

Core Strategy: Waste Management Further Issues and Options

City of Bradford Metropolitan District Council

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INTRODUCTION AND BACKGROUND

Background

This is the second Core Strategy Waste Management Issues and Options paper to be produced by The City of Bradford Metropolitan District Council (CBMDC).

It focuses on the strategic spatial Issues and Options for waste management across the District, feeding into the Core Strategy and Waste Management Development Plan Document (DPD) being undertaken by CBMDC.

The Vision for Waste Management

The first Core Strategy Waste Management Issues and Options paper (February 2007) consulted on a vision for waste management to be taken forwards in the Core Strategy and Waste Management Development Plan Document (DPD):

Bradford needs to take responsibility for the waste it generates, undertaking a step change in the way it manages its waste, through more sustainable waste management, moving the management of waste up

the waste hierarchy of: reduction; re-use; recycling and composting; using waste as a source of energy and only disposing of waste as a last resort. We should look to be self-sufficient in managing the waste we generate, locating facilities for the management of waste as close as possible to its place of production.

Why have a second Issues and Options Paper for Waste?

The need to consider the spatial Issues and Options for waste management is a result of further Government and the Planning Inspectorate advice on the waste management content of Core Strategies, which has emerged since the original Issues and Options for waste management were consulted on by CBMDC.

The Core Strategy will provide an approach for locating facilities for all types of waste arising across the District, however the focus here is on the major waste streams. All of the streams will be considered in detail within the Waste Management DPD to follow on from the Core Strategy.

Timetable

This document proposes the principles for identifying the most appropriate locations for waste facilities to be tested and included within the Core Strategy and Waste DPD. The timetable for this process, as set out in the Local Development Scheme, is:

- Detailed policies and proposals for Waste in the Core Strategy and Waste Management DPD will be generated as a result of this consultation, which in turn will be consulted on between June and July 2009.
- This will lead to the submission of the Core Strategy to the Secretary of State in 2009, and submission of the Waste Management DPD in Spring 2010.

We need your views to help us shape the direction of waste management in the Core Strategy and the Waste Management DPD.

Structure of Paper

This second Issues and Options paper has a number of sections, as detailed below:

The Need to Change – the background to the need to consider waste as part of a Core Strategy and the current policy position on dealing with waste including waste minimisation where possible

Waste Position in Bradford: Issues to Consider – the current scale and nature of waste arising across Bradford updating the position as presented in the first Waste Management Issues and Options paper.

Spatial Options and Key Questions – suggested broad locations for waste management facilities across Bradford to be tested in the Core Strategy and Waste DPD.

Next Steps – invitation to comment and call for potential sites to be considered in the Core Strategy and Waste DPD.

THE NEED TO CHANGE

What is waste?

Waste is defined as “...*any substance or object... which the holder discards or intends or is required to discard*¹”.

There are various types or categories of waste.:

- *Agricultural waste*: waste arising from a farm or market garden, including organic matter such as manure, slurry, silage effluent and crop residues, but also packaging and films, and animal treatment dips.
- *Commercial waste*: waste arising from wholesalers, catering establishments, shops and offices (in both the public and private sector).
- *Construction and demolition waste*: waste arising from the construction, repair, maintenance and demolition of buildings and structures.

- *Hazardous waste*: defined in European Law as those wastes included within the European Waste Catalogue because they possess one or more hazardous properties set out in the Hazardous Waste Directive.
- *Industrial waste*: waste arising from factories and industrial plants.
- *Municipal waste*: includes household waste and other waste collected by waste collection authorities.

This Issues and Options Report is primarily concerned with the management of Municipal Solid Waste, Commercial and Industrial waste, and Construction and Demolition waste. The forthcoming Waste DPD will also address issues relating to other types of waste including Hazardous and Agricultural waste arisings.

Changing climate for waste

As a country we continue to produce increasing amounts of waste. This is linked to both economic growth and increasing consumption by society, increasing the burden on existing methods of waste disposal. A lot of this waste which could have been re-used or recycled has been disposed of in landfills.

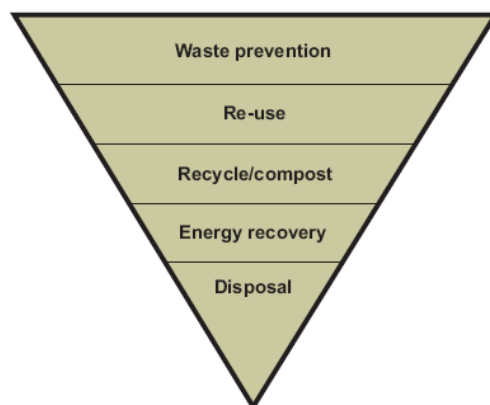
¹ Waste Framework Directive (WFD)

This position is changing, with people increasingly giving more thought to how we should be disposing of our waste in the most sustainable, environmentally friendly way, including a growing awareness of recycling.

The Government recognise the need to remove the direct link between economic growth (and household growth) and waste generation, putting more emphasis on waste prevention and re-use.

A waste hierarchy has been established which priorities waste prevention, but emphasises the need to take all available opportunities for re-use, recycling/ composting and energy recovery of those wastes which cannot be eliminated before final disposal is considered.

Figure 1: The Waste Hierarchy



Source: DEFRA, Waste Strategy, 2007

The need to promote sustainable development is central to planning policy at national, regional, and local levels. Within Waste Planning Policy an emphasis is placed on delivering sustainable development through driving waste up the waste hierarchy, and providing frameworks which allow communities to take responsibility for their own waste, through the provision of sufficient and appropriate waste management facilities to meet their needs.

The importance of positive planning for the delivery of sustainable waste management is recognised within Planning Policy Statement 10: *Planning for Sustainable Waste Management (PPS10)*. The planning system is responsible for providing sufficient opportunities for new waste management facilities of the right type, in the right place and at the right time. PPS10 specifically recognises that waste should be treated as close to its source as possible, bearing in mind other considerations such as environmental issues, accessibility, and nearby land uses (including housing). This is an important consideration for Bradford, which currently exports the majority of its waste to landfills outside of the District and has some significant environmental constraints.

