

# Waste Core Strategy

## for Worcestershire

ADOPTED WASTE LOCAL PLAN 2012-2027



**Worcestershire  
Waste Core Strategy  
Development  
Plan Document**

November 2012

Find out more online:  
[www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)



**worcestershire**  
county council

The **Waste Core Strategy** is a plan for how to manage all the waste produced in Worcestershire up to 2027.

This document, the Sustainability Appraisal and all the supporting evidence for the strategy are available on our website [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs).

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**This Local Plan was adopted on 15th November 2012.**

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## Foreword

by **Councillor Simon Geraghty**

Deputy Leader of the Council with responsibility for  
Economy & Infrastructure

Worcestershire County Council's Waste Core Strategy will guide our approach to planning for our county's waste management facilities until 2027.

This document is the result of exceptional professional expertise, extensive consultation and much hard work. I have great regard for the level of technical knowledge and understanding utilised by the team behind this strategy, whose skills are vital to our county's infrastructure, now and in the future.

I also acknowledge the volume of work involved and I'm grateful to the many people, businesses and organisations that put valuable time aside to take part in the multiple consultation exercises that have helped to ensure that all of our communities are represented by the strategy.

The result is much more than this document. The result is an ambitious and forward-thinking vision that will serve planners, waste management experts and – ultimately – the residents and businesses of our county for years to come. It reflects and complements many of the most important workstreams happening in Worcestershire today and will help to deliver the council's vision of a prosperous Worcestershire. It will help to ensure that Worcestershire is open for business and the environment is protected. It will act as a strong driver to achieve our waste management priorities, as well as wider economic development goals.

The facilities available to the county will play a critical role in achieving our ambitions of reducing, reusing and recycling as much of our waste as possible, while managing the disposal of anything that remains as close to its source we can, with the added potential of recovering energy.

At the same time, a successful strategy will support the local economy without compromising our local characteristics and distinctive environmental and cultural assets. It will protect and enhance the natural environment and biodiversity and will help to reduce greenhouse gases from how we manage waste.

It will show waste related businesses that they are welcomed in the county as part of the growing green economy. It will allow the waste management industry to be dynamic and respond to opportunities generated by other sectors, creating new employment opportunities, enhancing local economic resilience and contributing towards a low carbon economy.

Existing facilities will be safeguarded and new facilities will be resilient to, and help to mitigate, the effects of climate change. They will be well designed to complement their surroundings and minimise any adverse impacts.

For all of these reasons, I enthusiastically endorse our Waste Core Strategy. I believe that it will provide a sound basis for guiding decision making within our county and help to realise the benefits of sympathetic, relevant planning for all of the people, businesses and organisations that it has been designed to serve.



# Contents

## Foreword

<b>1. Introduction.....</b>	<b>1</b>
The purpose of the Waste Core Strategy.....	1
The scope of the Waste Core Strategy.....	2
The process.....	2
Key themes:.....	3
Waste Streams:.....	3
Waste Management Facilities:.....	4
Links with other plans and policies.....	4
<b>2. Spatial Portrait.....</b>	<b>7</b>
Environment.....	7
Economy.....	9
Transport.....	10
Climate Change.....	11
Waste Management.....	12
The vision and objectives.....	32
What will waste management in Worcestershire be like in 2027?.....	32
Where will new waste management infrastructure be developed?.....	33
When will the strategy be delivered?.....	34
How will the strategy be delivered?.....	38
<b>3. Presumption in favour of Sustainable Development.....</b>	<b>40</b>
Policy WCS 1: Presumption in favour of sustainable development.....	40
Explanatory text.....	41
<b>4. Managing waste as a resource.....</b>	<b>42</b>
Policy WCS 2: Enabling Waste Management Capacity.....	42
Explanatory text.....	44
Policy WCS 3: Re-use and Recycling.....	47
Explanatory text.....	47
Policy WCS 4: Other recovery.....	49
Explanatory text.....	50
Policy WCS 5: Landfill and disposal.....	52
Explanatory text.....	53



<b>5.</b>	<b>Location of new waste management development.....</b>	<b>58</b>
	Policy WCS 6: Compatible land uses.....	58
	Explanatory text.....	59
	Policy WCS 7: Development associated with existing temporary facilities.....	60
	Explanatory text.....	60
	Policy WCS 8: Site infrastructure and access.....	61
	Explanatory text.....	61
<b>6.</b>	<b>Ensuring sustainable waste management development.....</b>	<b>63</b>
	Policy WCS 9: Environmental assets.....	63
	Explanatory text.....	64
	Policy WCS 10: Flood risk and water resources.....	70
	Explanatory text.....	71
	Policy WCS 11: Sustainable design and operation of facilities.....	73
	Explanatory text.....	73
	Policy WCS 12: Local characteristics.....	76
	Explanatory text.....	76
	Policy WCS 13: Green Belt.....	80
	Explanatory text.....	80
	Policy WCS 14: Amenity.....	80
	Explanatory text.....	81
	Policy WCS 15: Social and economic benefits.....	82
	Explanatory text.....	82
<b>7.</b>	<b>Safeguarding existing waste management facilities.....</b>	<b>84</b>
	Policy WCS 16: New development proposed on or near to existing waste management facilities.....	84
	Explanatory text.....	85
<b>8.</b>	<b>Considering waste from all new development.....</b>	<b>87</b>
	Policy WCS 17: Making provision for waste in all new development.....	87
	Explanatory text.....	87
<b>9.</b>	<b>Implementation and Monitoring Framework.....</b>	<b>88</b>
	Implementation.....	88
	Deliverability.....	88
	Monitoring framework.....	104
	Monitoring schedule.....	105



<b>Appendix 1: Acronyms, abbreviations and glossary of terms.....</b>	<b>118</b>
Acronyms and abbreviations.....	118
Glossary.....	119
<b>Appendix 2: Superseded Saved Structure Plan Policies.....</b>	<b>126</b>
<b>Appendix 3: Habitats Regulations Assessment Figure.....</b>	<b>126</b>
<b>Annex A: Areas of Search.....</b>	<b>129</b>
<b>Annex B: Considering Flood Risk in Waste Management Development.....</b>	<b>132</b>



# 1. Introduction

## The Purpose of the Waste Core Strategy

- 1.1 Worcestershire County Council is responsible for making decisions on planning applications for waste management facilities in Worcestershire. This includes applications for facilities that handle, treat or dispose of waste<sup>1</sup>. Planning applications have to be determined in line with the Development Plan unless material considerations indicate otherwise.
- 1.2 The Waste Core Strategy is part of the Development Plan. It is a statutory Development Plan Document that applies to the whole of the county (see **Figure 1. Area of coverage**). The Development Plan is also made up of the Regional Spatial Strategy, Development Plan Documents and Local Development Documents prepared by the City, Borough and District Councils in Worcestershire. The National Planning Policy Framework is a material consideration in planning decisions and must be taken into account in the preparation of local and neighbourhood plans, including the Waste Core Strategy.
- 1.3 The Waste Core Strategy will be used by the County Council to determine applications for waste management development. The City, Borough and District councils in Worcestershire will also use it to make decisions on other types of planning applications that could have waste implications.
- 1.4 The Strategy will inform and guide waste management development by the private and public sector and will encourage and stimulate businesses involved in the recycling and re-use of resources.
- 1.5 Developers are encouraged to contact the Council before submitting planning applications for waste management development. This will help to ensure that appropriate consideration is given to the provisions of the Waste Core Strategy and the rest of the Development Plan in the development of proposals. This will help to make the determination of planning applications more efficient.
- 1.6 Worcestershire County Council's Waste Core Strategy will apply until 2027<sup>2</sup>. It supersedes the previous waste planning policies for Worcestershire which were set out in the 'saved' Structure Plan policies for waste (see **Appendix 2**).

1 The Town and Country Planning (Prescription of County Matters) (England) Regulations 2003 set out that the County Council as the Waste Planning Authority is responsible for applications for "the use of land, the carrying out of building, engineering or other operations, or the erection of plant or machinery used or proposed to be used, wholly or mainly for the purposes of recovering, treating, storing, processing, sorting, transferring or depositing of waste" and any operations or uses ancillary to the purpose.

2 This will cover a 15 year period from adoption, in line with national policy.



## The Scope of the Waste Core Strategy

- 1.7 The Waste Core Strategy sets out a long term vision for waste management in Worcestershire to 2027. This vision integrates economic, social and environmental aims and responds to local issues. Detailed objectives have been developed to help guide the realisation of the vision. These objectives direct the policies and form the basis of the monitoring framework.
- 1.8 The Strategy predicts how much waste is likely to be produced, how much capacity will be needed to manage it and when. It also sets out a Spatial Strategy for where new facilities will be located.
- 1.9 These predictions are based on the best available data, but the quantity, composition and source of waste are likely to change over the life of the Strategy, as are technologies used to manage waste. The Waste Core Strategy is therefore designed to be flexible and technology neutral.
- 1.10 It provides for all the following kinds of Directive Waste<sup>3</sup> produced in, or imported into, Worcestershire:
- Commercial and Industrial (C&I) Waste<sup>4</sup>,
  - Construction and Demolition (C&D) Waste,
  - Municipal Solid Waste (MSW)<sup>5</sup>,
  - Hazardous Waste<sup>6</sup>, and
  - Waste water.

All policies will apply equally to all of these waste streams. The Waste Core Strategy does not address non-Directive Agricultural Waste, such as crop residues and animal dung where they are managed on the farm holding where they originated, or mineral waste where

this is dealt with within the quarry or gravel pit where it is produced.

- 1.11 Implementation of the Waste Core Strategy will be monitored annually throughout its lifetime.

