and City. This waste stream has been growing at a rate up to 3% per annum but a significant reduction in tonnage input has been experienced in 05/06 probably owing to a slump in high street sales.

The County Council currently has six HWRC sites available to the public at Ashbourne, Bretby, Chesterfield, Glossop, Ilkeston and Loscoe. Two additional sites are currently being developed at Bolsover and Buxton. The current HWRC sites are managed by South Herts Waste Management for the period 2005 – 2010, with the exception of Glossop which is managed by WRG expiring March 2008.

Derby City has one HWRC site at Raynesway in Derby, operated by WRG until 28 February 2008.

3.8.2 Waste Transfer Loading Stations

There are currently four waste Transfer Loading Stations (TLS) in operation within the City and the County. These are located at Alfreton, Chesterfield (Chesterfield Recycling Centre), Derby and Glossop. Alfreton and Chesterfield also serve as delivery points for green waste. Alfreton provides an onsite composting facility. The throughput of each plant as received from the WCAs in 2004/05 was as follows:

Table 3.8 2004/05 Waste Transfer Stations Throughputs.

Reception Point	Municipal (tonnes)	Green (tonnes)	Total (tonnes)
Alfreton	30,300	11,700	42,000
Chesterfield	7,200	6,800	14,000
Derby	143,200	0	143,200
Glossop	36,300	0	36,300
Totals	**217,000**	**18,500**	**235,500**

3.8.3 Materials Recycling Facilities

The County Council does not provide any MRFs for sorting dry recyclable materials collected by the WCAs.

Fridges collected directly by the WCAs are taken to Sims Metals for onward transfer to Newport. Fluorescent tubes, batteries, asbestos and CRT waste from bulky collections and fly-tipping are delivered to a WRG TLS for further treatment and ultimate disposal. In the case of Derby fridges are bulked at the Raynesway HWRC before transfer to Newport.

Erewash has recently been out to tender for the provision of a sorting facility for recyclable materials and they have contracted with a MRF operator in Derby. Similarly Derby City has awarded a contract for a clean material MRF within the city to R U Recycling and they will deal with all the kerbside collections of glass, plastic bottles, cans and paper.

3.8.4 Composting

The WRG disposal contract provides one composting facility in Alfreton for garden waste only. Green waste from the north of the County is delivered to CRC for onward transport to composting facilities.

Analysis of Existing Service Provision

There are currently two main sites available for composting in the County, one is a Biffa facility located in Etwall, South Derbyshire, the second is located in Alfreton and operated by WRG for garden waste only. Additionally, South Derbyshire District Council utilise a site operated by Sita located in northeast Leicestershire.

Table 3.9 Disposal Points for Green Waste

Authority	Disposal Point
Amber Valley	No current green waste collections.
Bolsover	Green waste goes to the Alfreton Composting Facility.
Chesterfield	Green waste/cardboard goes to the Chesterfield Recycling Centre at Sheepbridge for onward transport to composting facilities.
Derby City	Green waste to Vital Earth where it goes to several facilities outside of Derbyshire.
Derbyshire Dales	Green waste goes to the Alfreton Composting Facility.
Erewash	Green waste goes to the Alfreton Composting Facility.
High Peak	No current green waste collections.
NE Derbyshire	Green waste/Cardboard goes to Chesterfield Recycling Centre at Sheepbridge for onward transport to composting facilities.
South Derbyshire	Green waste is taken to Lount (a SITA site) outside of the county and not within the DCC contract regime.

A number of composting facilities are currently being developed as follows:

- A 40,000 tonnes per annum capacity in-vessel composting facility in the North East of the County that will accept kitchen, green waste and card from three local WCAs (Bolsover, Chesterfield, North East Derbyshire).
- A 15,000 tonnes per annum capacity near Buxton to take kitchen, green waste and card from High Peak.
- A 60,000 tonnes per annum capacity and cardboard waste from Derby City, Amber Valley, Derbyshire Dales, Erewash and South Derbyshire District Council. A transfer station will exist in Derby to bulk up the material before delivering it to Ashbourne for composting.
- Biffa have applied to upgrade their existing facility at Etwall to enable them to accept food waste and possibly cardboard.
- The provision of additional composting capacity to service the South East of the County is currently under review.

3.9 Waste Minimisation & Communication

Many waste minimisation/communication projects and initiatives have been developed and implemented across the county in recent years as part of the partners efforts to develop sustainable waste management solutions and to meet Government targets. In many cases the work links to the national initiative Recycle Now that aims, through high profile national media campaigns, to promote waste reduction, reuse, recycling and composting.

3.9.1 Waste Minimisation

Whilst waste minimisation primarily aims to reduce the amounts of waste that is generated in the home environment it is the intention to influence waste production in business and industry as a by-product of the partners activities.

In recent years the partner authorities have been developing a number of waste minimisation initiatives including the promotion of:

- the sale of discounted home composters
- the use of real nappies
- reducing unwanted junk mail
- waste reuse through charities and the reuse of specific items such as carrier bags
- waste minimisation in schools through a theatre project and Eco-schools
- Separating waste streams for recycling and composting

3.9.2 Communication

A Waste Marketing Plan is currently being produced by the partners that seeks to maximise promotional opportunities for raising awareness of waste minimisation, reuse and recycling.

The partner authorities prime objective is to establish and operative effective communication mechanisms that raise public awareness and change public attitudes and consequently enable the public to undertake waste minimisation reuse and recycling practices in their everyday lives.

One particular tool used along with the normal communication channels (leaflets, webpages, press releases, etc) is Derbyshire's Waste Exhibition Vehicle purchased through DEFRA funding. This vehicle provides an important direct interface with the public and generates a high profile for

waste management issues at public events and has been used at locations throughout the County.

All of the above schemes and initiatives will continued to be developed by the partners as part of the Waste Minimisation and Recycling and Composting Plans defined in the Joint Municipal Waste Management Strategy.

3.10 Conclusion

Historically, there has been an annual growth in the tonnage of waste received by the Authorities from households, HWRC and WCA sources.

Against this backdrop of increasing waste volumes, the Authorities and the constituent WCAs have begun to improve recycling and composting rates in order to improve recycling and composting performance by 2005/06. This increase and change in waste management practices has largely come about through partner efforts across the County to develop sustainable waste management solutions.

While this increase in recycling and composting will deliver short-term targets, the existing infrastructure and arrangements will not deliver the long-term aims of the JMWMS or legislative obligations under the LATS.

In the event of the Authorities opting to continue with the existing level of service provision, the end result would be a failure to deliver the objectives of the JMWMS and significant financial penalties from failure to divert waste from landfill. Therefore, there is a need for significant investment in new facilities including a residual waste treatment plant to ensure the Authorities meets their objectives and avoids fiscal penalties.

This approach must be taken in conjunction with concerted efforts from the WCAs to increase levels of segregation of materials at the kerbside and to actively promote waste awareness and minimisation. Therefore, the future of waste management in Derbyshire and Derby City will be based upon a joint approach to ensure an effective interface between collection and disposal activities to achieve joint aims and objectives. This cannot be achieved through simply maintaining current practices and infrastructure.

Options Appraisal

4.1 Introduction

This section describes the development of the waste management options and the appraisal methodology applied to identify the MBT based solution as the Reference Project for the Authorities to meet the EU Landfill Directive. The options have been derived from previous work undertaken as part of the development of the Authorities JMWMS and have been agreed with the constituent District/Borough Councils. In undertaking the appraisal, the methodology considers both non-financial strategic criteria and financial criteria.

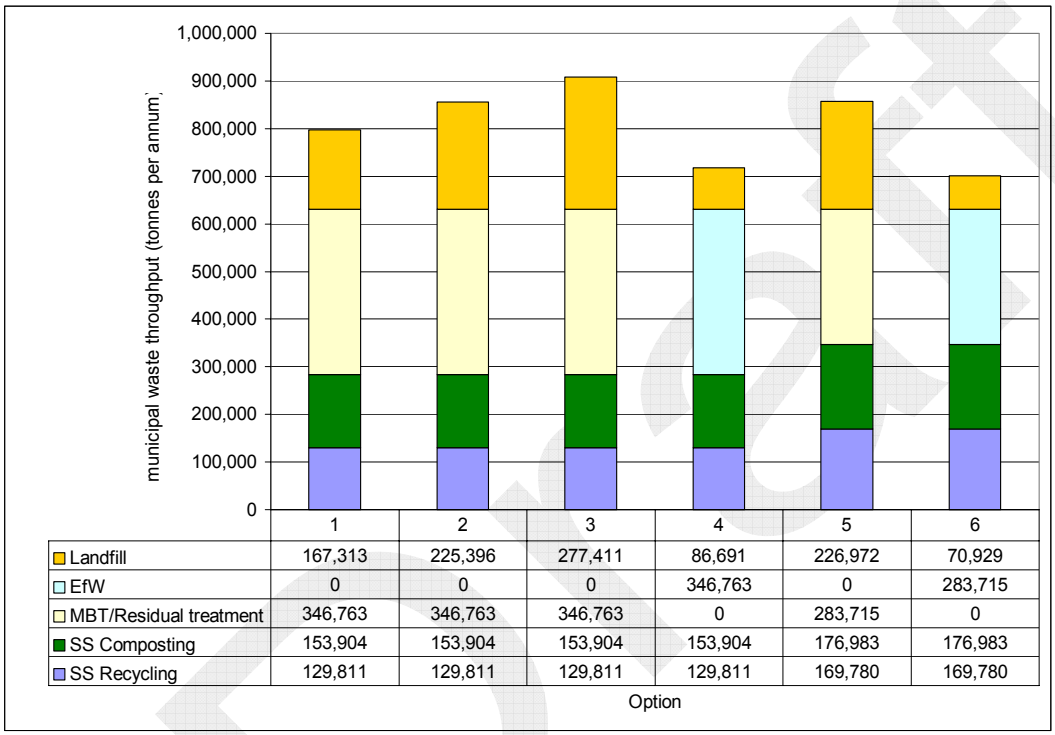
It should be noted that the OBC does not envisage including collection activities within the scope of the project. In addition, the market sounding exercise demonstrated a desire by potential bidders for the Authorities to consider alternative landfill procurement options for the securing the required landfill capacity for the concession period. This is discussed further in this section.