The Regional Spatial Strategy (RSS) for Yorkshire and Humber (adopted May 2008) contains specific policies relating to waste management. It recognises that, whilst significant progress has been made in terms of

Municipal Solid Waste recycling rates, Yorkshire and Humber remains one of the worst performing regions in terms of recycling and recovery; a situation which it considers to be unacceptable. In order to improve the situation the RSS stresses the importance of adopting strategies across the region to avoid waste production, recover value from the waste that is produced, and only dispose of the residual proportion that has no value. The need to accelerate the rate of investment in new waste facilities and initiatives, specifically relating to municipal solid waste arisings, is particularly emphasised.

Identifying broad locations for waste facilities

PPS10 requires that sites and/or areas that may be suitable for new or enhanced waste management facilities must be identified within DPDs to support the pattern of waste management facilities and waste apportionments set out in the RSS. It sets out general principles for the allocation of sites or areas, with a focus on providing opportunities for the management of waste where it arises and the need to consider a broad range of locations including industrial sites, looking for opportunities to co-locate facilities together or with complementary activities.

In testing the suitability of sites and areas for waste management facilities, DPDs should apply the following criteria:

- The extent to which the use of the site for waste management supports the policies in PPS10;
- The physical and environmental constraints on development, including existing and proposed neighbouring land uses;
- The cumulative effect of previous waste disposal facilities on the well-being of the local community, including a significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential; and
- The capacity of existing and potential transport infrastructure to support the sustainable movement of waste, and products arising from the resource recovery, seeking when practicable and beneficial to use modes other than road transport.

Policy ENV14 of the RSS sets out strategic location requirement for waste management facilities and emphasises that waste should be managed on the site where it arises, or if not possible at the nearest appropriate location. The RSS sets out the following priority order for the identification of sites for waste management facilities:

1. Established and proposed industrial sites which have potential for the location of waste management facilities and the co-location of complementary activities, such as “resource recovery” or “sustainable growth” parks

2. Previously developed land, including mineral extraction and landfill sites during their period of operation for the location of related waste treatment activities in sustainable locations

3. Redundant farm buildings and their curtilages

In preparing this Issues and Options Report further thought has been given to additional sustainability criteria that could be applied for potential waste management sites within the Core Strategy. This includes the following headline themes:

- Energy and resources: sites should allow the potential to ensure recovery of energy from waste including suitability for technologies that increase the re-use, recycling, and recovery of waste.
- Climate change: waste sites should encourage the reduction of emissions (from both movement of waste and treatment of waste).
- Air, soil and water quality: sites should be well located to safeguard and if possible improve air, water and soil resources including the reduction of negative external effects (flood risk, noise and dust, unstable land, water resources, etc).
- Natural and man-made assets: waste sites should offer opportunities to conserve and enhance biodiversity and the character of natural and man-made landscapes. Potential for

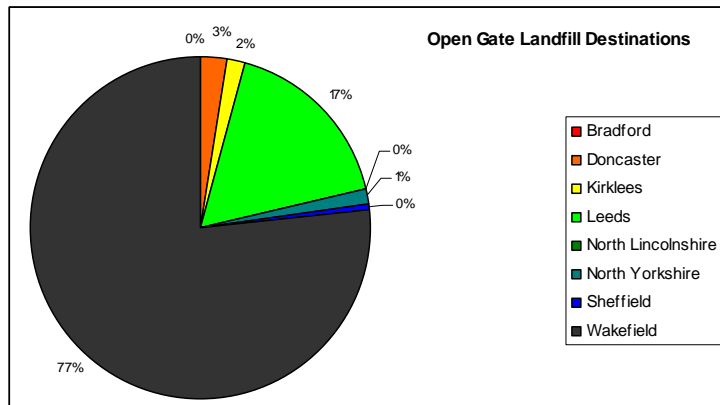
design-led solutions to improve the development should be considered.

- Accessibility and transportation: sites should be in the right locations to serve current and future population. Consideration should be given to reducing distances travelled to treatment sites, minimising nuisance caused to communities caused by waste transport, and the suitability of the road network used to access the site.
- Land use: proposed development in the nearby area and existing adjacent uses should be key considerations when testing sites, including potential impact on existing settlements.
- Community: sites should not harm human health, amenity or safety, or adversely affect nearby communities. Issues including potential odours, vermin and birds, noise and vibration, and litter should be considered.
- Culture, leisure and recreation: waste sites should be considered in the context of needing to conserve open spaces and other green infrastructure for recreation.
- Local economy and employment: waste sites should offer sufficient waste treatment/ disposal capacity to support local economic growth.

At this stage it is important to identify broad locations and possible directions that may be appropriate for waste management facilities in the future. These should reflect the scale and nature of growth which is going to take place across Bradford over the next fifteen years. This direction of growth is set out in more detail within the emerging Local Development Framework (LDF) Core Strategy DPD.

Bradford currently exports a significant amount of the municipal waste it generates to other locations to be disposed of in three types of facility: Open Gate Landfill, Treatment Plant, and Materials Reclamation Facility.

Figure 2: Open Centre Landfill Destinations

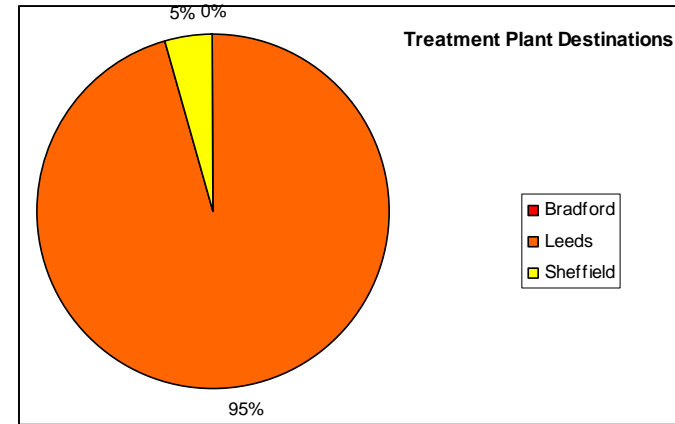


Source: RATS Dataset, 2005

Bradford exports over three-quarters of its landfill waste to Wakefield at the current time. Only 0.1% is sent to landfill sites in Bradford.