## The Process

- 1.12 The Waste Core Strategy has been shaped in consultation with communities, businesses and other organisations. Formal consultation was undertaken on the *Refreshed Issues and Options report* in September – December 2008, the *Emerging Preferred Options report* in November 2009 – February 2010 and the *First Draft Submission Consultation* in September – November 2010, and more informal targeted consultation has been undertaken throughout. Almost every waste management facility in the County has been visited during the preparation of the strategy to ensure that local issues are understood.
- 1.13 Full details of the consultations undertaken and the ways in which comments were taken into account can be found in the *Summary of Waste Core Strategy Pre-Submission Consultations (Regulation 30) Document*, which is available on the Council's website [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs).

3 Waste as defined under *Directive 2008/98/EC of the European Parliament* "waste" means any substance or object which the holder discards or intends or is required to discard.

4 Including agricultural waste.

5 The reviewed Joint Municipal Waste Management Strategy deals with how municipal waste should be managed. The Waste Core Strategy sets the policy framework by which all waste management facility developments must be assessed, including those brought forward from the reviewed Joint Municipal Waste Management Strategy.

6 Including clinical and radioactive waste. The policy for most radioactive waste is dealt with at national level.



**1.14** Interim Sustainability Appraisals (SA) have been undertaken at Refreshed Issues and Options, Emerging Preferred Options and First Draft Submission stages, a full Sustainability Appraisal was published alongside the *Waste Core Strategy Publication Document*<sup>7</sup> and further assessment accompanied the *Addendum to the Submission Document*<sup>8</sup>. The SA and Habitats Regulation Assessment<sup>9</sup> (HRA) have shaped the process throughout<sup>10,11</sup>, informing the formulation of policy and the development of the monitoring schedule.

**1.15** The Waste Core Strategy has also been informed through a set of background documents prepared by the County Council (see below) and the evidence base for the West Midlands Regional Spatial Strategy proposed Phase 2 revision:

**Key themes:**

- Towards a Vision Statement
- What is Worcestershire like now and how is it likely to change? Spatial Portrait
- Developing the Spatial Strategy
- Industrial Estates Study (ERM)
- Arisings and Capacity
- Climate Change and Waste Management in Worcestershire
- Links with Districts & Neighbouring Local Authorities Plans and Strategies
- Waste Sites in Worcestershire
- Monitoring Framework: Establishing a baseline
- Inland Waterways and Waste
- Waste Freight by Rail

**Waste Streams:**

- Municipal Waste
- Commercial and Industrial Waste
- Construction and Demolition Waste
- Agricultural Waste
- Hazardous Waste
- Waste Arisings from Healthcare and Related Activities: Clinical Wastes and Low Level Radioactive Wastes

7 *Sustainability Appraisal of Worcestershire Waste Core Strategy Submission Document - March 2011*  
 8 *Sustainability Appraisal of the Waste Core Strategy Submission Document Addendum - September 2011*  
 9 *Habitats Regulations Assessment of the Waste Core Strategy for Worcestershire : August 2009, February 2011, Addendum September 2011, Record of Screening Decision November 2011. Assessment of the Implications of the Proposed Changes to the Submitted Waste Core Strategy made following the Waste Core Strategy examination hearings on the Record of Screening Decision – 5<sup>th</sup> April 2012, Record of Screening Decision – updated 5<sup>th</sup> April 2012, and Statement on implications of "Policy WCS Additional: Presumption in favour of sustainable development" on Sustainability Appraisal and Habitats Regulations Assessment.*  
 10 *Initial Sustainability Appraisal of Issues and Options for Waste Core Strategy for Worcestershire: April 2009*  
 11 *Sustainability Appraisal of Emerging Preferred Options for the Waste Core Strategy for Worcestershire: November 2009, Waste Core Strategy First Draft Submission Report Interim Sustainability Appraisal - September 2010. Sustainability Appraisal of the Worcestershire Waste Core Strategy Submission Document. Sustainability Appraisal of the Worcestershire Waste Core Strategy Submission Document Addendum – September 2011. See also Review of Sustainability of the Proposed Changes to the Worcestershire Waste Core Strategy – March 2012, and Statement on implications of "Policy WCS Additional: Presumption in favour of sustainable development" on Sustainability Appraisal and Habitats Regulations Assessment. Final Sustainability Appraisal of the Waste Core Strategy for Worcestershire Local Plan – August 2012.*



## **Waste Management Facilities:**

- Types of Waste Management Facilities
- Landfill
- Metal Recycling
- Waste Transfer Stations and Material Recovery Facilities
- Resource Recovery from Biodegradable Waste: Composting and Anaerobic Digestion
- Recovering Energy from Waste: Biological and Thermal Treatment Technologies
- Waste Water Treatment Infrastructure

## **Links with other plans and policies**

**1.16** The Waste Core Strategy should be read as a whole and alongside other relevant European, National, Regional and local policies. Government policy requires that the Waste Core Strategy should accord with but not repeat or reformulate national policy.

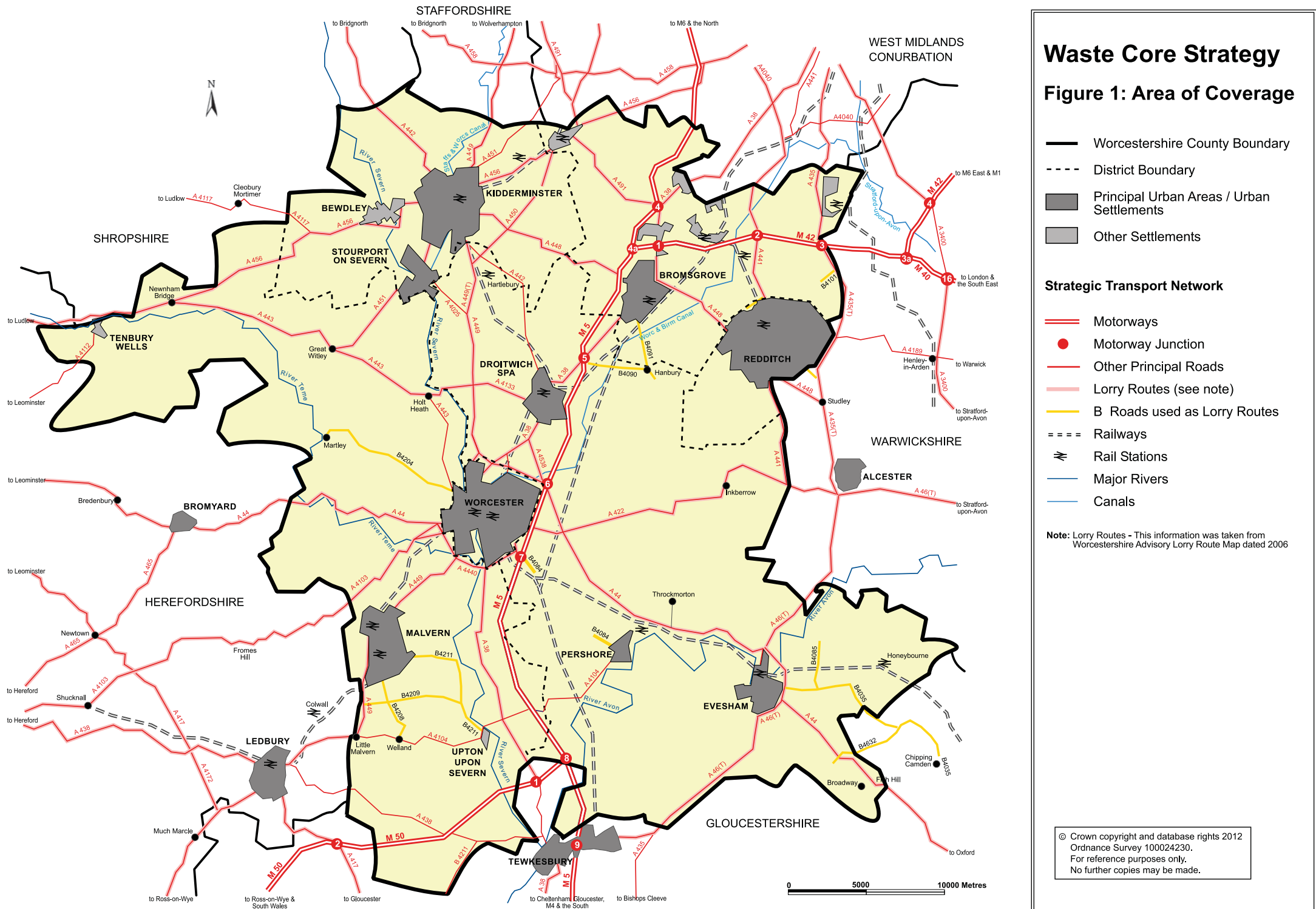
**1.17** What we do locally is guided by policies prepared internationally, nationally, regionally and locally, by the County, City, Borough and District Councils in Worcestershire and their partnership organisations. The Sustainable Community Strategies prepared by local strategic partnerships in the County have been particularly influential in the preparation of the Waste Core Strategy and the development of the Strategy's Vision and Objectives. Details of

how the Sustainable Community Strategies and other national and local policies have informed the development of the Waste Core Strategy are set out in the background documents prepared by the Council available on our website ([www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)).

**1.18** The *National Planning Policy Framework* sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework within which local people and councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities. The Worcestershire Waste Core Strategy has been prepared in order to achieve this.

# Waste Core Strategy

## Figure 1: Area of Coverage





## 2. Spatial portrait

**2.1** The County of Worcestershire (see **Figure 1. Area of Coverage**) has a population of 556,500<sup>12</sup> and covers an area of 173,529 ha. There are six District, City and Borough Councils in Worcestershire: Bromsgrove; Malvern Hills; Redditch; Worcester City; Wychavon; and Wyre Forest. Worcestershire is part of the West Midlands region and adjoins the South West region.