4.2 Project Options

Following the development of the JMWMS and consultation with the Authorities, six project options were selected for further appraisal. Each of the options developed comprises a mixture of bring recycling, kerbside recycling, HWRCs, waste treatment and waste disposal. The following generic waste management options have been considered and are summarised in Figure 4.1. Brief descriptions of Options 1-6 are also provided below.

Options Appraisal

Figure 4.1 Option Characterisation



	1	2	3	4	5	6
Landfill	167,313	225,396	277,411	86,691	226,972	70,929
EfW	0	0	0	346,763	0	283,715
MBT/Residual treatment	346,763	346,763	346,763	0	283,715	0
SS Composting	153,904	153,904	153,904	153,904	176,983	176,983
SS Recycling	129,811	129,811	129,811	129,811	169,780	169,780

Extracted from Derbyshire JMWMS

4.2.1 Option 1 - Moderate source segregation with the residual waste being processed in an autoclave MBT plant.

The basis of this option is to achieve a 45% source segregated recycling and composting effort, with residual waste processed through an autoclave MBT process. The autoclave MBT plant is based on steam sterilisation of waste, followed by recovery of recyclable materials, production of a refuse derived fuel (RDF), for offsite combustion, and disposal of a non recoverable fraction to landfill.

4.2.2 Option 2 - Moderate source segregation with the residual waste being processed in an MBT plant with RDF production to a level to meet the LATS requirements.

The basis of this option is to achieve a 45% source segregated recycling and composting effort, with just enough residual waste sent to an MBT plant to meet LATS targets. The MBT plant comprises a combination of biological drying, recovery of recyclable materials, generation of a refuse derive fuel and disposal of a non-recoverable fraction to landfill.

4.2.3 Option 3 - Moderate source segregation with the residual waste being processed in an anaerobic digestion plant (AD). (E.g. Leicester City).

The basis of this option is to achieve a 45% source segregated recycling and composting effort, with residual waste processed in an anaerobic digestion plant similar to the technology employed by Biffa to treat municipal waste in Leicester. This technology allows recovery of recyclables, anaerobic production of the biodegradable component together with composting of the resulting digestate, production of RDF for off-site combustion and disposal of a non-recoverable fraction to landfill.

4.2.4 Option 4 - Moderate source segregation with the residual waste being processed in an energy from waste plant maximising diversion from landfill.

Option 4 replicates levels of source-segregated composting and recycling achieved in options 1, 2 and 3, with all residual waste being treated through an energy from waste plant.

4.2.5 Option 5 - High source segregation with the residual waste being processed in an anaerobic digestion plant (AD).

The basis of this option is to achieve a 55% source segregated recycling and composting effort, with residual waste being treated via an anaerobic digestion plant.

4.2.6 Option 6 - High source segregation with the residual waste being processed in an energy from waste plant maximising diversion from landfill.

Option 6 replicates levels of source-segregated composting and recycling achieved in option 5, with all residual waste being treated via an energy from waste plant.

4.3 Options Appraisal Overview

4.3.1 JMWMS Options Appraisal

The JMWMS identified six potential options, each comprising a mixture of bring and kerbside recycling, household waste recycling centres, waste facilities for treatment of residual waste and landfill disposal. A detailed options appraisal process was undertaken as part of JMWMS development, comprising an assessment of these options against a number of environmental, economic and social indicators.

Options Appraisal

The performance of each option against key waste strategy targets was undertaken and the results are summarised in table 4.1, clearly showing the validity of each option as part of a future waste collection and disposal strategy.

Table 4.1 Performance of Options 1 - 6 against Key Waste Strategy Targets

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Recycle or compost 33% of Household Waste by 2015	✓	✓	✓	✓	✓	✓
Landfill Directive (35% of 1995 BMW to Landfill level) in assessment year 2019	✓	✓	✓	✓	✓	✓

Extracted from Derbyshire JMWMS

4.3.2 Outcomes of JMWMS Options Appraisal

The options appraisal process comprised an assessment of the Best Practicable Environmental Option (BPEO) and the Sustainable Waste Management Option (SWMO).

Each option was assessed against a set of 21 environmental, economic and social indicators. Each option was then scored according to how well it performs against each indicator. The scores for each indicator were added together to give a single performance score for each option. The option with the highest score is considered to be the BPEO and SWMO (See Appendix 2).

Option 6 and Option 5 were identified as the Best Practicable Environmental Option and Sustainable Waste Management Options, and as a result of this, it was felt at the present time that these generic options provide the most appropriate way forward for Derbyshire.

In addition, both options assumed an enhanced level of source segregated recycling and composting (overall recycling and composting rate of 55%). Whilst this may be achievable, the costs and logistics of achieving this diversion rate could be onerous and will no doubt cause considerable difficulties.

Option 6 assumes an expansion of recycling schemes to achieve a 55% performance, resulting in a high performing option. To achieve, and in fact exceed, the longer term BMW Landfill Directive targets all remaining

municipal waste is sent to energy from waste. This option meets the required Landfill Directive target in 2010 and maintains this position exceeding targets from 2010 up until the final year modelled in 2020.

4.3.3 Definition of a reference project

The second stage of the options appraisal consisted of the development of a reference project to provide a baseline against which funding and procurement options could be assessed. The reference project simply provides an indication of a technology solution which could be used; the majority of procurement and funding options are likely to be procured via an output specification which would not be technologically specific, with the precise mechanism of achieving specified targets defined by bidders and assessed by the Authorities in accordance with pre-defined evaluation criteria.

4.3.4 Reference project summary

The best performing options, considered to offer a sustainable solution for the future management of Derbyshire's and Derby City's municipal waste and allow the Authorities to comply with Landfill Allowance targets involved a recycling / composting rate of between 45 and 55% with the residual waste being treated via:

- Energy from Waste;
- Anaerobic Digestion;
- Autoclave.

There will need to be a significant increase in the number of waste handling facilities to manage the waste. In particular, the JMWMS has recommended the development of two NWTFs, one in the south of the County/City and one in the north of the County.

The reference project for Phase 1 has not sought to be particularly definitive about the technological solution but has developed a generic approach to the implementation of the strategy, comprising a combination of the above as follows:

A NWTF which provides mechanical and biological treatment of the waste, and produces a Refuse Derived Fuel (RDF). An approximate facility capacity of 180,000 tonnes per year, at a capital cost (at present value) of £40 million, has been assumed

4.3.5 Business case for JMWMS and 'Do nothing' option

Historically, waste management in both the County and the City has been dominated by relatively cheap disposal of waste to landfill. The cost of continued landfill disposal will be increasing due to higher rates of landfill tax and increased susceptibility to having to purchase landfill allowances from other WDAs, if they are available, or facing draconian fines if landfill allowances can not be purchased. This therefore defines a "Do Nothing" option which entails dramatically higher costs of residual waste management than are currently being incurred, for example:

Table 4.2 Current and future landfill costs

	Current Costs (/tonne)	"Do Nothing" Future Costs by 2011 (/tonne)
Landfill Gate Fee	£20	£25 (to reflect increasing scarcity)
Landfill Tax	£18	£35
Tradable Allowance	£0	£25-£100 (depending on availability)
TOTAL	**£38 per tonne**	**£85-£160 per tonne**

However, all of the options examined as part of the JMWMS implementation also result in significantly higher costs being incurred:

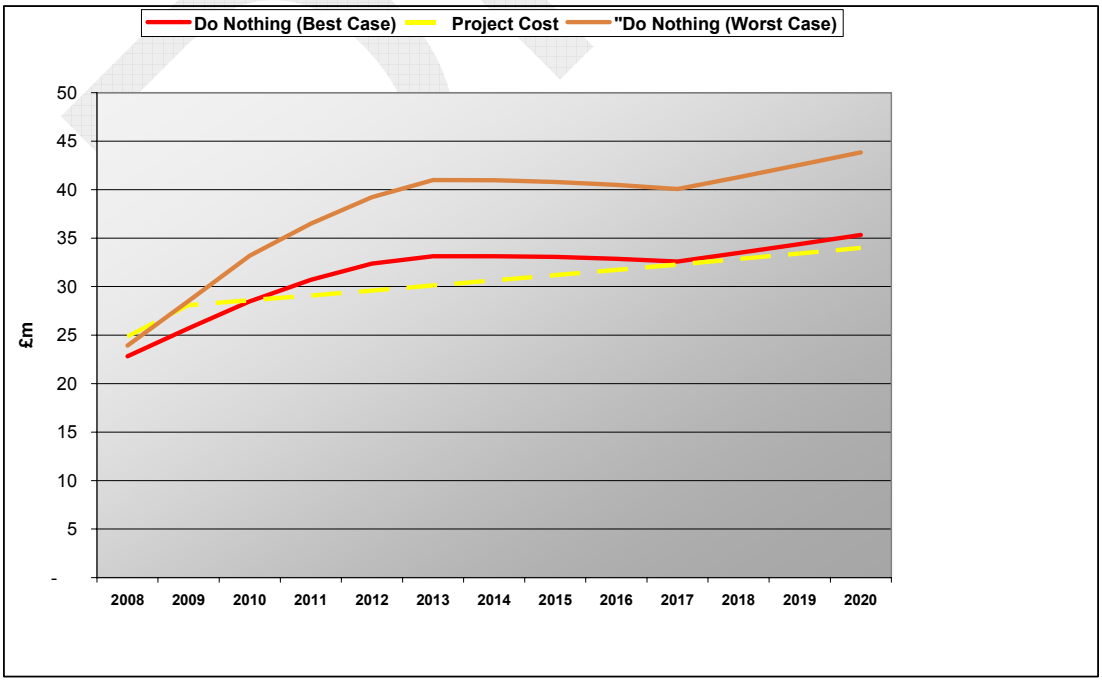
- increased costs of kerbside recycling. These costs would be borne by the WCAs, although the WDA would become liable to pay recycling credits or may wish to subsidise WCAs in order to encourage cost effective diversion of waste from landfill;
- capital investment and higher operating costs at HWRCs;
- investment in and operation of new composting infrastructure to support the management of organic (garden and kitchen) wastes planned to be collected by the WCAs;
- development and operation of additional waste handling and transfer infrastructure to support the enhanced waste management activities;
- development and operation of new waste treatment facilities to divert residual waste from landfill.

The key to the financial business case is thus comparing the costs of the "Do Nothing" option with the cost of various options to divert waste from

landfill. This is shown illustratively in Figure 1 below which shows comparable costs for the “Do Nothing” option and one of the high scoring options considered in the JMWMS.

This clearly demonstrates that, even the best case “do nothing” option (assumed to be a LATS price of £40 per tonne) is more expensive than the anticipated costs of implementing the JMWMS as landfill and landfill tax both rise faster than inflation. However, “do nothing” would also leave the Councils highly susceptible to the LATS market, as demonstrated by the significantly higher cost of the “worst case” do nothing option which assumed a LATS price of £100 per tonne (indeed, it is possible that there may be periods of time where LATS are not available at all in which case the authorities would face a fine of £150 per tonne. The Do Nothing options include continued improvement in kerbside and HWRC recycling performance to 2017, in line with the JMWMS. If this is not as successful as forecast, the gap between the options would become wider still.

Figure 4.2 Comparison to “Do Nothing”



4.4 Options for delivery

4.4.1 Contract Options

In order to deliver the reference project, involving the development of more than one treatment facility, the Authorities would need to enter into a procurement or procurements with a private sector provider. This procurement could take a number of different forms as follows:

C1. Single integrated project - Delivery of a facility or facilities through a single contract for both Councils, providing long-term waste treatment & disposal;

C2. Staged implementation - Joint delivery of a number of sequential contracts, either with different providers or through strategic partnership with one partner;

C3. Separate implementation - Separate projects procured by individual authorities

The Authorities believe that the advantages of partnerships outweigh the disadvantages, and are committed to working together to implement a project or projects which deliver the JMWMS. For this reason, separate implementation has been discounted from further consideration.

4.4.2 Funding Options

Whichever procurement method is chosen there will be a requirement for funding which could be provided by either the private sector or the public sector through the following routes, all of which are considered by the Authorities to be potentially deliverable:

- **F1.** Private financing delivered through the Private Finance Initiative (PFI): under the Private Finance Initiative a waste disposal authority can obtain an annual subsidy from central government through a Special Grant. One of the conditions of Government, in awarding PFI credits, is that the project must comply with the requirements setting out the definition of a "private finance transaction". The details are set out in the Local Government PFI project support guide at www.local.odpm.gov.uk/pfi/grantcond.pdf but include the need to transfer significant risk to the private sector contractor. Due to high procurement costs and timetables HM Treasury is recommending PFI only for capital projects over £20m in value, and DEFRA has set a maximum of £40m for the PFI credits available for individual projects.

- **F2.** Private financing delivered through a Public Private Partnership (PPP): If a PFI transaction is not appropriate, a contractor may be willing nevertheless to enter a contract to provide a new facility and operate it. The contractor's charges for this could be structured so as to achieve a smooth profile over the contract period and might be expressed as gate fees.

The inherent cost of finance, as with PFI, is likely to be higher than that available through prudential borrowing.

- **F3.** Public sector financing delivered via Prudential Borrowing (if available): the Local Government Act 2003 provides for a new 'prudential' system of capital finance controls that gives local authorities increased freedom to raise finance for capital expenditure, where they can afford to service the debt without Government support. There will be reserve powers for Government to set limits on borrowing and credit, but it is envisaged that these would be used only in exceptional circumstances. This Act imposes a duty on each local authority to determine an affordable borrowing limit, which would be subject to the scrutiny of its external auditor. The regulations require the consent of the full council for setting the borrowing limit and any subsequent variation thereof.

4.4.3 Procurement Options

Four different procurement options have been identified for the development and operation of new waste treatment facilities. These have a track record in traditional waste management and in other sectors as a result of which there is often existing guidance and standard documentation.

The options considered here for the Design (D), Build (B), Operation (O) and Financing (F) of new waste treatment facilities are as follows:

P1) Separate D,B,O,F	The WDA contracts separately for the works and services needed, and provides funding by raising capital in separate arrangements to the main contracts. The contract for the works is to carry out the construction of a facility to a design and specification provided by the client. The waste authority funds the capital cost through milestone payments, and owns the facility that is constructed. Facility operation is typically arranged through a separate operation and maintenance (O&M) contract.
P2) D&B,O,F	A contract for the private sector to provide both the design and construction of a facility to specified performance requirements. The WDA owns the facility that is constructed and makes separate arrangements to raise capital. Operation would be arranged through a separate O&M contract.
P3) DBO, F	This combines the D&B contract with the O&M contract. On commissioning of the facility, the capital cost is refunded to the contractor, who then operates the facility during which it receives predefined regular performance payments. The WDA owns the facility that is constructed and makes separate arrangements to raise capital. At the end of the contract, the facility is transferred back to the client in a specified condition.
P4) DBFO	As DBO but with the contractor also providing the financing of the project. The

	design, construction and operation are carried out by the contractor to specified performance requirements for which the service fee (including funding costs) is paid. The contractor then operates the facility over a fixed term during which it receives regular performance payments to recover its capital and financing costs, operating and maintenance expenses, plus a reasonable return. At the end of the contract, the facility is usually transferred back to the WDA in a specified condition.

In general terms, increasing integration of the various components of construction results in:

- greater risk transfer to the contractor and a related loss of control by the Authorities. This is typically manifested through the specified requirements changing from "inputs" to "outputs" (typically, required performance results with penalties for failure to perform);
- increased complexity, length and cost of procurement. This becomes most significant when private sector project (standalone) finance is being used to fund the cost of capital facilities;
- increased optimisation of project life-cycle costs; and
- reduced flexibility to make changes once the procurement has been contracted, unless this is explicitly structured in.

Given the typical requirements of Waste Disposal Authorities to transfer as much risk as possible, and outsource the integration of the various service elements, to date there have been no examples of WDAs procuring waste treatment facilities through options P1 or P2.

4.4.4 Short-listed Options

There are clearly a large number of combinations of the various contract, funding and procurement options. However, some of the options have been discounted from further consideration (see above), and a number of the various contract, funding and procurement options sit comfortably together. Following an initial evaluation by Deloitte and the Authorities, the following four main options were therefore selected for further consideration:

- **PFI** – development of a single (County + City) DBFO project through the Private Finance Initiative, involving the development of large complex infrastructure (a combination of C1, F1 and P4)

- **PPP** – as above, but as a conventional private sector financed project without PFI (a combination of C1, F2 and P4)
- **Staged PPP** – sequential implementation of a series of projects (e.g. interim, long-term) with private sector financing (a combination of C2, F2 and P4)
- **Staged DBO** – sequential implementation of a series of Design, Build and Operate projects (e.g. an interim, then a long-term) with public sector financing such as prudential borrowing (a combination of C2, F3 and P3)

In addition, hybrid options were considered whereby a first project was procured through one of the above options with a second project delivered through an alternative contract, funding and/or procurement route.