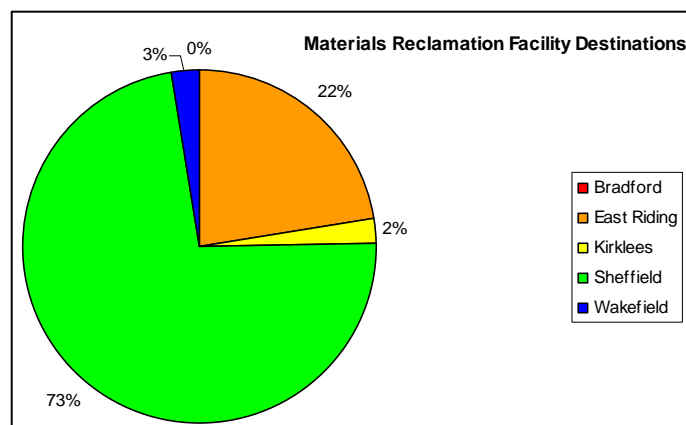
95% of Bradford's waste destined for treatment plants is exported to Leeds. Only 0.1% is treated within Bradford.

Figure 3: Treatment Plant Destinations



Source: RATS Dataset, 2005

All waste sent for reclamation is currently exported from Bradford, with over 70% sent to Sheffield.

Figure 4: Materials Reclamation Facility Destinations

Source: RATS Dataset, 2005

Through the forthcoming Waste Management DPD and other Core Strategy policies Bradford are attempting to both reduce the level of waste generated, and deal with its own waste within the City boundaries, rather than rely on exporting it as it does currently. Although detailed information is not currently available on the geography of waste arising across Bradford it is assumed that the majority is generated within the urban areas.

The future spatial direction for growth and development across Bradford, as outlined in the Core Strategy Issues and Options Paper, suggests a

future spatial framework which is focused on Bradford City Centre, Keighley, and potentially Ilkley as the main locations for development.

Headline Search Criteria

The search for sites is part of the overall approach to waste management adopted by the Council which seeks to drive waste management up the waste hierarchy, prioritising re-use, reduction and recycling. As part of this strategy new or enhanced waste management facilities will be required within the district to improve waste recycling and energy recovery rates. The following headline search criteria are proposed for sites for such facilities.

- Existing and anticipated pattern of waste arisings – essentially considered to be focused on urban centres.
- Given the aspiration for reducing the movement of waste and heavy vehicle movements associated with most waste recovery or disposal sites the second filter should look to prioritise sites within 1km of the existing road network.
- A further filter should be environmental constraints, avoiding certain sensitive areas for waste management uses in the future, but

allowing for the possibility of locating facilities within minerals extraction and landfill sites or redundant agricultural buildings which may be located within sensitive areas..

- The scale of waste, which needs to be managed in the future across Bradford is considered in the next section.

WASTE POSITION IN BRADFORD: ISSUES TO CONSIDER

Background

The previous Core Strategy Topic Paper 8 introduced a series of “issues and options” relating to waste management across Bradford (February 2007). Given the period of time since the publication of that document and this report, these issues have been updated to reflect the more recent position where new data is now available.

This updated position is presented in the remainder of this section. The options relating to these issues have largely been consulted on, with the options presented in this report relating more to *where* waste management facilities should be located across Bradford in the future.

The Current Position

The Core Strategy and forthcoming Waste DPD will consider the scale of current and predicted future levels of waste generation, which must be accommodated over the next fifteen years. The scale of waste arising across Bradford was considered in the first Waste Management Issues and Options paper, with updated figures, where available, presented in this second Issues and Options paper.

The Core Strategy and forthcoming Waste DPD will considered all types of waste generated across Bradford including municipal, industrial and commercial, construction and demolition, hazardous, and agricultural waste arisings. This Issues and Options paper is primarily concerned with:

- Municipal (household waste, trade waste and the waste collected at the Household Waste Recycling Centres)
- Industrial and Commercial (waste produced in factories, shops, and offices)
- Construction and Demolition (waste produced through the building of new developments)

Municipal Waste Arisings

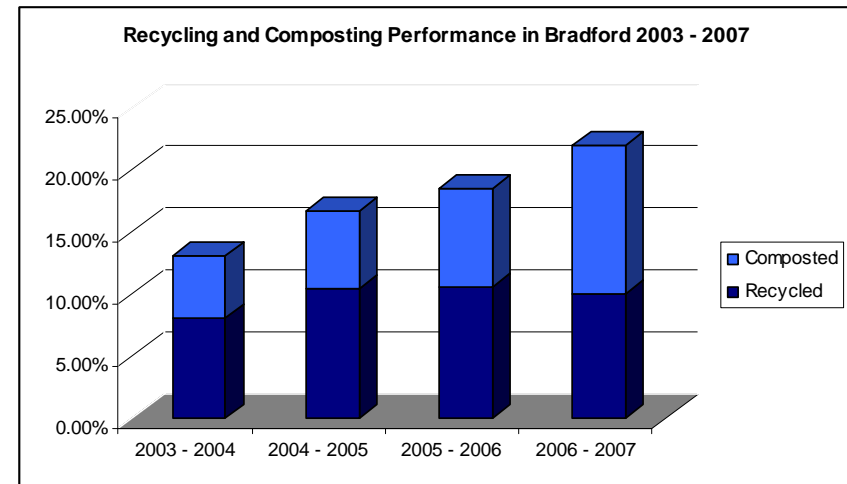
The most recent data suggests that Bradford District generates around 275,000 tonnes of **municipal** waste annually (based on 2007 figures).

The majority of this is disposed of in landfill sites outside of the District via Waste Transfer Stations at either Keighley in the north or Bradford City in the south. The waste is then bulk loaded and transported via road to one of a number of landfill sites located outside of the District boundary.

A dedicated Waste Education Office has been set-up, and practical waste recycling has been promoted in over 130 schools across the District.

There has been a continued improvement in the amount of municipal waste that is being recycled across Bradford District in recent years, with around 20% being recycled in 2006/7.