### *Environment*

**2.2** Worcestershire's landscape<sup>13</sup> is one of the most diverse in Britain. It spans the boundary between the ancient landscapes of the north and west of Britain and the planned landscapes associated with much of central England, with a combination of geology, topography, soils, tree cover, settlement patterns and land use that has produced 22 significantly different rural landscape types. The Malvern Hills Area of Outstanding Natural Beauty (AONB) and the Cotswolds AONB are both partly within the County.

**2.3** Worcestershire has a diverse and rich historic environment. There are over 26,000 heritage assets currently recorded on the county Historic Environment Record, of these only a small fraction are formally designated, with 135 conservation areas, 6,800 Listed Buildings, and 235 Scheduled Ancient Monuments. There remains a constant potential for further unrecorded heritage assets to be recognised anywhere in the County.

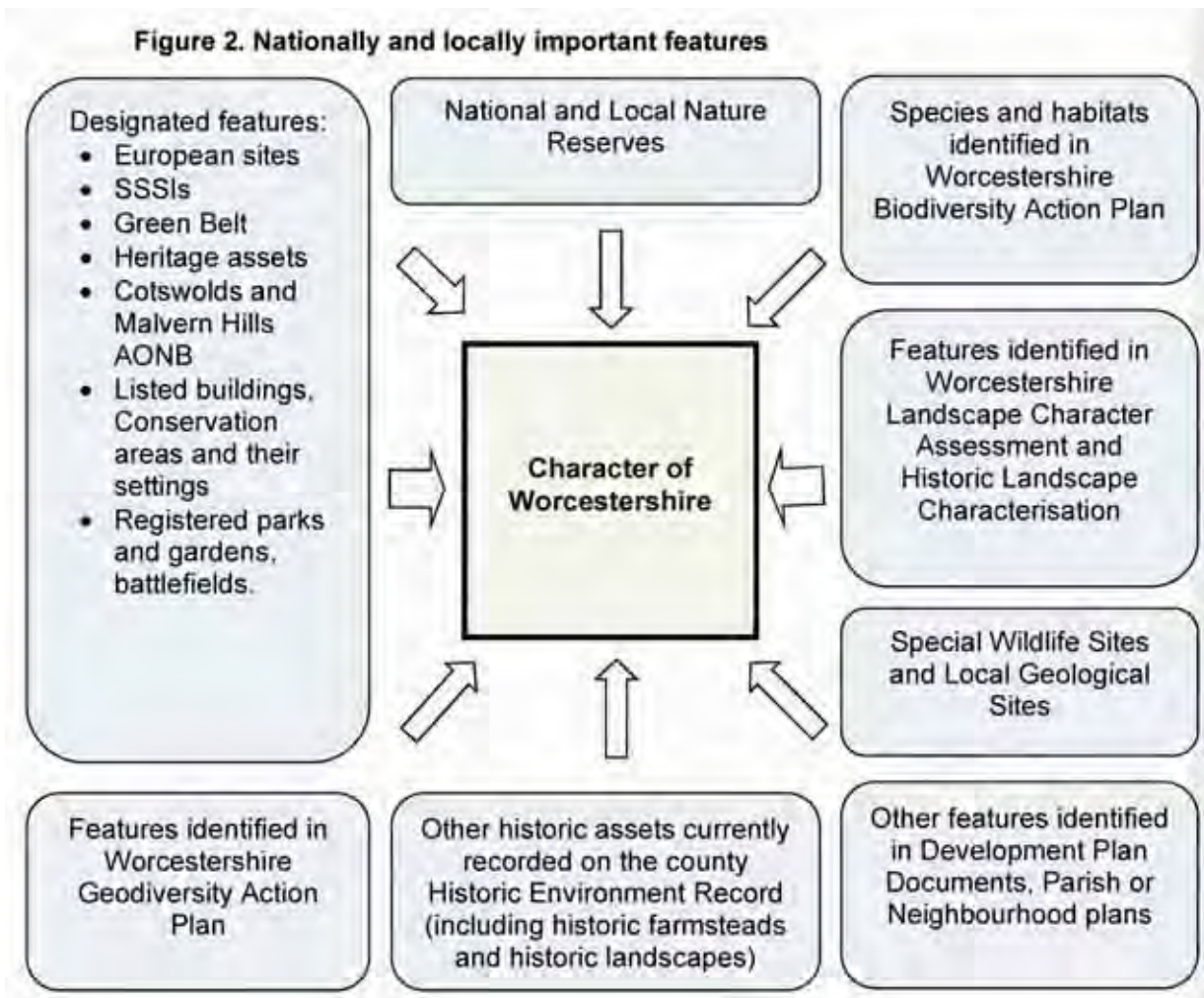
**2.4** Worcestershire encompasses the southern limit of many northern plant and animal species and the northern limit of many species found in the south and so is exceptionally rich biologically. There are 114 SSSIs and over 460 locally designated Special Wildlife Sites in the county. Worcestershire also has over a quarter of the UK's resource of unimproved neutral grassland habitat. There are two European designated Special Areas of Conservations (SACs) in the County and five other European protected sites within 15 km of the County boundary. There are 13 geological SSSIs and more than 90 Local Geological Sites in Worcestershire.

**2.5** In addition to the designated features in Worcestershire, there are many locally important features that contribute to the distinctiveness of the area. These are listed in **Figure 2**.

<sup>12</sup> ONS mid year estimate 2009  
<sup>13</sup> <http://www.worcestershire.gov.uk/cms/environment-and-planning/landscape-character-assessment.aspx> - The council has produced a Landscape Character Assessment of these features and a web tool to enable applicants and Local Planning Authorities to identify the defining characteristics of any particular site and to assess how proposals would relate to them.



Figure 2. Nationally and locally important features



2.6 These nationally and locally important features are valued in national policy and by local communities. In developing the strategy consultees supported the protection of these features in the Waste Core Strategy. There are opportunities for waste management activities to enhance these features through appropriate location, good design and operation and the landscaping and restoration of waste management sites.

2.7 Land drainage and flooding issues are important influences on development in Worcestershire. Approximately 10% of the land area of Worcestershire is at risk of flooding<sup>14</sup>. Flooding affects every town in the county and can significantly affect where waste management development can take place. This will place more limitations on some types of facilities than others: waste water treatment could be suitable on the functional flood plain but other types of facilities would not.

14 "Planning for Climate Change in Worcestershire Technical Research Paper Draft: May 2008"



## Economy

- 2.8** 71% of the population of Worcestershire live in urban areas, principally Worcester, Redditch and Kidderminster, Stourport on Severn, Bromsgrove, Malvern, Droitwich Spa and Evesham, with over one sixth of the population living in Worcester<sup>15</sup>. Some smaller towns, notably Bewdley, Pershore, Upton-upon-Severn and Tenbury Wells provide a traditional market town role serving an extensive rural hinterland.
- 2.9** Future growth in Worcestershire is expected to maintain and reinforce the current distribution of population and employment, with a focus in and around Worcester, Redditch and Kidderminster and some growth in Malvern, Droitwich Spa and Evesham. Waste Management facilities have a role to play in providing the necessary infrastructure to serve these communities and support the local economy.
- 2.10** Agriculture, most distinctively horticulture, particularly orchards and market gardening, dominates the use of land in the County. Only 1% of the West Midlands is Grade 1 Agricultural Land Quality and a third of this is in Worcestershire. Current trends in agriculture mean that there are redundant agricultural and forestry buildings in Worcestershire which could be suitable for waste management facilities.

- 2.11** At 78%, employment in Worcestershire is above the West Midlands average (71%) and England average (74%)<sup>16</sup>. Employment in the County is predominantly urban based, with the majority being service-based but with manufacturing also being locally important. The towns in the north of the county have traditionally relied on manufacturing although this has declined in recent years. In the south of the county food-related industries are important. Worcester, Malvern and to a lesser degree Droitwich Spa have large distribution, research and professional and educational sectors and form part of the Central Technology Belt<sup>17</sup>.

- 2.12** Waste management is estimated to contribute £95.9 million per year to the economy of Worcestershire<sup>18</sup>. About 12,000 people work in the waste sector in the West Midlands<sup>19</sup>, with 1,250 people employed in "sewage and refuse disposal, sanitation and similar activities" in Worcestershire<sup>20</sup>. This is a modest number, but is expected to rise by 2020<sup>21</sup>, even without any impetus from the Waste Core Strategy. With this increase, waste management is likely to have a growing role in future "green" employment in the county.

15 "Worcestershire County Economic Assessment 2009-2010.

16 Worcestershire County Economic Assessment 2009-2010.

17 The concept arose as part of the former regional economic strategy, its status is unclear at present but it is now being considered as part of the county Economic Development Strategy.

18 Gross value added (GVA) based on number of employees in the categories: Sewerage, Collection of non-hazardous waste, Collection of hazardous waste, Treatment and disposal of non-hazardous waste, Treatment and disposal of hazardous waste, Dismantling of wrecks, Recovery of sorted materials and Remediation activities and other waste management services in Worcestershire in 2007. Worcestershire County Council.

19 Energy and Utility Skills Labour Market Investigation 2006 and Census of Population 2001. EU Skills AACS LMI March 2001.

20 Annual Business Inquiry, Worcestershire County Council. Note that the West Midlands and Worcestershire figures are not directly comparable due to the use of different categories.