4.5 The Preferred Option

Option 6 (high source segregation with the residual waste being processed in an energy from waste plant maximising diversion from landfill), assumes an expansion of recycling schemes to achieve a 55% performance, resulting in a high performing option. To achieve, and in fact exceed, the longer term BMW Landfill Directive targets all remaining municipal waste is sent to energy from waste. It should be noted however, that a full-scale EfW plant would not be operational by 2009/10. Therefore, alternative arrangements will need to be in place during the interim period. This Strategy will take this factor into account and will seek to recommend appropriate alternative arrangements.

Option 6 and Option 5 (high source segregation with the residual waste being processed in an anaerobic digestion plant) were identified as the Best Practicable Environmental Option and Sustainable Waste Management Options, and as a result of this, it was felt at the present time that these generic options provide the most appropriate way forward for Derbyshire. Therefore the preferred strategy, based on the options above, is as follows:

- Expansion of recycling and composting schemes to achieve a 55% recycling level.
- All residual waste, in the absence of a suitable Regional facility will be treated at in-county treatment facilities.

- The combination of recycling and energy recovery will ensure that the Landfill Directive targets for each of the key years are met and in fact exceeded.

None of the options discussed above allow the authorities to avoid exposure to LATS in the short-term, the time needed to procure and deliver the quickest of the options still leads to 2009. The authorities should therefore consider how LATS penalties can be mitigated alongside the implementation of the JMWMS.

In terms of funding and procurement options, the PFI option would take the longest to deliver; with a potential exposure to LATS of up to £45m should the authorities be fined at £150/tonne. A smaller scale "off-the-shelf" technology delivered through prudential borrowing via a DBO contract would be the fastest to deliver, with the potential exposure limited to £5m.

4.6 Mass Flow Analysis

In order to predict the tonnages of waste to be dealt with when the first treatment facility is operated a waste flow analysis has been carried out by Enviros, the technical advisors to this project.

Firstly the work carried out by WCAs in separating waste at the kerbside for recycling/composting has been reviewed and extrapolated to give future estimates. The remaining waste (residual waste) is that which then has to be treated in the new facility and the modelling work estimates the quantity and composition of this material so that the requirements of the new plant can be specified at the tender stage.

Value for Money

5.1

This section is currently being reviewed and reference should made to the Cabinet main report.

Affordability

6.1

This section is currently being reviewed and reference should made to the Cabinet main report.

Delivering the Project

7.1 Introduction

Having defined the Reference Project and concluded on the procurement methodology this section will describe further the approach to procurement and identify some of the issues that will need to be addressed as this project moves forward.

7.2 Output specification

The key features of the output specification can be summarised as follows:

- The Councils are seeking to enter into a contract with a partner who will work with the Councils to implement their waste management strategy. In particular, the Councils are seeking to procure the following services:
- Treatment of residual waste, including management of treatment products;
- Provision of delivery points for the Waste Collection Authorities for the receipt of residual waste, bulky waste and clinical wastes collected by them (other waste streams may be delivered by the WCAs by agreement);
- Transport of waste from delivery points to:
- Treatment facility;
- Landfill or other disposal point.
- Operation of Household Waste Recycling Centres (HWRCs), including transportation, marketing, management and disposal of all wastes derived from HWRCs (recyclables, green waste, residual waste) including the handling of “ad hoc” and hazardous waste;
- Disposal of residual waste, not subject to treatment, and residues from waste treatment.

A full description of the output specification is described in Appendix 4 of this document, the “Scope of Project”.

7.3 Payment Mechanism

Delivering the Project

The payment mechanism is both a method for payment and a method of incentivising performance. As such, the payment mechanism needs to be linked to the service outputs defined in the Output Specification and deductions are applied when Output Specification standards are not achieved. It is also important that a good performance monitoring system is in place to ensure performance is up to standard.

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

- payment for services only when availability and performance is achieved;
- transfers risk to the provider in line with their obligations; and
- provides a financial incentive to perform in accordance with the output specification.

7.3.1 4Ps Payment Mechanism

[The 4Ps have developed a payment mechanism to act as a standard basis for waste management PFI schemes, which the Authorities intend to adopt. The project team is planning a number of internal procurement workshops to draft the payment mechanism in detail for the ITN, using the 4Ps payment mechanism as the basis. The rest of this section summarises the main elements of the payment mechanism in line with the 4Ps Toolkit.]

7.3.2 Calculation of Unitary Charge

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

7.3.3 Performance Management

The primary method of performance management will be exercised through the landfill payment of the payment Mechanism where direct deductions will apply where the failure of the contractor to meet a performance standard exposes the Authorities to additional cost. An

example of this is where failure to meet the required diversion targets causes the Authorities to incur additional landfill tax costs. In this instance the payment mechanism will seek to make deductions to the Unitary Charge to compensate the Authorities. The Contract should contain sufficient incentives for the Contractor to rectify the fault, but where appropriate, substandard performance for a prolonged period could trigger a termination event.

7.3.4 Performance Deductions

It is considered that deductions do not need to apply to the whole Unitary Charge since the incentives of many activities are best achieved through the modular payment build up. Nonetheless, performance and availability standards are best incentivised through a deduction regime. These will range from opening facilities at the right times to health and safety issues. Deductions will also be made where recycling is not achieved.

7.3.5 Performance Monitoring

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

7.4 Project Agreement

The contract to be developed for the ITN will be based on SoPC version 3, as amended by DEFRA for waste projects, and the contractual terms contained within the 4Ps Toolkit, in particular with respect to planning and termination. Project-specific issues will, of course, need to be addressed in their own right and incorporated into the draft project agreement. Employment drafting will take account of the recently issued model clauses prepared by OGC and the 4Ps.

7.5 Approach to key risk areas

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The Authorities appreciate the importance of recognising and managing key risks within the project. The project team have developed an initial risk register as an approach to managing these risks. The attached project register in Appendix 3 provides an assessment of the risks associated with the project and details existing and proposed mitigation strategies. This register will be reviewed regularly by the project team to reflect changes and will develop as the project proceeds. The key high-level risks associated with this project include:- planning, performance, affordability, stakeholder engagement and commitment and procurement issues.

7.5.1 Allocation of Risk

It is anticipated that the contracting terms and resulting risk allocation within this project will be in line with the national PFI standardisation process, both adopting the Office of Government Commerce (OGC) standardisation and the 4Ps procurement pack. The project team is developing a risk allocation matrix detailing those risks that can sensibly be transferred to the contractor and those that must be retained or shared. The contractors ability and willingness to take on risk is a central concern. The ISOP evaluation process will probe their understanding of, and attitude towards, the risks involved. Bidders will be asked to comment on the proposed risk allocation matrix.

7.6 Commercially Sensitive Section

7.6.1 Landfill Tax Risk

Where the contracted landfill diversion targets set out in the Output Specification are met or exceeded by the contractor, the Authorities will reimburse the costs of landfill tax incurred and paid by the contractor. The Authorities will therefore retain landfill tax ‘rate risk’ where diversion targets are met. Where the Contractor fails to achieve the contract diversion targets, not as a result of underperformance on the part of the collection authorities, in accordance with the 4Ps Toolkit payment mechanism, reimbursement of landfill tax will be up to the contract rate of diversion only. The contractor will therefore bear both landfill tax ‘volume’ and ‘rate’ risk where contract diversion targets are not achieved.

7.6.2 Landfill Allowances

[Due to the uncertainties that exist with regards to the market price for tradable landfill allowances, contractors as part of their proposals are not able to analyse their financial exposure as a result of failing to achieve BMW landfill diversion targets. For these same reasons, the Authorities do not consider it feasible to transfer such risk.

Further to the above, and the adverse impact that unknown landfill allowance liabilities might have on the bankability of the project, the Authorities intends to follow the guidance set out in the 4Ps Toolkit, which suggests a financial cap per tonne where the contractor fails to achieve BMW diversion targets until such time the impacts of LATS is more fully understood and a robust trading system has developed.]

7.7 Bankability

As conceived the project is likely to be funded directly by the Council and there are thus unlikely to be any third party funder implications. However, since the Council will effectively be investing in the proposed solution, this is still an important consideration.

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 Contractor. The model has also assumed that the Contractor will invest some equity in the project (comparable with a PFI project) in the form of project development costs in order to provide an ongoing financial incentive to perform.

The proposed technology in the reference project in this OBC has now been banked on a number of projects in the UK and is widely financed internationally. The Councils should thus be confident in the ability of the technology to perform. However, it is suggested that the Councils will need to undertake further and appropriate due diligence of the investment proposition as an when it is known.