Figure 5: Recycling and Composting Performance in Bradford



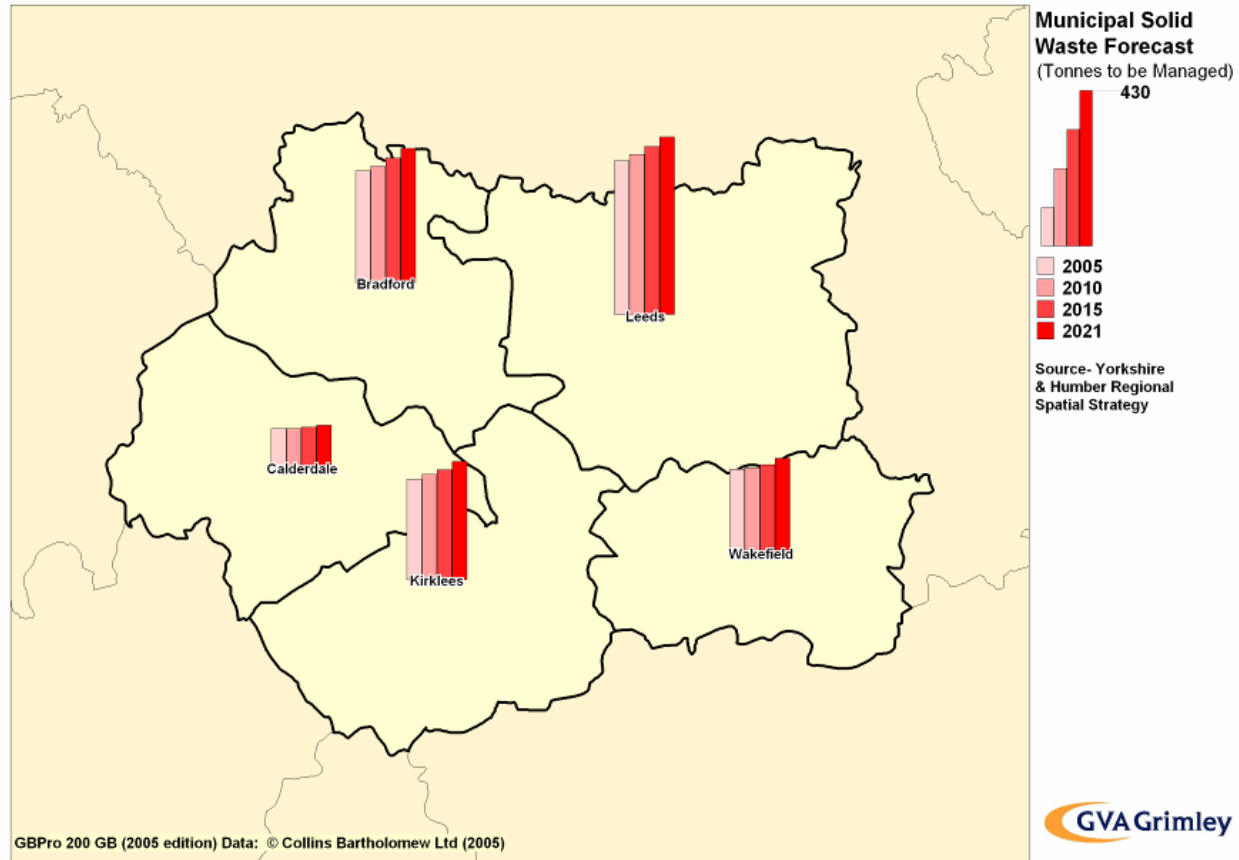
Source: BMDC Outline Business Case PFI Credit Support for Waste Treatment Services (2007)

It is expected that around 25% of municipal waste will be recycled across Bradford District in 2008. CBMDC's target is to increase this to 50% by 2020.

There are currently eight Household Waste Recycling Centres (HWRC) across Bradford District, which handle just under a quarter of municipal waste arising.

- By 2010, 279,000 tonnes of municipal solid waste will need to be managed across Bradford District.
- By 2015, 296,000 tonnes of municipal solid waste will need to be managed across Bradford District.
- By 2021, 318,000 tonnes of municipal solid waste will need to be managed across Bradford District.

Figure 6: Municipal Solid Waste Forecast



Source: GVA Grimley Ltd adapted from Yorkshire and Humber Regional Spatial Strategy

Bradford has both interim and long term strategies for meeting the targets set out in relation to municipal solid waste. These are set out in the Bradford Municipal Waste Strategy and Outline Business Case PFI credit support for waste treatment services:

Short term (interim)

- Continuing the waste awareness campaign, the planned expansion on the number of households offered kerbside recycling and the range of recycling collected; and
- Seeking a short-term contract for mixed waste to generate a recyclable product (e.g. for land reclamation)

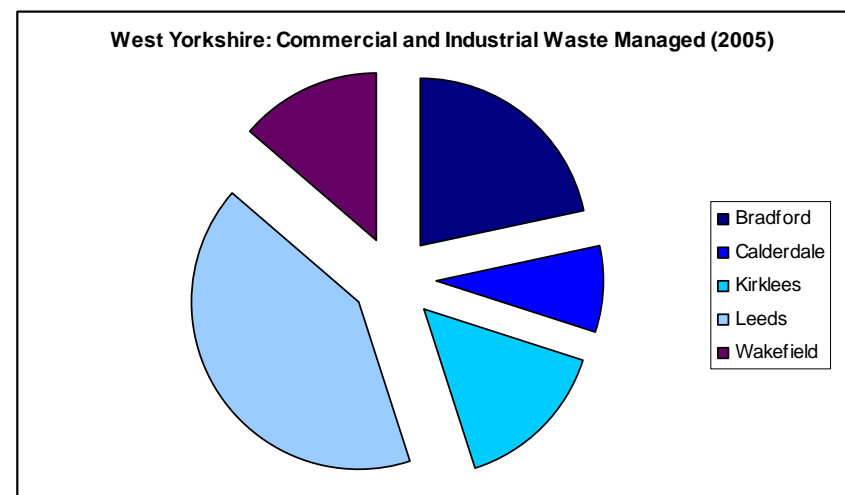
Long term

The long term proposal includes a contract to deliver a step-change in the management of municipal waste, up the waste hierarchy and away from landfilling with a start date of 2010-12 at the latest, with a contract period of 25 years.