21 Annual Business Inquiry, Worcestershire County Council.



- 2.13** Mineral extraction plays a small but important role in the County's economy. There are nationally important resources of Industrial Sand in the Bromsgrove area, useful reserves of sand and gravel, mostly in river valleys; hard rock resources are more limited. There are also limited coal resources in the Bayton, Mamble, Menithwood, Abberley area in the northwest of the county, small areas to the west of Stourport-on-Severn and an area to the northwest of Kidderminster, concentrated on the Shatterford, Upper Arley and Pound Green area. Restoration of mineral workings can require waste materials to be imported and used as fill. With future potential for mineral extraction in the county, the Waste Core Strategy will be mindful of this.

### **Transport**

- 2.14** The county's strategic transport network is shown on **Figure 1. Area of coverage** .
- 2.15** The River Avon passes through Evesham and Pershore and is navigable throughout the County. The River Severn is navigable in Upton, Worcester and as far north as Stourport-on-Severn. The River Severn is currently used for freight transportation between Ryall and Ripple mineral workings, demonstrating that water transportation can be commercially viable in the county.
- 2.16** The canal network is extensive and connects to systems to the north, south and east of the County. Worcester (Worcester & Birmingham Canal) and Stourport (Staffordshire & Worcestershire Canal) are placed on the river and canal network and the Droitwich

Canals have recently undergone restoration to link to the River Severn and the Worcester & Birmingham Canal. There are however some limitations on vessel size due to the locks on or between the canals. Though there is little likelihood of increased freight traffic on the county's canals in the foreseeable future, there is more potential for the use of the River Severn. The Waste Core Strategy encourages the consideration of freight transport by water where possible, but recognises that potential is limited.

- 2.17** The strategic rail network within Worcestershire has strong links to the north and south of the county. Worcester, Kidderminster, Redditch, Bromsgrove, Droitwich Spa, Malvern, Evesham and Pershore are all connected to the rail network. There is rail capacity for freight movement on most routes in Worcestershire although this is not available at peak times. There are, however, no major rail freight facilities located in the county. The development of new stations or railheads is likely to be challenging. Trainloads generally convey around 1000 tonnes payload meaning that even on a weekly train basis a terminal/waste transfer station would need to have throughput of 52,000 tonnes a year<sup>22</sup>. There is no evidence to suggest that such a terminal would be economically viable in Worcestershire at present. However the Waste Core Strategy will encourage potential for rail transport to be considered where appropriate.

<sup>22</sup> Information provided by Network Rail in response to the Waste Core Strategy First Draft Submission consultation (reference WR25-4 in the 'Consultation Response Document, December 2010').



**2.18** At present all of the county's waste is transported by road. Motorway links to the M5, M42 and M50 mean that there are long distance movements into, out of and across the County<sup>23</sup>. Worcester, Droitwich Spa, Bromsgrove and Redditch are well placed on the motorway network. Upton-upon-Severn, Pershore and Evesham are connected to the motorway network by A roads and Kidderminster and Malvern are also well placed on the strategic highways network. Bewdley is connected to Kidderminster by the A456. Tenbury Wells is further from the other main settlements but is connected by the A456 to Kidderminster in the east and Herefordshire and Shropshire to the west.

**2.19** There is relatively little traffic congestion on the county's road network, but the limited number of river crossings is a key cause of congestion in Worcester and local road congestion can be a major constraint on growth in other parts of the county.

**2.20** There are currently 9 Air Quality Management Areas (AQMAs) either in existence or in the process of being designated in Worcestershire due to poor air quality. The AQMAs are associated with busy arterial and main roads. This is a cross-boundary issue. Air quality issues will be a consideration in developing waste management facilities.

## Climate Change

**2.21** In 2007 Worcestershire's CO<sub>2</sub> emissions were 3.9 million tonnes. 44% of the CO<sub>2</sub> emissions from Worcestershire were produced by industry and commerce, 33% from the domestic sector and 23% from transport<sup>24</sup>.

**2.22** The greenhouse gases that make the largest contribution to global warming are carbon dioxide, methane and nitrous oxide. All three can be produced during the management and disposal of wastes. In the UK waste management is estimated to contribute around 2.5% of total greenhouse gas emissions and 41% of all methane emissions<sup>25</sup>. Most of these emissions come from the landfill of biodegradable waste<sup>26</sup>. Re-using and recycling waste can reduce the greenhouse gas emissions produced as waste decomposes. These activities can also result in a greenhouse gas reduction and energy benefit by recovering energy or recycling materials and reducing the need for virgin materials.

**2.23** Emissions from transport are a locally important issue, with a reduction being one of the priorities set out in the *Worcestershire Climate Change Strategy*. The energy used in constructing, occupying and operating buildings is also a significant issue, representing approximately 50% of greenhouse gas emissions in the UK<sup>27</sup>. However transport emissions and those from the construction and operation of facilities make up only a small component of the greenhouse gas impacts from waste management activities.

23 *Worcestershire's Local Transport Plan 2006-2011* - <http://worcestershire.whub.org.uk/ltp-2006/wcc-transport-ltp-final-2006-2011.pdf>

24 Information on Worcestershire's CO<sub>2</sub> emissions from Worcestershire Partnership Climate Change Strategy. These figures exclude emissions from motorways.

25 *Stern Review on the Economics of Climate Change S.1* HM Treasury, 2006. For further information see Waste Core Strategy background document 'Climate change and waste management in Worcestershire'.

26 Defra *Waste Strategy for England 2007*.

27 Defra. *Sustainable construction: position statement*, 2003.



**2.24** In Worcestershire climate change is likely to lead to more frequent extreme weather events such as flooding and higher wind speeds. Some areas are also likely to experience increased outdoor fire risk <sup>28</sup>. Land instability is already an issue of potential concern in parts of the county where there has been former coal mining. This is likely to increase, with increased risk of subsidence in areas with clay soils.

**2.25** As a result of climate change, the county should expect warmer wetter winters as well as hotter drier summers. This means that during the summer months the possibility of water shortages increases. Over half of public water supply in Worcestershire is provided from groundwater sources. It is possible that water shortages could frustrate development, including waste management, over the life of the Strategy <sup>29</sup>.

**2.26** Seasonal variations in temperature and precipitation are also likely and could impact on waste management activities, affecting decomposition rates of waste. As such, the processes involved in and design of some waste treatment methods may change over the life of the Strategy to reflect this.

<sup>28</sup> See "Planning for Climate Change in Worcestershire: Technical Research Paper" for more details of anticipated Climate Change effects in the county and background document "Climate change and waste management in Worcestershire".

<sup>29</sup> Customer security of water supplied by Severn Trent Water is currently ranked poorly and increases in housing numbers and the predicted increase in water usage per person per day will put further pressure on water supply in Worcestershire.

<sup>30</sup> Based on 2010 figure/projections. See background document "Arising and Capacity"

<sup>31</sup> On-farm animal and plant wastes currently fall outside the legal definition of controlled waste in England and Wales.

## Waste Management

### Waste arisings

#### Amount of waste arising

**2.27** It is estimated that approximately 1,591,000 tonnes of waste are produced in Worcestershire each year <sup>30</sup> (waste arisings). This is categorised into:

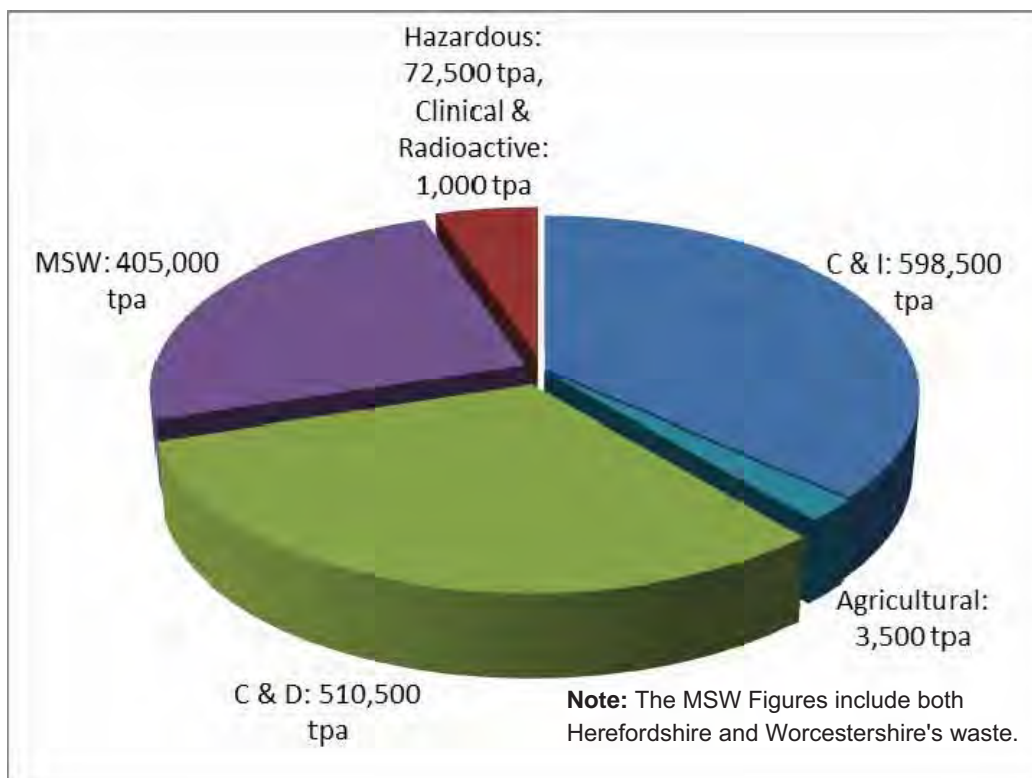
- **Commercial and Industrial Waste (C&I):** Business waste. For the purpose of the Waste Core Strategy this includes:
  - **Agricultural waste:** All wastes that are discarded from agricultural premises except on-farm animal and plant wastes which fall outside the scope of the Waste Core Strategy <sup>31</sup>.
- **Construction demolition and excavation waste (C&D):** Waste from building works and other related operations.
- **Municipal Solid Waste (MSW):** This waste is mainly collected from households. In Worcestershire MSW is managed jointly with Herefordshire in partnership with all councils in the two counties.
- **Hazardous waste:** Waste defined as needing special management because it is difficult to handle or potentially polluting or dangerous. For the purpose of the Waste Core Strategy this includes:



- **Clinical waste:** produced from healthcare and similar activities that may pose a risk of infection or may prove hazardous to any person coming into contact with it.
- **Radioactive waste:** radioactive waste from non-nuclear industries is mostly produced by hospitals, pharmaceutical companies, education and research establishments.