Performance guarantees from reputable and financially robust suppliers should also be available for the proposed technology to provide additional security to the Councils.

7.8 Market Testing

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A market testing exercise was carried out by the Council with potential waste contractors in August 2005. The contractors that attended the information gathering sessions were BIFFA, Nuttalls, Shanks, SITA, United Utilities and written questionnaire responses were provided by AMEC and Onyx Aurora.

Responses highlighted a genuine interest from the market in Derby and Derbyshire's waste management project. A two staged approach to the procurement of waste facilities appeared attractive to contractors and the potential of using prudential borrowing was also a welcome change. However, the timing of the project in relation to other opportunities, likely bid costs, the risk sharing mechanisms and length of the procurement period were issues that would affect the level of interest in the procurement

In response to the scope of the project, the staged approach was suggested to offer flexibility and unlocked a better deal for the Councils, in order to get a facility up and running and dealing with residual waste. Mixed views were received in response to the inclusion of HWRC services and Landfill within the contract and the length of the contract varying from 15 to 30 years.

Commercial considerations such as Council financing was accepted as a funding solution and it was highlighted that this would aid the speed of delivering waste facilities. Private sector financing was also an option that the contractors would provide. Risk sharing mechanisms would however be integral to any financing decisions.

Contractors responded positively to the provision of sites for the potential development of facilities. The preferred technical solutions discussed were variations on MBT, and some responses for an EfW, with BMW diversion performance guarantees in region of 45% to 70%.

All contractors supported the concept of appointing a strategic partner who would work with the councils to deliver the infrastructure needed to enable the councils to meet their future LATS targets.

7.9 Decision Making Arrangements and Stakeholder Engagement

a) Procurement Strategy

A procurement strategy was approved by both Councils in late 2005 and can be summarised as follows:

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- joint working of the County Council and Derby City Council to procure new waste treatment facilities.

- a staged procurement process with Stage 1 providing a facility to service Derby City and the Districts/Boroughs in the south of the County.

- the appointment of a "strategic partner" to work in partnership with the Authorities to provide the infrastructure needed to deliver the Joint Municipal Waste Management Strategy.

- Adopting Prudential Borrowing, with the County Council and Derby City Council sharing the cost equally, as the preferred funding method for Stage 1 subject to consideration of each Authority's future capital programmes.

b) Joint Municipal Waste Management Strategy (JMWMS)

A JMWMS has been developed by all 10 authorities in Derbyshire and it is currently subject to public consultation.

The proposed strategy is based on a number of key elements as follows:

- A partnership approach between all councils to achieve the visions of this municipal waste strategy;

- Introduction of waste minimisation schemes to reduce the growth in waste arisings; Ultimately, it is intended that zero growth in waste arisings will be achieved;

- Continued support to and promotion of the benefits of home composting and other waste minimisation schemes;

- Support to local and regional schemes that encourage and develop local recycling, composting and reprocessing capacity;

- Continued introduction/expansion of the kerbside collection of dry recyclable and organic (compostable) materials;

- Enhancement of the Household Waste and Recycling Centre (HWRC) provision

- Provision of Materials Recycling Facilities (MRFs) to deal with recyclable materials as required;

- Development of a number of in-vessel composting facilities;
- Continued use of open windrow composting for green waste.
- Provision of sufficient residual waste handling capacity to treat residual waste.
- Provision of sufficient landfill capacity to receive treatment residues and other non-recyclable waste.

c) Reference Project

The above Strategy indicated that the best performing options with respect to Best Practicable Environmental Option (BPEO) and the Sustainable Waste Management Option (SWMO) for long-term management of municipal waste in Derbyshire involved a recycling / composting rate between 45 and 55% with the residual waste being treated at an Energy from Waste Facility, or by anaerobic digestion or by autoclaving (steam sterilisation) technology.

It has therefore been decided to use a Mechanical Biological Treatment (MBT) type of facility (the basis of the latter two treatment options above) to model the anticipated waste flows and cost so that the affordability of this type of proposal can be calculated.

d) Memorandum of Understanding

A MoU has been developed by all 10 authorities to provide a framework for guiding the implementation of the Derbyshire Joint Municipal Waste Management Strategy (JMWMS) to ensure the effective management of municipal waste in the county and the City over the next 20-30 years.

The Memorandum will underpin the establishment of appropriate solutions by the two Waste Disposal Authorities (WDAs) and the eight Waste Collection Authorities (WCAs), (referred to as “the Partners”) to ensure that EU and UK Government waste management targets are met and that Derbyshire’s waste is managed in a sustainable manner. It will also:

- demonstrate how the ”Partners” will effectively work together to co-ordinate their efforts,
- clarify, document and confirm the respective roles, responsibility and contribution of each Partner to the delivery of the JMWMS,

- ensure a commitment to the development of appropriate and rigorous performance management and project management arrangements.

The adoption of the JMWMS and the MoU by all authorities in 2006 will demonstrate the commitment of all partners to the project.

7.10 Stakeholder engagement beyond Derby City and Derbyshire County local government

The partner authorities are committed to a full and extensive stakeholder engagement process to ensure that the development of Derbyshire's Waste Management Strategy takes account of the needs and wants of groups and organisations in, and adjacent to, the county. To this end the partners are undertaking extensive consultation of the draft Strategy document in 2005/6 with over 1100 groups and organisations. The views expressed will be taken into account during the writing of the final version of Strategy in 2006. It is the intention of the partner authorities to consider further stakeholder engagement, should the need arise at any time during the implementation of the many aspects of the Strategy.

7.11 Project Governance and Management Arrangements

The authorities recognise the importance of effective governance and project management arrangements. This sub-section sets out current arrangements to achieve this goal.

7.11.1 Project Board

A Project Board was set up in 2005 with the approval of the Cabinets of both authorities to oversee the procurement of future waste contracts, and it comprises Elected Members and senior officers from the County Council, City Council and a representative District Council. Full membership of the Board is set out below.

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Name	Position
Cllr. J Williams	Chair of Project Board and Leader of Derbyshire County Council (DCC)
Cllr. B Lucas	DCC Cabinet Member for Sustainable Communities
G Tommy	DCC Director of Corporate Resources
D Harvey	DCC Strategic Director, Environmental Services
A Thomas	DCC Asst. Director, Environmental Services
C Robertson	DCC Project Manager, Environmental Services
Cllr S Bolton	Derby City Council Cabinet Member for Environment and Direct Services
P Dransfield	Derby City Council Director of Finance
J Guest	Derby City Council Director of Regeneration and Community
Cllr. S Taylor	South Derbyshire District Council Member and Chair of Waste Collection Authority Advisory Group
M Alflat	Director of Community Services, South Derbys. District Council

7.11.2 Project Team

In 2005 a project team was set up to develop a procurement strategy and to manage its implementation. It comprises senior officers from the County Council and Derby City Council representing Corporate Procurement, Environmental Services, Legal Services, Treasurers, Waste Management and Risk Management. Two representatives from the Waste Collection Authorities are also part of the team.

Both the County Council and Derby City Council have appointed Project Managers to deal with day to day project issues.

7.11.3 Project Management Arrangements

The project management team, chaired by an Assistant Director of Environmental Services, meets monthly to review and discuss procurement tasks, monitors progress against the procurement programme and makes recommendations to the Project Board and Cabinet for key decisions.

The Project Board meets at key milestones to consider recommendations from the project team and has delegated powers to:-

(i) progress the procurement strategy being developed with financial advisors Deloitte, with final decisions on the award of contracts being subject to further reports to Cabinet.

(ii) approve the appointment of external financial, legal and technical advisors subject to the Council's tendering procedures to assist in the implementation of the procurement strategy.

(iii) following the conclusion of negotiations, agree the apportionment of advisors costs between the County Council and City Council.

7.11.4 External Advisors

External advisers (financial, technical, legal) have been appointed for the procurement phase of the Project and they have assisted the Authorities during the OBC preparation. These are:

- Legal - Eversheds LLP;
- Financial - Deloitte MCS Ltd; and
- Technical - Enviros UK Ltd

7.12 Timetable

The indicative procurement timetable for delivering this project is set out below:

Table 7.1 Project Timetable

	Stage	Date
1	Publication of PIN	26 January 2006
2	Publication of Contract Notice	June 2006
3	Bidder's Day	June 2006
4	Return of PQQs / ISOPs	July/August 2006
5	Issue of ITN	September 2006
6	Receipt of responses to ITN	15 December 2006

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	Stage	Date
7	Selection of Bidders for BAFO and Issue of Invitation to submit BAFOs	26 January 2007
8	Receipt of BAFOs	9 March 2007
9	Selection of Preferred Bidder	30 March 2007
10	Financial Close	18 December 2007
11	Award Contract	30 January 2008
12	Service Delivery Commences	1 April 2008

7.12.1 Managing Timetable Risks

To assist with the identification of risks to the progress of the project a detailed project programme has been prepared identifying all the critical actions that need to be taken. The programme clearly shows the individual documents that have to be produced and the deadlines for producing them. All members of the project team will be required to monitor their own progress against the programme. The joint project managers will monitor the progress of the project against the programme and monitor the changes in risks. The risks identified at January 2006 are presented in Appendix 3.