Commercial and Industrial Waste Arisings

Comprehensive information on the scale of **commercial and industrial** waste produced is limited at a level below sub-region (in the case of Bradford District, across West Yorkshire).

Figure 7: West Yorkshire Commercial and Industrial Waste Managed



Source: GVA Grimley Ltd adapted from Yorkshire and Humber Regional Spatial Strategy

The RSS states that around 625,000 tonnes of commercial and industrial waste is managed across the Bradford District annually (based on figures from 2005). This makes it the second largest producer of this type of waste within the sub-region, only behind Leeds.

The current waste management processes for commercial and industrial waste arising within Bradford are not known in detail although, at West

Yorkshire level, the following examples of failures to drive commercial and industrial waste up the waste hierarchy are recognised:

- Circa 105,000 tonnes of compostable waste (kitchen and paper) is disposed of in general waste skips;
- Circa 29,000 tonnes of cardboard is disposed of in general waste containers; and
- Circa 30,000 tonnes of recyclable paper is not recycled.

Indeed, West Yorkshire is highlighted as being the worst performing sub-region within Yorkshire and Humber in terms of compostable wastes being deposited in general waste skips, and the second worst performing in terms of cardboard being deposited in general waste containers.

There are ten sites across Bradford District that manage the disposal of commercial and industrial waste arisings. Eight are located to the south of the District, in and around the City of Bradford area, and two to the north in the Keighley / Bingley area.

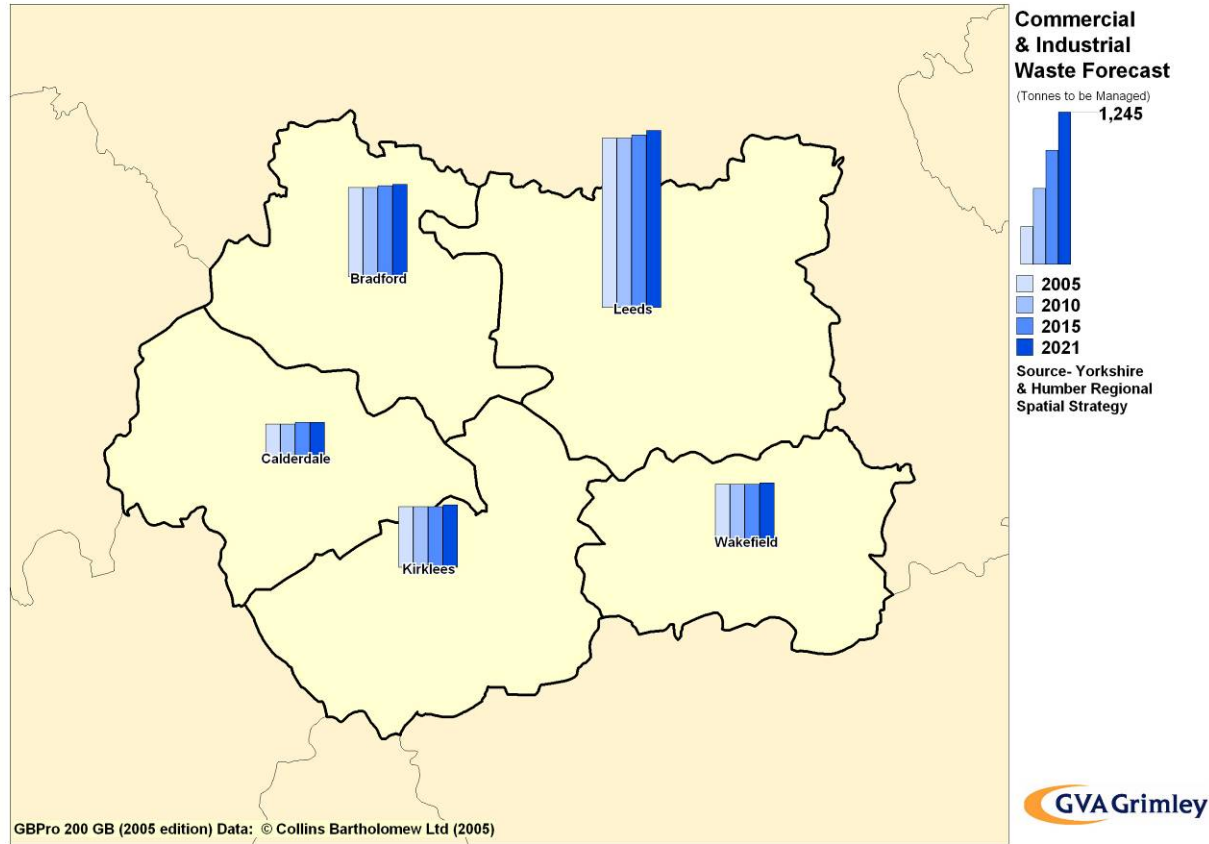
The majority of these sites are Waste Transfer Stations where the waste is sorted, certain materials are separated for recycling, and residual waste is transferred to landfill sites outside of the District.

In addition to the ten general commercial and industrial waste management facilities there are four specialist waste sites which

undertake activities including rendering and incineration; two are located within the City of Bradford area, and two to the east of the District in the Thornton / Harecroft area.

- By 2010, 628,000 tonnes of commercial and industrial waste will need to be managed across Bradford District.
- By 2015, 638,000 tonnes of commercial and industrial waste will need to be managed across Bradford District.
- By 2021, 649,000 tonnes of commercial and industrial waste will need to be managed across Bradford District.

Figure 8: Commercial and Industrial Waste Forecast



Source: GVA Grimley Ltd adapted from Yorkshire and Humber Regional Spatial Strategy

Construction and Demolition Waste Arisings

The level of **construction and demolition** waste currently being generated at the regional, sub-regional, or local (district) level is not stated within the RSS, although the previous Waste Management Issues and Options paper stated that Yorkshire and Humber currently produce up to 12,001,800 tonnes annually.

Draft RSS does however set out the intended growth of Bradford's economy and population, which will require the development of new homes and business premises. There will be additional construction and demolition waste produced as a result of this growth, and although direct recycling on construction sites is encouraged there is still likely to be an increased pressure on existing facilities for construction and demolition waste which currently includes eight management sites (with most being transfer sites). The management sites are currently focused to the south of the District, in and around the City Centre, with one to the north in the Keighley area.