2.28 The amount of waste arisings from each of these waste streams is shown in **Figure 3**.

**Figure 3: Waste arisings in Worcestershire (2010)**



2.29 Waste arisings are expected to grow over the period of the strategy as illustrated in **Figure 4** and **Table 1**<sup>32</sup>. This has been taken into account in developing the Waste Core Strategy objectives and policy framework.

32 These projections are based on the best available data. The methods are set out in Waste Core Strategy Background document "Arisings and Capacity".



Figure 4: Projected waste arisings

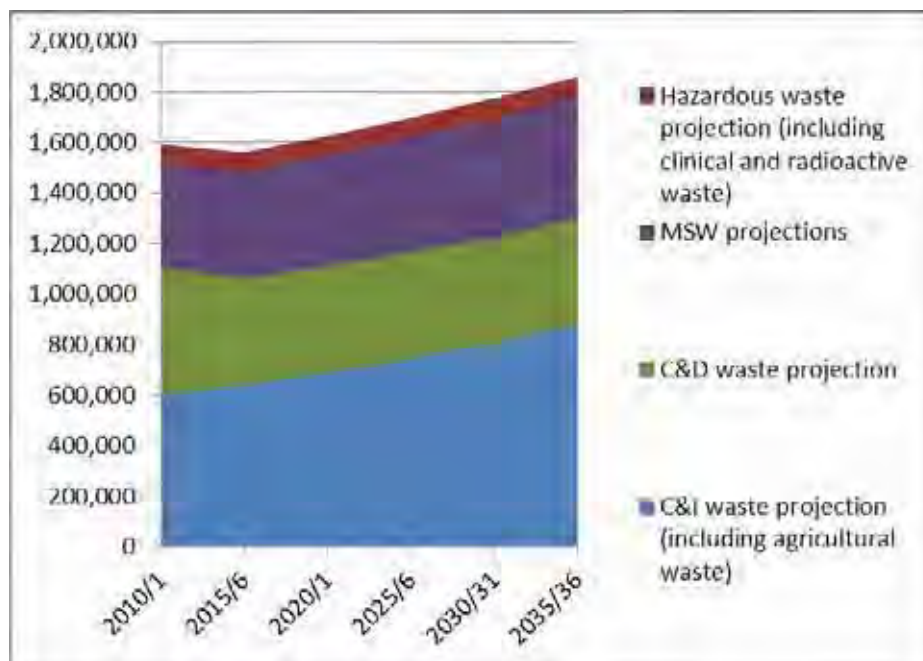
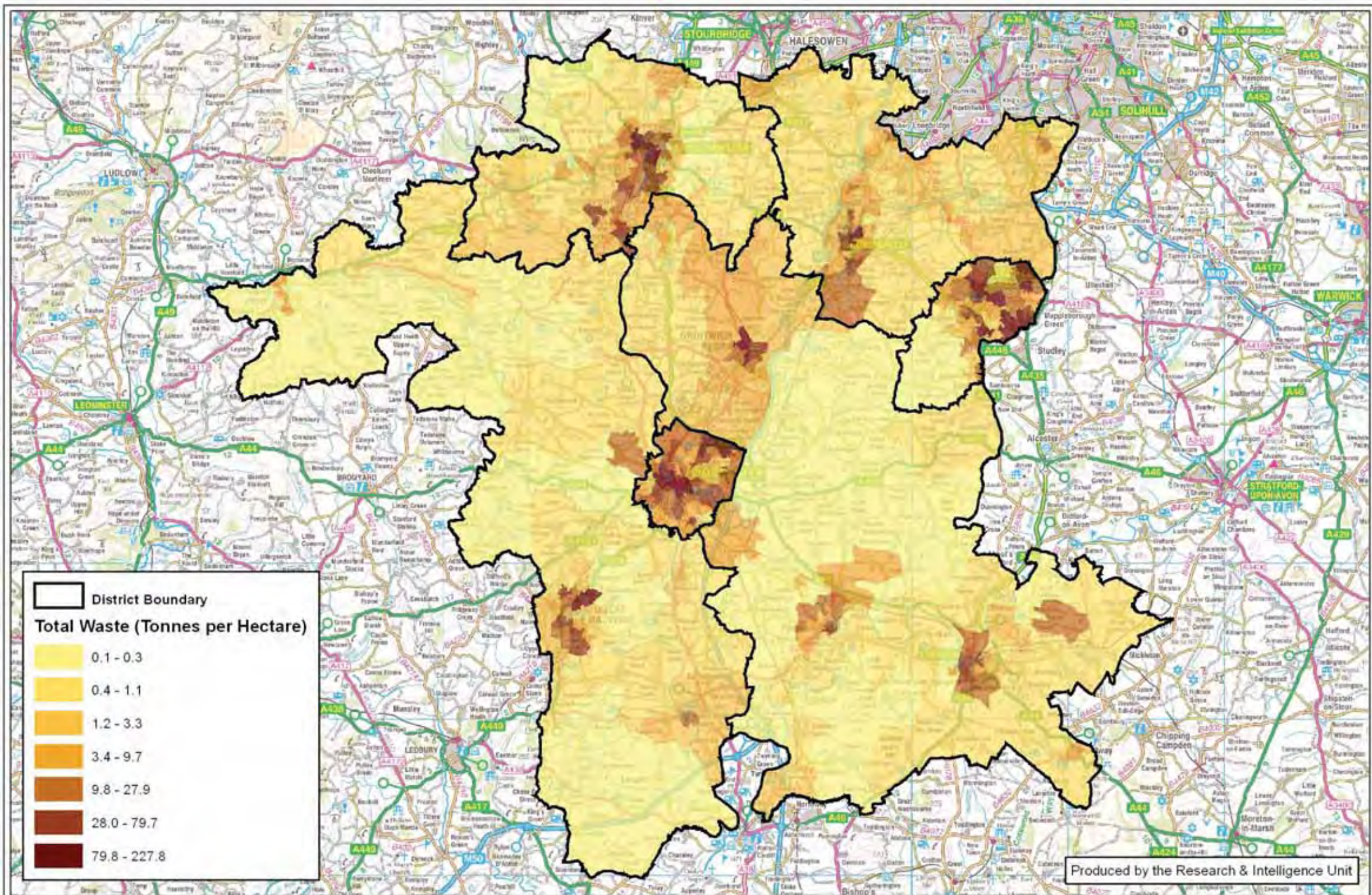


Table 1: Projected waste arisings (tonnes per annum)

	2010/11	2015/16	2020/21	2025/26	2030/31	2035/36
C&I waste projection (including agricultural waste)	601,790	644,039	692,073	746,684	808,774	879,366
C&D waste projection	510,555	419,520	419,520	419,520	419,520	419,520
MSW projections	405,139	421,817	438,496	455,175	471,854	485,197
Hazardous waste projection (including clinical and radioactive waste)	73,572	73,621	73,670	73,719	73,768	73,808
<b>Total waste arisings projection</b>	<b>1,591,056</b>	<b>1,558,997</b>	<b>1,623,759</b>	<b>1,695,098</b>	<b>1,773,916</b>	<b>1,857,891</b>



**Figure 5: Patterns of C&I Arisings in Worcestershire (per Hectare by LSOA)**

Based on ADAS Study into Commercial and Industrial Waste Arisings April 2009



### *Distribution of arisings*

**2.30** Concentrations of waste arisings broadly reflect the distribution of population and the location of industry in the county, focusing around the main urban areas <sup>33</sup>:

- **C&I:** arisings are focused mainly in existing urban areas. **Figure 5** illustrates the distribution of C&I waste arisings broken down into Lower-level Super Output Areas (LSOAs <sup>34</sup>).
- **Agricultural waste:** a detailed breakdown of distribution is not available, however arisings are in rural areas and anecdotal evidence suggests that it is more concentrated in the south of the county where horticulture is most prevalent.
- **C&D:** arisings relate to new development. Future development in Worcestershire is likely to be focused in and around existing urban areas.
- **MSW:** arisings are concentrated in urban areas where there are higher densities of households.
- **Hazardous waste:** arises as part of the other waste streams, although it is managed separately. It will therefore broadly reflect the distribution of arisings from these streams.

**2.31** With the exception of Wyre Forest, which has an adopted Core Strategy, the District, City and Borough Councils in and adjoining Worcestershire are still developing their Development Plan Documents. In general patterns of development are expected to maintain and reinforce the current distribution of population and employment up to at least 2026.

### *Current capacity*

**2.32** Worcestershire's MSW is managed jointly with Herefordshire in partnership with all the councils in the two counties, through an Integrated PFI contract signed with Mercia Waste Management Ltd. in 1998. The contract enables the councils to take advantage of economies of scale, manage their waste disposal services more efficiently and provide better levels of service jointly than they would be able to individually.

**2.33** C&I waste is managed largely by the private sector, with the third (voluntary) sector playing a small but increasing role. It is common for some of the capacity at C&I facilities to be used for the treatment of MSW and C&D waste.