7.13 Employee Issues

No employees of the County Council or Derby City Council will be transferred to the private sector and hence there are no TUPE implications for council staff.

Employees of current contractors and their subcontractors may be affected and steps will be taken to identify potential TUPE issues and their resolution in accordance with council policies.

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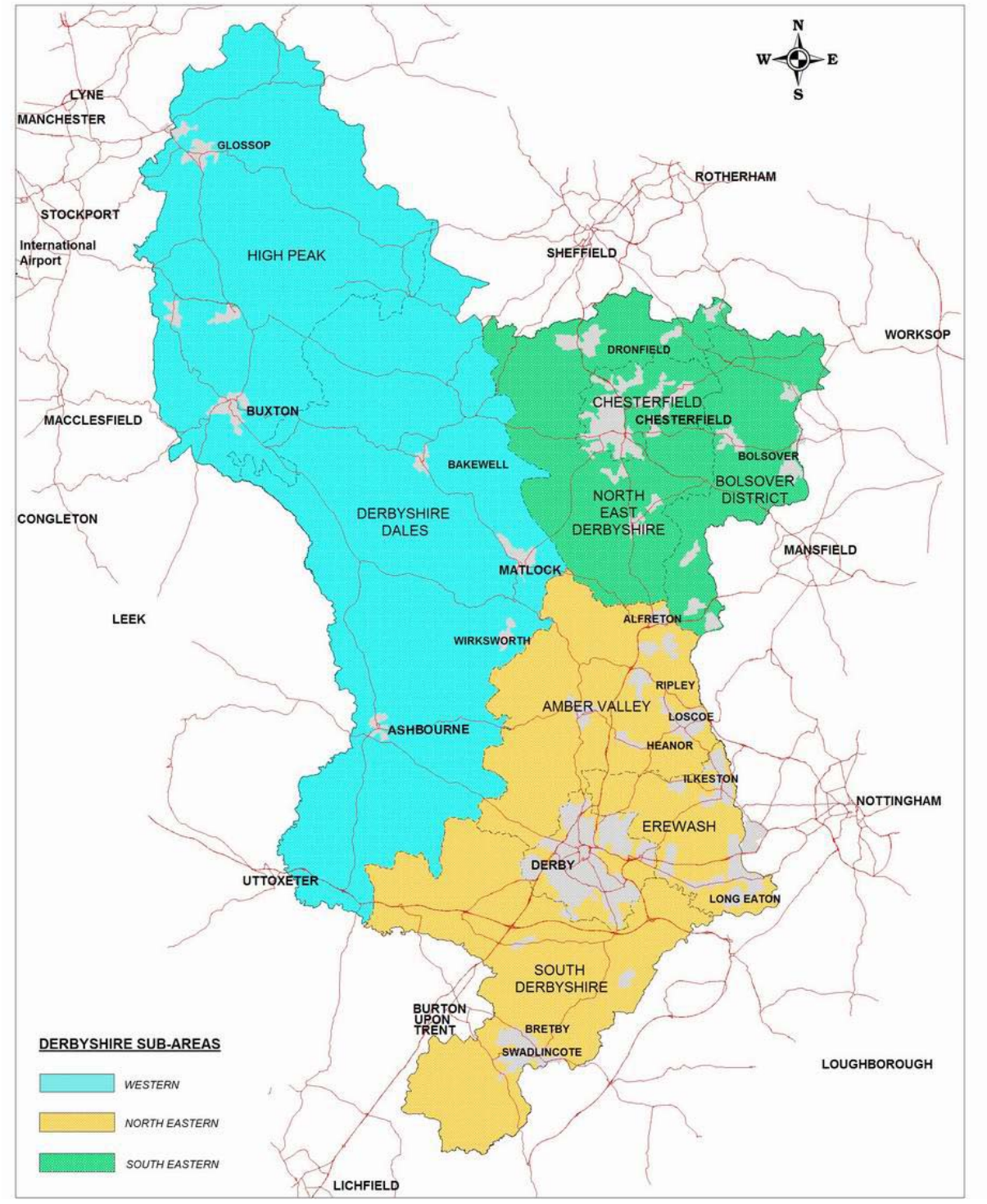
Appendix 1 - Map of Derbyshire showing District/Borough Boundaries, Main centres of Population and Transportation Routes.



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Appendix 2 - Overall Scores BPEO and SWMO for options 1 to 6.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Valued Performance Scores						
SWMO Assessment (all criteria)[1]	2	5	6	4	3	1
BPEO Assessment (BPEO criteria)[1]	1	4	6	5	3	2
Weighted Performance Scores						
SWMO Assessment (all criteria)[2]	3	4	6	5	2	1
BPEO Assessment (BPEO criteria)[2]	3	4	6	5	2	1
Sensitivity Analysis (Regional Weightings)						
SWMO Assessment (all criteria)[3]	2	4	6	5	3	1
BPEO Assessment (BPEO criteria)[3]	1	4	6	5	3	2
Sensitivity Analysis (Inverted Weightings)						
SWMO Assessment (all criteria)[4]	1	5	6	3	4	2
BPEO Assessment (BPEO criteria)[4]	1	5	4	6	2	3

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Average Performance Scores	1.75	4.375	5.75	4.75	2.75	1.625
Ranking of average Performance Scores	2	4	6	5	3	1

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Appendix 3 - WASTE MANAGEMENT PROJECT - STAGE 1 PROCUREMENT RISK REGISTER

Risk Ranking Matrix

Risk Score = Severity x Probability score.

Key for Risk Register

H – High (3)

M- Medium (2)

L – Low (1)

Severity

High (3)	**3**	**6**	**9**
Medium (2)	**2**	**4**	**6**
Low (1)	**1**	**2**	**3**
	Low (1)	**Medium (2)**	**High (3)**

Probability

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	Risk Description	Existing Risk Mitigation Procedures/Controls In Place	Severity	Probability	Score	Planned Risk Mitigation Procedures/Controls
PROJECT						
P1	Failure to define the objective(s) of the project	* Project scope and objectives clearly defined and understood by all stakeholders * Developing in partnership with City and Districts, through project team and project board * Draft Waste Strategy Consultation on website & road shows have taken place across the County * Stakeholder responses to consultation	H	L	3	* Approval of Waste Strategy Principles * Proposed public meetings * Need to ensure that the project meets all strategic needs and is sustainable in all areas - not just to achieve LATs targets
P2	Failure to link with strategic priorities	* The project links with the key Council Plan Priorities * Derby and Derbyshire Local Plan	H	L	3	* Need to ensure that the project meets all strategic needs and is sustainable in all area - not just to achieve LATs targets * Being developed into the new County Council Plan
P3	Lack of top level ownership and leadership with County and City Council's	* Full commitment of Chief Executive and Leader of Council from both Councils and key stakeholders	H	L	3	

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P4	Lack of top level ownership and leadership with collection authorities	* Verbal support of all Chief Executives * Development of Memorandum of Understanding * Working groups involving all parties	H	M	6	
P5	Lack of commitment from project sponsor	* Both Councils are co-operating in sponsoring this project. The County Council sponsor is the Deputy Chief Executive and Director of Environmental Services. The City Council sponsor is the Director of Environmental Services * Regular briefing and input at Director Level	H	L	3	
P6	Lack of effective stakeholder engagement	* All stakeholders currently being consulted on Waste Management Strategy	H	M	6	* Methods of further engagement with stakeholders to be considered * Assess and incorporate as applicable comments into the revised strategy
P7	Poor project management - leading to failure to meet key deadlines (including procurement)	* Project management by the project managers and Asst Director to maintain programme momentum * Project Management Team have programme with key milestones * Keeping project board and members informed and aware to avoid delays * Effective use of Microsoft Project by Project Team	H	L/M	3-6	* Review resourcing implications
P8	Inadequate resources and skills to deliver	* The project team working with external financial, legal and insurance specialists	H	L	3	* From the project programme the team should be able to identify areas of concern and ensure resources are deployed

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TECHNOLOGY						
T1	Unsuitable technology/incorrect technical solution	* Leading experts employed * Soft Market Testing undertaken * Phased approach enables us to take advantage of developments in the technology	H	M	6	* Explore all possible solutions in the market * Full assessment regarding technology and methodology to be employed * Use of proven technology only * Due diligence exercise by use of experts
T2	Consultants not competent to undertake work/give advice	* Competence of consultants employed are considered to be the leaders in their respective areas of expertise * Advisors have been through robust selection process - with assessment of bidders competence and experience of delivery	H	L	3	
SITE SELECTION/PLANNING						
S1	Failure to find suitable potential sites e.g. size and type, wider environmental impact and transport network impact	* Site selection in accordance with Derby and Derbyshire Waste Local Plan * Working group examining suitable sites	M	M	4	* Asking contractors to identify/offer other potential sites
S2	Failure to obtain planning consent for solution	* Advice being taken from Planning Authority * Sites being identified that are likely to get planning permission * Consideration of a solution with lower planning risks	H	H	9	* Consideration of multiple sites/smaller treatment plants