Other Waste Arisings

The forthcoming Waste DPD will consider all types of waste including waste arisings not detailed within this Issues and Options paper. Through the Waste DPD preparation and consultation process further

consideration will be given to issues such as locations for hazardous and agricultural waste management facilities in the future.

Conclusions

Capacity for treatment and recovery of municipal and commercial and industrial waste in West Yorkshire needs to double by 2020. Even allowing for the successes of strategies to encourage waste reduction through promoting the waste hierarchy, there remains a need to plan for increased and enhanced waste treatment capacity within the Bradford district to allow Bradford to take more responsibility for its own waste, encourage a step change towards more sustainable waste management and to accommodate a projected increase in future waste arisings due to economic growth. **We need your views on how best to plan for new and enhanced waste management facilities with the district.**

Waste Management Facility Requirements

The table in Appendix 1 sets out the requirements (in site terms) of different types of waste management facility. Within the Core Strategy and forthcoming Waste Management DPD these requirements will be used as a further filter for potential sites considered.

OPTIONS AND KEY QUESTIONS

The previous Waste Management Issues and Options paper (February 2007) consulted on a number of key questions and options, as summarised below.

Previous key questions

- 8.1 How can the LDF promote waste minimisation and re-use?
- 8.2 How can the forthcoming Waste DPD help assist in the Bradford District reaching its recycling targets set by Government?
- 8.3 What additional waste management facilities are needed for the different types of waste that are produced in the Bradford District?
- 8.4 Are there any types of waste for which there are sufficient facilities?
- 8.5 In which areas of the Bradford District should these waste management facilities be located?
- 8.6 Should we identify the major waste facilities that may be required and allocate sites for these?

- 8.7 Should we have a site selection criteria as well as identifying the major waste facilities?

Representations were sought on the basis of the issues, key questions, and options for waste management in February 2007. **As a result additional consultation is not being sought on the key questions 8.1 to 8.7. Summaries of comments receive and event logs can be found on line at: www.bradford.gov.uk/ldf**

Further key questions and options to consider

In focusing on broad locations for waste management facilities across Bradford we have developed a number of additional key questions and options. **We would like your views on these additional key questions and options.**

- 8.8 When looking to identify potential locations for new waste management facilities should the Council?
 - Option 1: Expand existing facilities
 - Option 2: Identify new sites
 - Option 3: Both of the above maximising opportunity and need

It is important to consider where waste management sites should be located, specifically the need to consider environmental impacts of such development. PPS10 and the RSS are clear in identifying the need to have a balanced approach to ensure that waste management facilities can be accommodated without compromising environmental protection.

Figure 9 sets out the Strategic environmentally sensitive areas across the District, defined to include:

Historic heritage: World Heritage Sites, Historic Battlefield, Historic Parks and Gardens,

Natural environment: Green Belt, Special Protection Areas/SAC, Sites of Special Scientific Interest, Sites of Ecological and Geological Importance, and urban green space

Development in or adjacent to these areas would normally only be considered in special circumstances and where no detrimental impact would be caused.

Figure 10 sets out the existing strategic road network and urban areas, including a buffer of 1km around the strategic road network.

Figure 11 illustrates the 'Area of Search' identified following the application of these criteria (the white land shown on the plan). **It is within these Areas of Search that sites will be sought for waste management purposes.**

8.9 Do you agree with the indicative Area of Search for waste management facilities or not?

Option 1: Use areas of search as identified on Figure 11

Option 2: Use a different area of search using alternative criteria (see question 8.10 below)

Option 3: Do not identify area of search in the Core Strategy and rely on criteria policy only

8.10 Are the broad search criteria adopted in this paper appropriate?

Option 1: Remove existing road network and urban areas

Option 2: Remove environmentally sensitive areas

Option 3: Keep layers as they are

8.11 Are there any broad criteria that should be on the plan that are not, if so what?

8.12 Should there be exceptions to the indicative areas of search as shown on the Figure 11 (for example to allow for the development of waste facilities within quarries, landfill sites, redundant agricultural buildings, or other existing complementary land uses), if so why?

8.13 Should the distance from the strategic road network be 1km, another variable, or used less strictly as a preference rather than a constraint?

Option 1: 1km as it is

Option 2: Another variable (suggest)