<sup>33</sup> For this purpose hazardous, clinical and radioactive waste are considered as component parts of the other waste streams.

<sup>34</sup> Lower-level Super Output Areas are the smallest scale at which Census data can be used. They roughly equate to 1,500 people.



- 2.34** Dedicated C&D facilities also exist in the County, with a network of transfer facilities which feed treatment facilities both in Worcestershire and the West Midlands conurbation<sup>35</sup>. However the processing of C&D waste increasingly takes place in-situ and this will be encouraged where appropriate.
- 2.35** Current waste management capacity<sup>36</sup> is approximately 1,274,500 tonnes<sup>37</sup> per annum as shown in **Table 2**.
- 2.36** Waste water treatment capacity is currently adequate across most of the county and Severn Trent Water does not usually operate Sewage Treatment Works with spare capacity<sup>38</sup>.
- 2.37** In Worcestershire, most existing facilities are smaller than 0.5 ha in size (65% of facilities), with only 22% of facilities being over 1 ha in size. There are however some larger sites in the county, with the largest being approximately 13 ha<sup>40</sup>.
- 2.38** In general, waste management facilities tend to be clustered in or near to towns in the north of the county, and are more dispersed in the south. Kidderminster, Redditch and Pershore have high levels of waste management capacity, whilst Worcester, Bromsgrove, Droitwich Spa, Evesham and Malvern have relatively low levels. Household Recycling Centres (civic amenity sites) are found in or near to all towns in the County, as illustrated in **Figure 6**<sup>41</sup>. There are also a number of small 'bring' sites in the county which are not shown on this Figure.

**Table 2: Current waste management capacity**<sup>39</sup>

	Capacity 2008/9
Re-use and recycling capacity	310,000 tpa
'Other recovery' capacity	8,000 tpa
Sorting and transfer capacity	859,000 tpa
Household recycling centres	97,500 tpa
Landfill capacity	9,778,000 m <sup>3</sup>
Other disposal capacity	<500 tpa

35 This relationship with facilities in the West Midlands is considered appropriate by the West Midlands Regional Technical Advisory Body for Waste (WMRTAB), as considered in the *Regional Waste Scenarios Study (WMRA) – July 2005*.

36 As set out in background document "Arising and capacity".

37 Not including waste water treatment capacity or landfill.

38 See background document "Waste water treatment infrastructure".

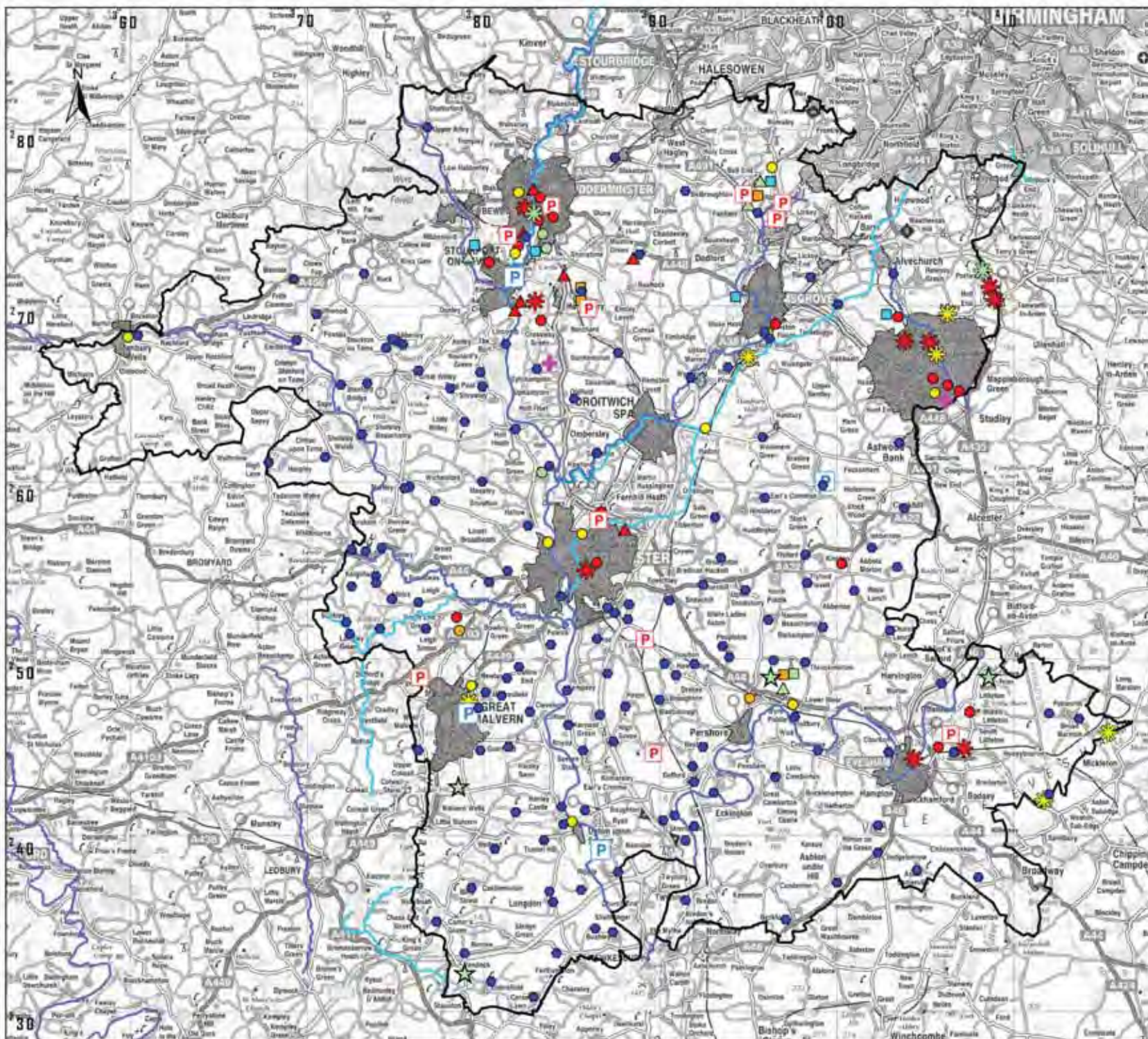
39 See background document "Arising and capacity" for further details

40 See Waste Core Strategy background document "Waste sites in Worcestershire".

41 As at February 2011.

# Waste Core Strategy for Worcestershire

Figure 6: Existing Waste Sites June 2009



- County Boundary
- Principal Urban Areas
- Other Settlements
- Major Rivers
- Canals

## Existing Waste Sites June 2009

- Sewage Treatment Works
- A02 - Other landfill taking special waste (1)
- A04 - Household, commercial and industrial waste landfill (4)
- A05 - Landfill taking non-biodegradable waste (5)
- A10 - In-house storage facility (1)
- A11 - Household, commercial and industrial waste transfer station (30)
- A13 - Household waste emergency site (12)
- A14 - Transfer station taking non-biodegradable waste (7)
- WTD - Waste Transport Depot (2)
- A15 - Material recycling facility (4)
- A16 - Physical treatment facility (3)
- A18 - Incinerator (2)
- A19 - Metal recycling site (vehicle dismantler) (2)
- A19a - End of Life Vehicles facility (9)
- A20 - Metal recycling site (MRS) (Mixed) (6)
- A22 - Composting facility (4)
- DPP - Outstanding Planning Permission (10)
- PC - Pending Consideration (5)

Total Number of Sites - 93

NB: Due to the scale of the map, symbols are only indicative of the site location.

The number shown in brackets on the key: e.g. (3) indicates the number of sites in that category in Worcestershire.

WTD (Waste Transport Depot) is not an Environment Agency 'A Code' but is a term derived by Worcestershire County Council Planning Policy team to describe two specific sites, which did not neatly fit under any of the 'A Code' Listings, which were primarily used as storage depots.

DPP (Outstanding Planning Permission) refers to sites with planning permission for Waste Management Facilities but are not yet implemented.

PC (Pending Consideration) refers to sites, where planning applications had been submitted to the County Council and are pending consideration.

Redundant agricultural land and derelict land are not shown.





**2.39** Waste management facilities tend to be located on industrial estates, with some facilities at minerals workings and landfill sites. There are also several facilities on former airfields or using redundant agricultural buildings.

**2.40** The distribution and characteristics of existing waste management capacity in Worcestershire have been a fundamental consideration in the development of the Waste Core Strategy and the Council has engaged with all current operators in order to develop an understanding of the current situation.

### *Capacity gap*

**2.41** In Worcestershire there is currently a 'capacity gap', meaning that waste arisings within the county are greater than the capacity to treat them. The capacity gap was a fundamental driver in the development of the Waste Core Strategy and is one of the main challenges it aims to tackle.

**2.42** The capacity gap is calculated by considering:

- **Waste arisings:** Current and future projections.
- **Capacity requirements:** This applies targets to the waste arisings to estimate the quantities of waste that will be managed through 're-use and recycling', 'other recovery' and 'disposal or landfill', as well as the capacity required for 'sorting and transfer'.