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PROCUREMENT						
PR1	Failure to appoint competent contractor	* Expert Advisors appointed * Limited market means the competent contractors are known	H	L	3	* Robust selection process * Financial checks * Due diligence exercise * Seeking interest of bidders through attractive proposals
PR2	Failure to attract competitive and viable bids from limited market External Consultant already concerned about market perceptions of the partnership	* PFI now rejected, PB more attractive to bidders * Providing detailed information to bidders to promote project and attract bids * Linkage with key priorities displays commitment * Top level ownership & commitment gives confidence to the market	H	M	6	* Promote - Strong Partnership, potential sites and planning opportunities
PR3	Failure to follow correct procurement route/rules	* Expert Advisors appointed * Principal Procurement Officer on Project Team & leading procurement exercise * Proposed Procurement Route drafted	H	M	6	* Comply with OJEU and other legal requirements
MARKET RISK						
M1	Product Market not developed & unstable - variable value in products - unstable market for recovered products - changes in legislation	* Financially modelled when considering bids & affordability	M	M	4	* Need to explore potential markets for products and seek agreements * Monitor and review new legislation * Lobby and influence government * Need to identify alternative solutions for unsaleable by products e.g. landfill

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CONTRACTOR						
C1	Financial difficulties/bankruptcy	* Expert Advisors appointed	M	L/M	2-4	* Financial checks on bidders * Due diligence exercise by experts * Proposed performance/parent company bonds
C2	Contractor default	* County Secretary and expert legal advisors involved in process * Appropriate clauses with assistance from commercial lawyers in drafting the wording to ensure continuity of the service * Contract signed with external advisers	M	L/M	2-4	
C3	Dispute with contractors	* Expert Advisors appointed * County Secretary and expert legal advisors involved in preparing contracts	M	L/M	2-4	* Procedures are agreed at the outset to enable speedy resolution of disputes or decisions
C4	Physical loss of plant & interruption costs	* Expert Advisors appointed * County Secretary and expert legal advisors involved in preparing contracts * Contractors to evidence BCP capability at time of procurement	M/H	L/M	2-6	* Consideration of risk control in design * Consideration of multiple sites for more resilience * Explore insurance options with brokers and alternative outlets * Examine and develop BCP arrangements

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C5	Technology rights	* Expert Advisors appointed * County Secretary and expert legal advisors involved in preparing contracts	H	L	3	* Seek access to rights in event of contractor failure
DATA						
D1	Waste data is inaccurate and/or misinterpreted	* Monitoring of data * Statutory Waste data flow returns to DEFRA	M/H	L	2-3	* Data gathering exercise being carried out with collection authorities * Seeking common interpretation between all partners on definitions of waste
D2	Changes to Waste Composition Volume	* Data exercise with collection authorities * Verbal commitment from Chief Executives of collection authorities	M	M	4	* Memorandum of Understanding to be agreed and signed with collection authorities * Contingency planning for changes
PARTNERSHIP						
PA1	Failure of partnership with Derby City	* Good working relationship between directors & officers * Agreed procurement route * Engagement of key officers and members in project	H	L	3	* Change of Director at Derby City - will need to engage and get support of the new sponsor
PA2	Failure of partnership with collection authorities	* Engaging authorities fully in the process * Collection authorities represented on project team, board and collection authority advisory group	H	M	6	* Memorandum of understanding being drafted * Individual contracts with authorities to be agreed

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LEGAL						
L1	Poor contractual agreements	* County Secretary and expert legal advisors involved in process * Appropriate clauses with assistance from commercial lawyers in drafting the wording * Procedures are agreed at the outset to enable speeding resolution of disputes or decisions * Contract signed with external advisers	M/H	L	2-3	
L2	Failure to tie in all people involved in the project with contracts or documents of understanding	* Legal advice available should ensure that this does not occur * External Advisers Appointed	M/H	L	2-3	* Memorandum of understanding being drafted * Proposed agreement between City and County Council's * Due diligence exercise and financial checks

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FINANCIAL						
F1	Failure to determine the most effective financing mechanism e.g. PFI vs. PB	* Risk Workshop carried out to determine differences between PFI and PB * Sites being identified that are likely to get planning permission * Consideration of a solution with lower planning risks	H	L	3	
F2	Affordability of solution	* Affordability analysis carried out	H	M	6	* To be revisited and monitored in light of proposals
F3	Cost overruns and variation orders		M	M	4	* Contract needs to be robust to accommodate differences * Due diligence exercise
F4	Potential exposure to LATS - unstable project market and residual disposal costs	* Monitor and review markets and costs	H	L/M	3-6	* Assess opportunity to purchase LATs for 2009/10, 2010/11 * Update financial modelling regularly
POLITICAL						
PO1	Lack of Member support for site/technology (national or local)	* Project in accordance with Councils Plan Priorities * Support by Members * Members on project board and given regular updates	H	M	6	* Further engagement of all members
PO2	Change of Government policy or party	* Continue to monitor and review	H	M	6	* Further engagement of all members

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REPUTATIONAL						
RE1	Adverse publicity - * due to failure in progressing project * impact of events/disputes * planning issues * environmental issues * site issues	* Good relationship with key stakeholders	M/H	L/M	2-6	* Contingency arrangements to be developed * Ensure good relationship management * Both Councils need to agree common approach to PR strategy * Consultation with stakeholders * Consider regular meeting with stakeholders * Learn from successes of other authorities in similar projects
RE2	Public perception of authority acting as both waste disposal and planning authority	* Derby City have separate directorates for waste and planning	M	L/M	2-4	* Consideration of separation of roles in County Council

Appendix 4 - Derbyshire County Council and Derby City Council Waste Management Project

Scope of Project

1. Introduction

1.1 Derbyshire County Council and Derby City Council ("the Councils") have agreed to work in partnership to procure jointly waste management contracts.

1.2 The purpose of this briefing note is to define the scope of the waste management contracts which will be procured by the Councils.

1.3 The project scope has been agreed by the project team, in consultation with its advisors, and will form the basis of the projects which will be advertised through the OJEU process.

2. Project Objectives

2.1 The Councils are seeking to enter into a contract with a partner who will work with the Councils to implement their waste management strategy. In particular, the Councils are seeking to procure the following services:

- Treatment of residual waste, including management of treatment products;
- Provision of delivery points for the Waste Collection Authorities for the receipt of residual waste, bulky waste and clinical wastes collected by them (other waste streams may be delivered by the WCAs by agreement);
- Transport of waste from delivery points to:
  - Treatment facility;
  - Landfill or other disposal point.
- Operation of Household Waste Recycling Centres (HWRCs), including transportation, marketing, management and disposal of all wastes derived from

HWRCs (recyclables, green waste, residual waste) including the handling of “ad hoc” and hazardous waste;

- Disposal of residual waste, not subject to treatment, and residues from waste treatment.

2.2 Management of source-segregated dry recyclables is undertaken by the Waste Collection Authorities and thus is not included within the scope of services being procured.

2.3 In-vessel composting services for mixed organic waste delivered directly by Waste Collection Authorities is being separately procured, and falls outside the services discussed in this briefing note.

3. Procurement Strategy

3.1 The Councils have determined that waste treatment services will be delivered through a two-stage procurement process:

- The first treatment facility will seek to be delivered as rapidly as possible in order to assist the Councils manage their LATS risks in the short to medium term.
- The first treatment facility will then seek to deliver compliance with Landfill Allowances up to approximately 2014.
- The first treatment facility will thus not be required to manage all of the waste from the Councils’ areas.
- The first treatment facility may also not achieve a permanent solution for managing any products from a treatment process.
- The second treatment facility will then seek to deliver compliance with long-term Landfill Allowances (i.e. post 2020). This could be achieved through treating residual waste from the remainder of the Councils’ areas, and/or providing a permanent solution for managing any products from the first project.

3.2 The first treatment facility will manage residual waste from Derby City and the south of Derbyshire.

3.3 The Councils have provisionally agreed that the capital costs for the first project (up to £50 million) can be raised by prudential borrowing. This project would thus comprise a Design, Build, Operate and Maintain (DBOM) contract.

4. Constraints

4.1 The existing contracts covering the services which will be procured are due to expire as follows:-

Derby City Council

- The existing waste disposal contract expires at the end of February 2008;
- Current HWRC Contract expires at the end of February 2008.

Derbyshire County Council

- The existing waste disposal contract expires at the end of March 2008;
- The existing HWRC Contract in respect of the Glossop site expires at the end of March 2008;
- Current HWRC Contracts for all other sites expire in 2010.

4.2 The Raynesway and Glossop facilities comprise joint HWRC sites and transfer stations. There is thus a link between these services at these sites.