Option 3: 1km used less strictly as a general preferred distance

Figure 9: Environmentally Sensitive Areas

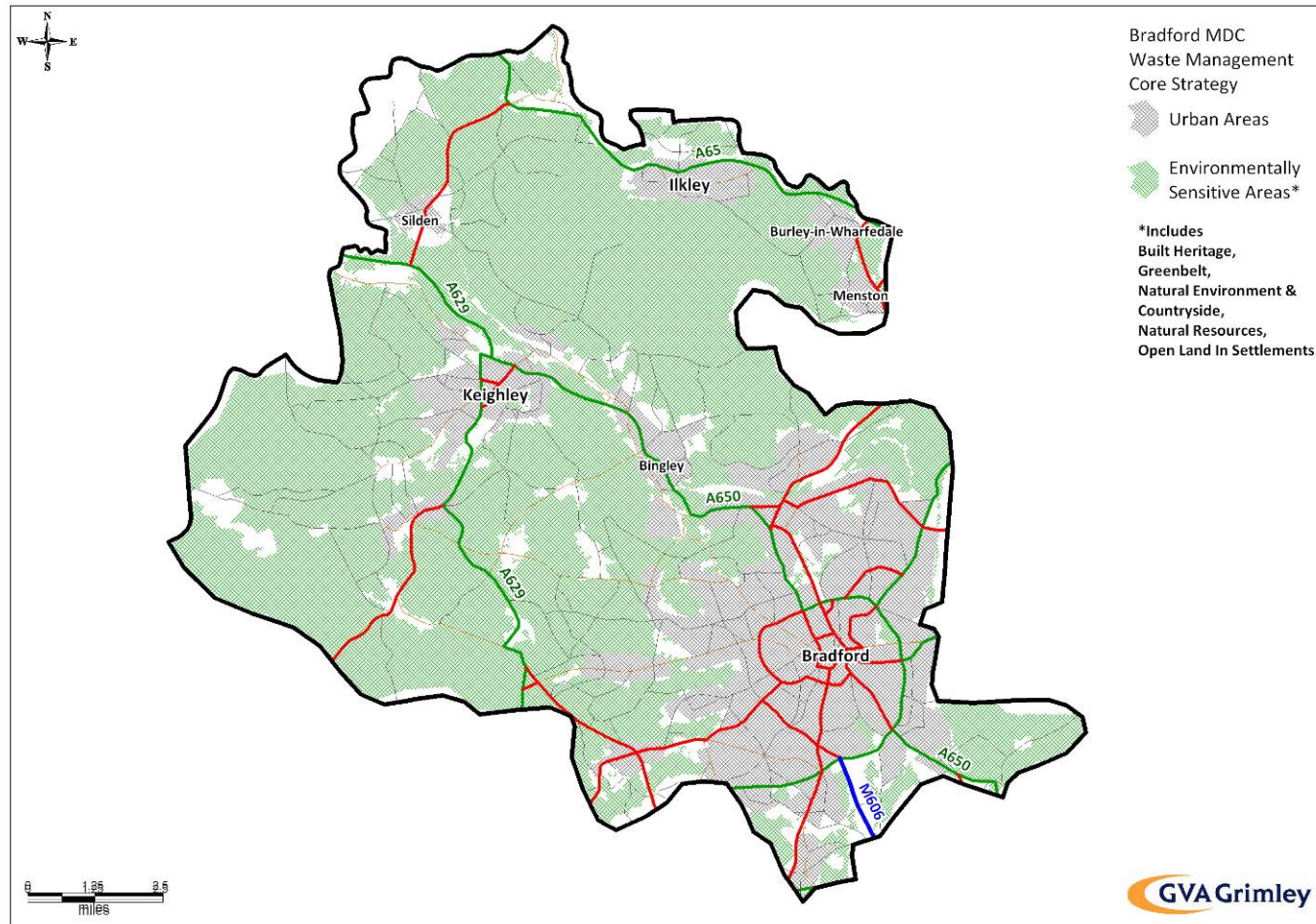


Figure 10: Strategic Road Network with 1km Buffer

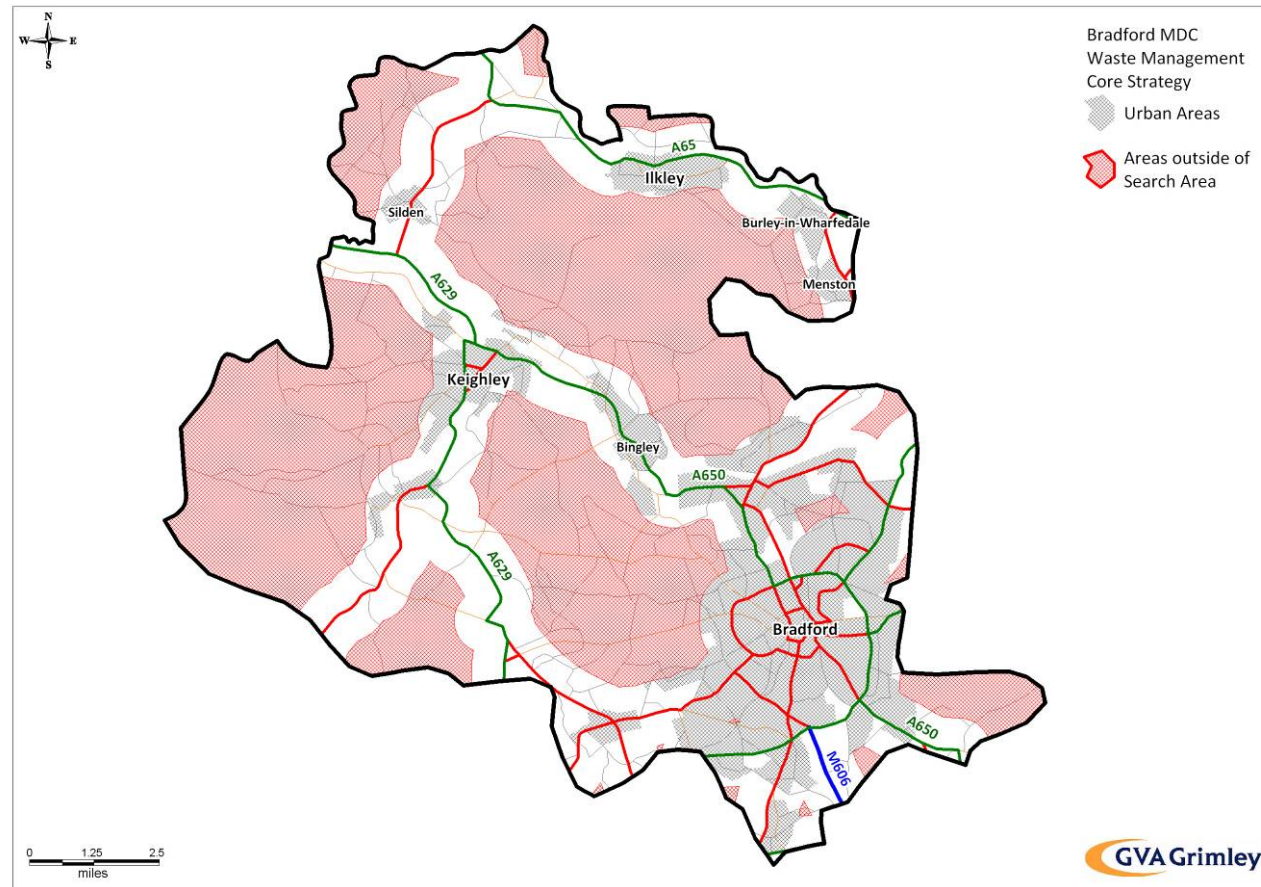
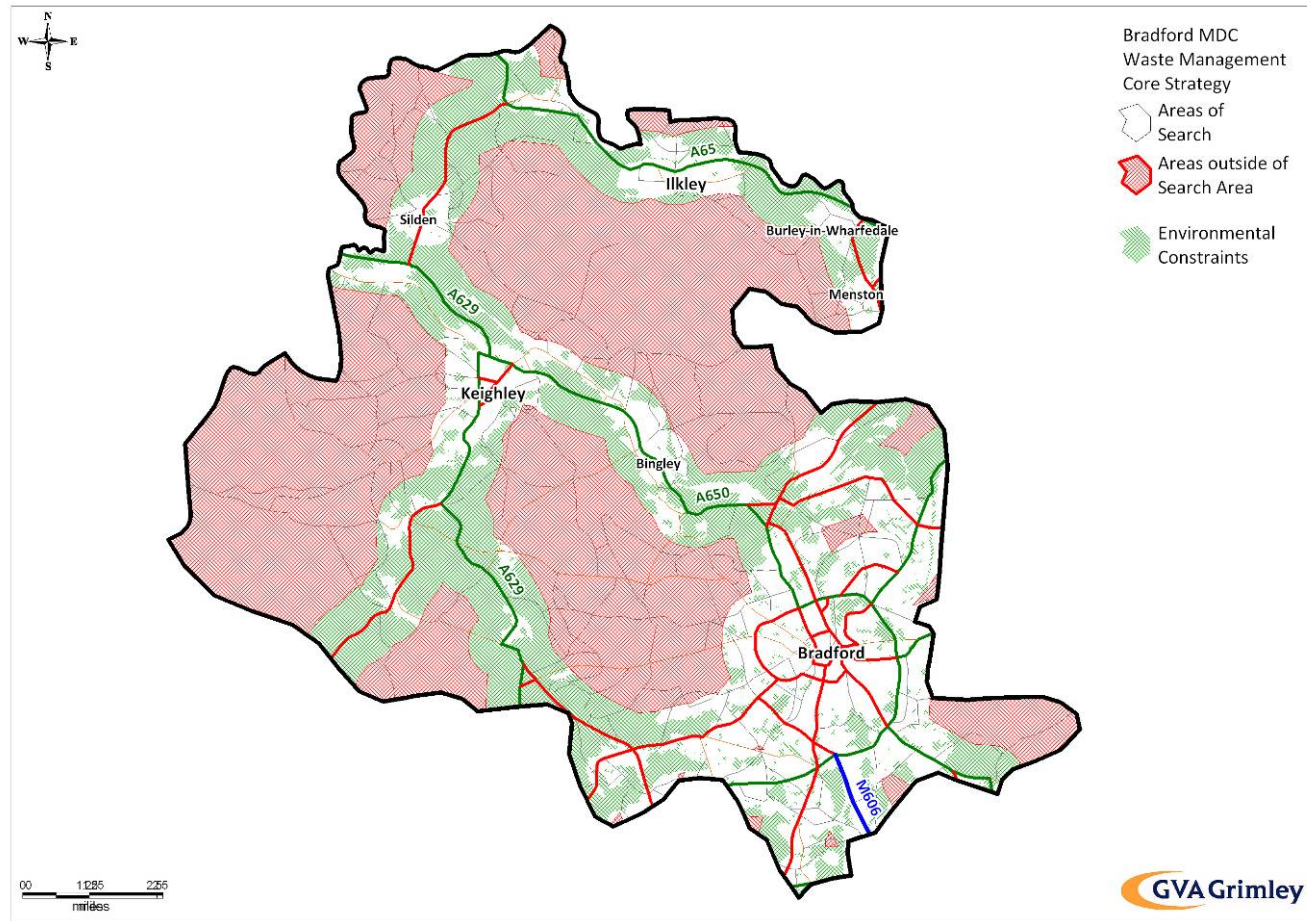