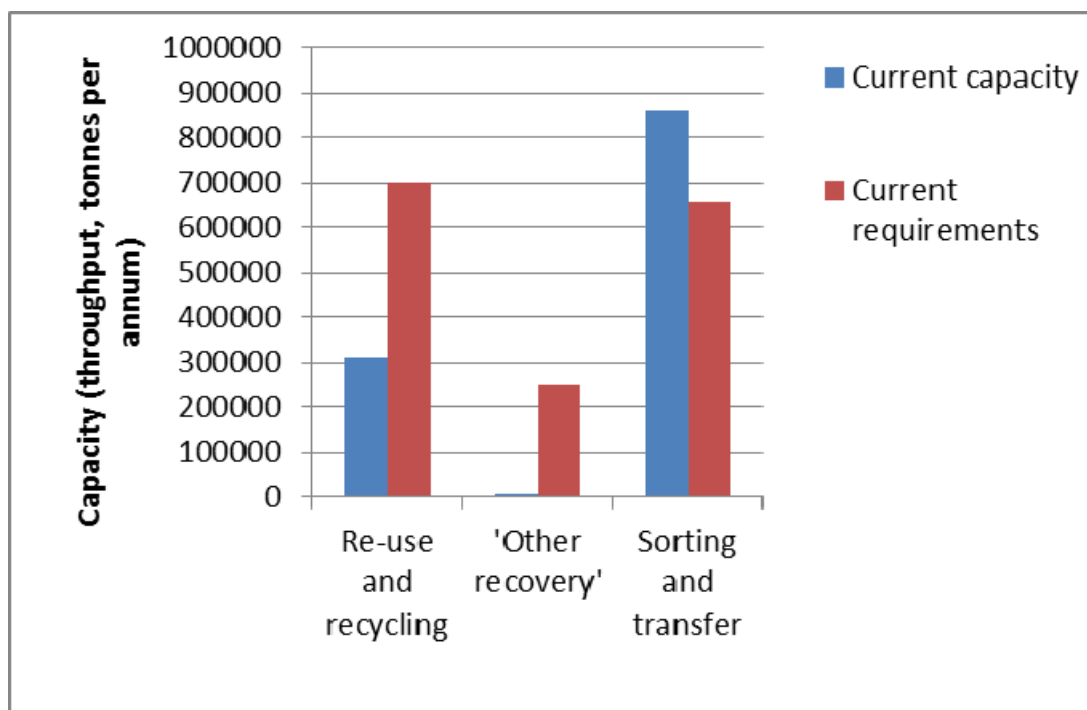
- **Current capacity:** Operational waste management capacity. This considers 're-use, recycling', 'other recovery' and 'disposal and landfill' and 'sorting and transfer' capacity separately.

**2.43** It is clear from **Figure 7** that additional waste management capacity is needed in the county for re-use and recycling and 'other recovery' of all waste streams. Current requirements are shown in **Figure 7** and **Table 3** and future requirements are shown in **Figure 8** and **Table 4**. These show that the timely and early provision of re-use and recycling and 'other recovery' facilities for all waste streams will be necessary.

**2.44** **Figure 7** and **Table 3** show that there is a capacity gap for re-use and recycling facilities and for 'other recovery' facilities but not for sorting and transfer facilities or for landfill or disposal facilities. The existing void space at landfill sites in the county is sufficient to manage the amounts and types of waste expected to need to be landfilled or disposed of over the life of the Waste Core Strategy.



**Figure 7: Current capacity and requirements (all waste streams)**



**Table 3: Minimum capacity gap 2010/11 (all waste streams)**

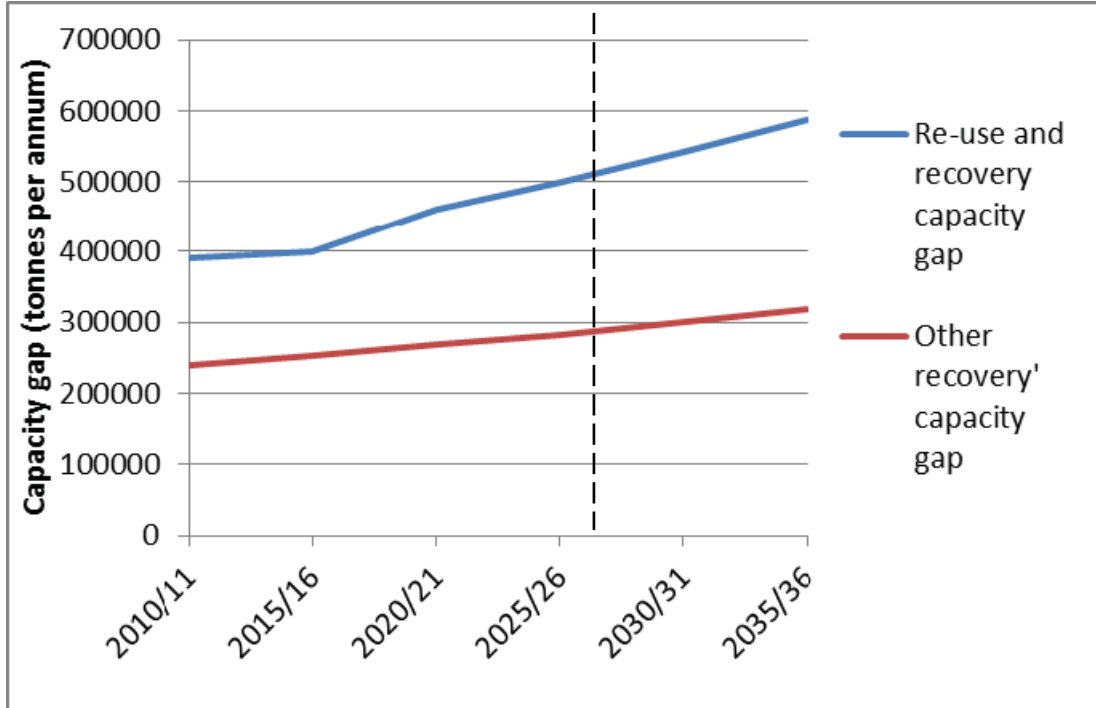
Management type (all waste streams)	Current capacity gap 2010/2011
Re-use and recycling	391,000 tpa
'Other recovery'	240,500 tpa
Sorting and transfer	0 tpa
Disposal and landfill	0 tpa

**Note:** calculations based on targets set out in Objective WO3 (except for C&D waste which is calculated at 25% for static facilities), and assuming a maximum landfill or disposal level of 25% for C&I, C&D and Hazardous waste and 22% for MSW. A more detailed breakdown of this information is available in **Table 4**. No capacity gap has been identified for radioactive waste.



- 2.45 **Figure 8** shows how the capacity gap will grow during the life of the Strategy and beyond, if no new facilities are developed in the county.
- 2.46 **Figure 7** and **Table 4** show headline figures for current capacity and current and future requirements at each level of the waste management hierarchy. Different methods of management are appropriate for different types of waste and innovation in waste management methods is anticipated over the life of the strategy. This means that the Waste Core Strategy will need to be strong in guiding the right types of development to the right places at the right time but flexible to respond to innovative techniques.

**Figure 8: Capacity gap projections**





**Table 4: Capacity Gap and Land Requirements** <sup>42</sup>

	2010/11	2015/16	2020/21	2025/26	2030/31	2035/36
<b>Re-use and recycling capacity gap</b>	<b>391,000</b>	<b>400,500</b>	<b>460,000</b>	<b>498,500</b>	<b>541,500</b>	<b>586,500</b>
C&I (inc Agricultural waste)	58,000	81,000	107,500	137,500	172,000	210,500
C&D	127,500	105,000	105,000	105,000	105,000	105,000
MSW	165,500	174,000	207,000	215,500	224,000	230,500
Hazardous (inc Clinical and radioactive)	40,000	40,500	40,500	40,500	40,500	40,500
<b>'Other recovery' capacity gap</b>	<b>240,500</b>	<b>253,500</b>	<b>268,000</b>	<b>283,500</b>	<b>300,500</b>	<b>318,500</b>
C&I (inc Agricultural waste)	120,500	129,000	138,500	149,500	162,000	176,000
MSW	113,500	118,000	123,000	127,500	132,000	136,000
Hazardous (inc Clinical and radioactive)	6,500	6,500	6,500	6,500	6,500	6,500
<b>Sorting and transfer capacity gap</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
C&I (inc Agricultural waste) and C&D	0	0	0	0	0	0
MSW	0	0	0	0	0	0
Hazardous (inc Clinical and radioactive)	0	0	0	0	0	0

<b>Land requirements</b>	<b>25 ha</b>	<b>25 ha</b>	<b>29 ha</b>	<b>30 ha</b>	<b>33 ha</b>	<b>35 ha</b>
Re-use and recycling	17 ha	17 ha	20 ha	21 ha	23 ha	25 ha
'Other recovery'	8 ha	8 ha	9 ha	9 ha	10ha	10 ha
Sorting and transfer	0	0	0	0	0	0

**Landfill and disposal (tpa) (cumulative totals)**

<b>Disposal and landfill capacity gap</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>713,500</b>	<b>2,985,500</b>
C&I (inc Agricultural waste) and MSW	0	0	0	0	290,500	1,776,000
Hazardous (inc Clinical and radioactive)	0	0	0	0	0	0
C&D	0	0	0	0	423,000	1,209,500

**Note:** Capacity gap figures rounded to the nearest 500 tonnes, Land requirements rounded to the nearest 0.5 ha.

42 The capacity gap is based on the assumption of:

- Minimum recycling of 50% for MSW, and 55% for C&I and Hazardous waste, and 25% of C&D waste at static facilities; and
- Maximum landfill 25% C&I, C&D and Hazardous waste, 22% MSW;
- a working assumption for 'other recovery' 20% C&I and Hazardous waste, 28% for MSW.

Land requirements are based on average throughputs per hectare for facilities in Worcestershire: Re-use and recycling 23,500tpa, Recovery 32,000tpa. Further details are set out in the Waste Core Strategy Background document "Arising and capacity".