4.3 The County Council is in the process of procuring composting facilities at Buxton and Chesterfield:

- The Chesterfield site may also be large enough for a transfer station. However, provision of and operation of a transfer station would not be undertaken through the composting contract; rather consideration will be given to making land available to bidders of this procurement process.
- The Buxton facility will offer an HWRC and transfer station as well as a composting facility, all of which will be

managed by the composting contractor for a period of about 15 years.

4.4 There is only one transfer station covering Derby City and the south of Derbyshire. This facility (at Raynesway) is owned by the County Council but leased to WRG on a long-term basis.

4.5 Based on the project timetable, the earliest likely date of award for the first treatment contract is the end of 2007.

4.6 In the current waste market, as confirmed in the soft market testing, bidders with landfill have a preference for landfill services to be included within the contract, whereas technology providers with no access to landfill prefer it not to be. Due to the existing limited appetite for waste projects, it is considered that bids should be sought on a basis which could attract both types of organisation.

4.7 Residual waste from the north of the County will need to be landfilled up until the second treatment plant is built.

4.8 There are a number of commercial and practical synergies between waste treatment and disposal services:

- If waste treatment and disposal services are being provided at the same time, then decisions need to be made regarding the waste to be treated and the wastes to be disposed of;
- There may be a need to transport waste from delivery points to treatment or disposal facilities;
- There is likely to be a requirement to dispose of residues from any treatment process;
- If a treatment project is delayed, commercial incentivisation and continuity of service is easier to provide with a single provider;

5. Strategic Partnering

5.1 There is significant potential for a large number of services to be delivered by a single contractor.

5.2 The Councils are keen to ensure close co-operative working arrangements between themselves and their contractor, including "early contractor involvement" in the development of new facilities and services.

5.3 In addition, the Councils will want to deliver a second treatment facility in order to implement the remaining strands of their waste management strategy, and recognise that there are likely to be synergies between the various phases of waste treatment.

5.4 These elements could all be wrapped together through a strategic partnering agreement which:

- Defines the framework within which the parties will work together in partnership;
- Establishes a mechanism through which the strategic partner conceives and designs the second treatment project;
- Allows the Councils to procure this second treatment project through a new contract with the strategic partner.

5.5 The Councils are thus proposing that the provision of the services is provided through a long-term strategic partnership agreement, defining the methods through which the parties will work together to implement the waste management strategy, achieving agreed outputs and developing new facilities which may be required.

5.6 There are a number of potential risks associated with such a provision:

- Although now widely used in other sectors, this is a relatively innovative approach in the waste industry. There is thus a risk that the Councils are not confident that there is a strong "cultural fit" with the contractor in which case the Councils would not wish to be bound to enter into a strategic partner agreement;
- A single contract for the whole services may suppress bidding appetite from those companies who are not able to offer landfill.

- If the award of the contract is delayed for any reason, there will be a need for the Councils to make interim arrangements for waste disposal services;

5.7 These issues will be addressed through a twin-track procurement process in which the Council gives itself the option to more than one contract with different contractors to deliver various elements of the service, as set out in the following sections.

6. Twin-track procurement process

6.1 The intention of a twin-track contract process is to provide the Councils with the flexibility of issuing either:

- one “all-encompassing” Main Contract covering waste reception, transfer, treatment, disposal and HWRC management; or,
- several contracts, whereby waste disposal services would be removed from the main contract and form the basis of the second contract.

6.2 This process would provides bidders with the option of tendering for the Main Contract including or excluding disposal or for a disposal only contract. Further details of the coverage of the OJEU notice is detailed below.

6.3 The ISOP stage of the procurement process will then be used to assess the preferred approach:

- If there are a number of strong bids for the Main Contract including disposal then the procurement process will move forward based on provision of all services through a strategic partnership structure.
- If there are ongoing concerns regarding timescales and/or competition, the twin-track procurement process would continue.

6.4 This arrangement will provide the flexibility to ensure that there is a waste disposal contractor appointed should the treatment contractor either fail to deliver or is delayed in delivering the treatment facility.

6.5 If two separate contracts are procured, this may result in potential interface problems between contractors which would need to be defined in the context of the specific services offered by each contractor. The likely scope of a twin contract structure is set out in Table 1 at the end of the document.

7. Residual Waste Treatment

7.1 To ensure that the Councils are able to procure a residual waste treatment facility that is aligned to the needs of the south of the County for the first stage project, key data covering the parameters of treatment need to be known. This includes:

- Specification of feedstock (quantity and composition);
- Capacity of facility in tonnes per annum;
- When the facility need to be operational from;
- Dates the diversions/targets take effect from;
- Performance of the facility in relation to BMW diversion;
- Production of and markets for end products as a result of the treatment process;
- Geographic divide of the County to provide feedstock to the treatment plants in the south (and north) of the county.

7.2 Logistics in relation to moving waste around will not be known until sites for the treatment facility and disposal arrangements are proposed.

7.3 The Main Contract is likely to be of long duration. However, funding by the Council may provide the potential for shorter contract durations, and subsequent award of operating contracts. The OJEU needs to provide sufficient flexibility (say 10 to 30 years).

7.4 The Councils are keen to see some cost-effective recycling of waste from the Residual Waste stream. This is best achieved through specifying a modest level of recycling in the specification (say [5%]) with the cost-benefits of recycling higher quantities addressed through evaluation criteria.

8. Household Waste Recycling Centres

8.1 In terms of managing the Councils' HWRC contracts in the future, the Project Team decided that they should be included in the main treatment contract, as and when existing contracts expire, rather than being split into the two respective north and south treatment contracts.

8.2 The inclusion of HWRCs would demonstrate the importance of the overall recycling ambitions in the Joint Municipal Waste Management Strategy (JMWMS). The management of the HWRCs will also be put under the control of the main contractor, providing the opportunity for the main contractor to consider any transportation and waste transfer issues.

8.3 The inclusion of the HWRCs in the main contract would enable the performance of the HWRCs to be integrated into the overall performance of the main contract, thus allowing appropriate levels of performance incentives to be included.

8.4 Combination of these services would also allow the authorities to coordinate communications regarding these waste management services with the Contractor.

8.5 The County Council is proposing to develop a combined transfer station, HWRC and composting facility in Buxton. It is thus likely that operation of this facility, including transportation of wastes for treatment/disposal, will be undertaken by the composting contractor. This will introduce complexities into interface arrangements which will need to be comprehensively and consistently addressed in both contracts.

8.6 The County Council is also proposing to develop additional transfer stations and/or HWRCs at South Derbyshire, Matlock, Bolsover and Clay Cross. Development of these facilities will be undertaken separately by the Council. Initial operation (up to 2010) will be undertaken by the existing HWRC contractor. Operation of these facilities post 2010 will be delivered through this project. The County Council will need to ensure that it carefully specifies the precise nature of the facilities it will develop in order that bidders can price the scope of the operation and assume performance risk.

9. Disposal

9.1 If a separate waste disposal contract is procured, this needs to cover a wide range of potential scenarios:

- Interim services, resulting from a delay to the procurement process;
- Waste disposal in advance of the first treatment facility becoming operational;
- Disposal of residues from the treatment facility;
- Disposal of waste not sent for treatment at the first facility (e.g. from the north of the county);
- Disposal of residues from HWRCs.

9.2 The Disposal contract could thus have a duration ranging from a few months (for interim services) to 30 years, if disposing of residues from the treatment facility and the OJEU Contract Notice needs to be sufficiently flexible to accommodate these potential variances.

9.3 The ISOP stage needs to be carefully designed to identify, if any, the scope of services which would need to be delivered through a separate disposal contract (whilst maintaining appropriate competition in the main contract). A decision would then need to be made about the scope of disposal services included in ITN documentation.

9.4 The ISOP evaluation could lead to the disposal services not being progressed, with all services included in the main contract, and the OJEU Contract Notice must provide the flexibility for this. In this scenario, the disposal procurement process should be suspended rather than abandoned, as this then could be reactivated if an interim disposal contract was required.

Table 1

Services		**Main Contract**	**Disposal Contract**
Waste Reception at Delivery Points	Either	Included	Excluded
	Or	Included except for any residual waste direct-delivered to a disposal facility.	Included for direct-delivered residual waste only.
Transfer to treatment/disposal facilities.		Included	Excluded
DBOM for Waste Treatment		Included	Excluded
Management of waste treatment products		Included	Excluded
Management of waste treatment residues	Either	Included	Excluded
	Or	Excluded	Included
Disposal of Residual Waste before Treatment Commencement Date	Either	Included	Excluded
	Or	Excluded	Included
Disposal of Residual Waste not sent for Treatment	Either	Included	Excluded
	Or	Excluded	Included
Management of HWRCs		Included	Excluded
Management of Recyclables from HWRCs		Included	Excluded
Composting of Green Waste from HWRCs		Included	Excluded
Disposal of Residues from HWRCs	Either	Included	Excluded
	Or	Included except for any areas where disposal is separate.	Included for any separate areas.