Figure 11: Potential Areas of Search



NEXT STEPS

We need to know what you think

The statutory consultation period to respond is 7 November 2008 to 12 December 2008.

Please send your comments to the following FREEPOST address:

Bradford Local Development Framework

FREEPOST NEA 11445

PO Box 1068

BRADFORD

BD1 1BR

Alternatively, comments should be marked Core Strategy Consultation and emailed to ldf.consultation@bradford.gov.uk or faxed to (01274) 433767.

Further copies of these documents can be downloaded from the Council's website via the Local Development Framework pages found at www.bradford.gov.uk/ldf. Hard reference copies are also available in the Council's planning offices at: Jacob's Well,

Bradford, and the Town Halls at Ilkley, Keighley and Shipley; or in the main libraries at Shipley, Bingley, Keighley and Bradford Central Library. In addition, hard copies will be made available on request from the LDF Group.

Call for sites

If you are a developer with an interest in waste management, or are a landowner who wishes your site to be considered as a possible location within the new LDF we need to hear from you.

If you do not put your site forward as part of this process it is unlikely that it will be considered for this use and it may make it difficult to receive planning permission for waste management proposals in the future.

Appendix 1: Waste Management Facility Land Requirements

Type of Facility	Typical Capacity (Tonnes Per Annum)	Land Requirements (Hectares)
Mechanical Biological Treatment (MBT)	25,000 to 200,000 (usually multiple modular units are used on larger sites)	0.9 to 2 for small facility (25,000 to 60,000 tonnes per annum), 3 to 4 for larger facility (up to 200,000 tonnes per annum)
Clean Material Reclamation Facilities	3,000 to 100,000	0.8 to 2
Dirty Material Reclamation Facilities	100,000 to 200,000	2 to 4
Energy from Waste Facility	60,000 to 600,000 (although typically 100,000 to 250,000)	Typically 2.5 to 3.5
Windrow Composting	50,000 (range from 2,000 to 100,000)	Approximately 2.5 to 5 for 50,000 tonnes per annum (additional space required for curing and stockpiling)
In-Vessel Composting	50,000 (range from 2,000 to 200,000)	Less land required for in-vessel composting than

		for windrow systems, the larger scale (200,000tpa) may require 5 to 6
Anaerobic Digestion	5,000 to 60,000 (modular facilities, larger capacity can be achieved by a number of digesters on one site)	Less than for windrow composting and waste-to-energy plants, depends on the process adopted. Estimated requirement is 1m ² per tonne, depending on technology employed.
Pyrolysis and Gasification	Typically 20,000 100,000 t (tend to be modular, so larger capacities may be achieved through multiples of facilities on one or more sites).	Typically 0.5 to 1.75 for a 50,000 to 60,000 tonnes per annum sized plant.