- 2.47** The reviewed *Joint Municipal Waste Management Strategy* (JMWMS) identifies the need for some form of treatment facility to manage residual MSW but the Action Plan for the JMWMS states that suitable development land and the technology to be used are still to be decided.
- 2.48** The reviewed *Joint Municipal Waste Management Strategy* also recognises that the Household Recycling Centre in Tenbury Wells does not include the range and quality of services available at other Household Recycling Centres and it will need to be improved during the life of the Strategy.
- 2.49** The reviewed *Joint Municipal Waste Management Strategy* has not identified any need at present for additional facilities for the management of green waste.
- 2.50** There is a total permitted capacity in Worcestershire for the treatment of green waste from all waste streams in the form of 62,000 tonnes per annum composting capacity<sup>43</sup> and 15,000 tonnes per annum anaerobic digestion capacity<sup>44</sup>. There is not currently a need to make specific provision for additional capacity. However, the Waste Core Strategy will need to remain flexible and facilities to manage green waste will need to be considered as an integrated part of re-use and recycling infrastructure in the county.
- 2.51** A capacity gap has also been identified for waste water treatment, with some new capacity likely to be required to serve future development in some parts of Worcestershire. Bromsgrove will need much higher waste water treatment capacity to meet the demands of planned expansion, and Redditch and Worcester will need some increased capacity. It has been agreed that the need for and general location of new waste water treatment infrastructure will be identified by the City, Borough and District Councils in their Development Plan Documents, and as part of the infrastructure needed for new development. In addition small scale facilities may be required in order to provide first time sewage for existing dwellings. Any specific proposals will be assessed against the policies in the Waste Core Strategy.

43 This includes the consideration of 12,000tpa capacity at Morton-on-Lugg in Herefordshire for the composting of MSW.

44 Planning permission for this facility was granted after capacity gap calculations were undertaken and as such is not included in the baseline capacity figures shown in **Table 2**.

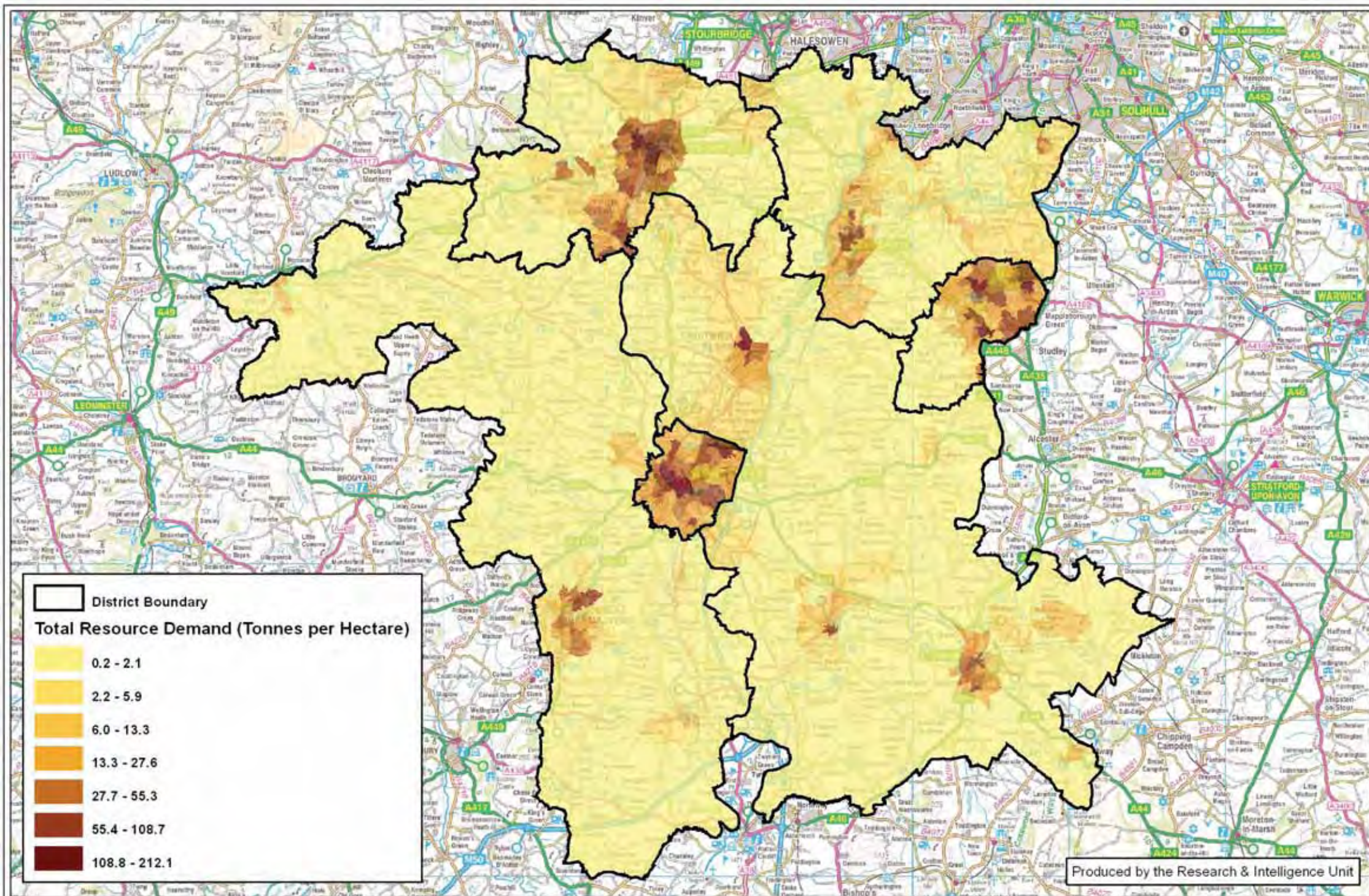


## Resource demand

- 2.52** Waste management facilities enable the use of waste as a resource. Therefore the consideration of resource demand is important. Estimates of resource demand (demand for organics, energy and recycle based on business types<sup>45</sup>) broadly reflect the distribution of waste arisings in the county, being concentrated in and around urban settlements, see **Figure 9**.
- 2.53** Waste management facilities often form part of a 'treatment chain', and as such existing facilities will also be an important consideration providing potential onward treatment opportunities. There are clusters of facilities in and around Kidderminster and Redditch.
- 2.54** The geographic patterns of resource demand and distribution of existing facilities have been taken into account in developing the approach in the Waste Core Strategy.

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45 AWM methodology developed as part of the "Landfill Diversion Strategy" AWM 2009.



**Figure 9: Patterns of resource demand for organics, energy and recycle in Worcestershire (per Hectare by LSOA)**  
 Based on AWM Landfill Diversion Strategy (2009)



## Imports and Exports <sup>46</sup>

- 2.55** Some cross boundary movements of waste are inevitable and reflect the normal working of the economy. Some types of waste also require specialised management methods; for such facilities to be viable they often operate at a regional or national level. This may account for some of the imports and exports in Worcestershire.
- 2.56** Overall, the evidence is that the amount of waste imported exceeds that exported from the County. There are clear trends relating to waste movements <sup>47</sup>, with the most significant volumes of imports coming from the South West at 63,260 tpa and East of England at 3,850 tpa. Imports from other regions (excluding the West Midlands) are less than 600 tpa (see **Figure 10**). Within the West Midlands, the most significant volume of imports is MSW from Herefordshire.
- 2.57** The pattern of exports from Worcestershire is more diffuse with some materials going to every region in England. The most significant exports are to the South West (20,900 tpa) and Yorkshire and Humber (20,200 tpa) (see **Figure 11**). The most significant exports within the West Midlands are to Herefordshire, Warwickshire and the West Midlands conurbation.

46 Data source for this section: Environment Agency Waste Data Interrogator 2008.

47 Data about sub regional movements of waste is very poor. We believe that the best source of information is the Environment Agency Waste Data Interrogator (WDI) and we have based our assumptions about waste imports and exports on it. We acknowledge that it is imperfect, considerable volumes of both imports and exports are recorded as "not codeable" by the Agency and their origin and destination cannot be identified. Some movements, but it is not clear how much, are just within and beyond the county. In addition, we know from monitoring the joint waste contract between the two counties that much more MSW is imported from Herefordshire than is shown in the EA Waste Data Interrogator 2008.



Figure 10. Waste imports to Worcestershire by Region

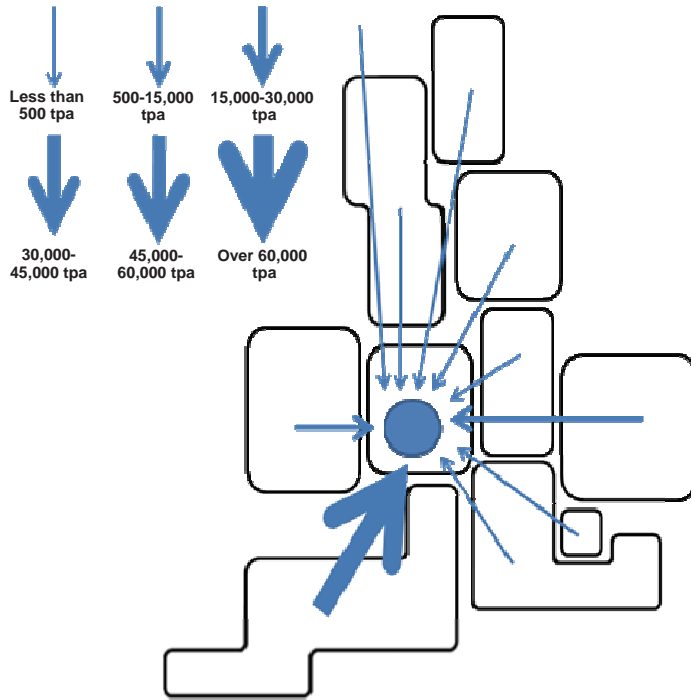
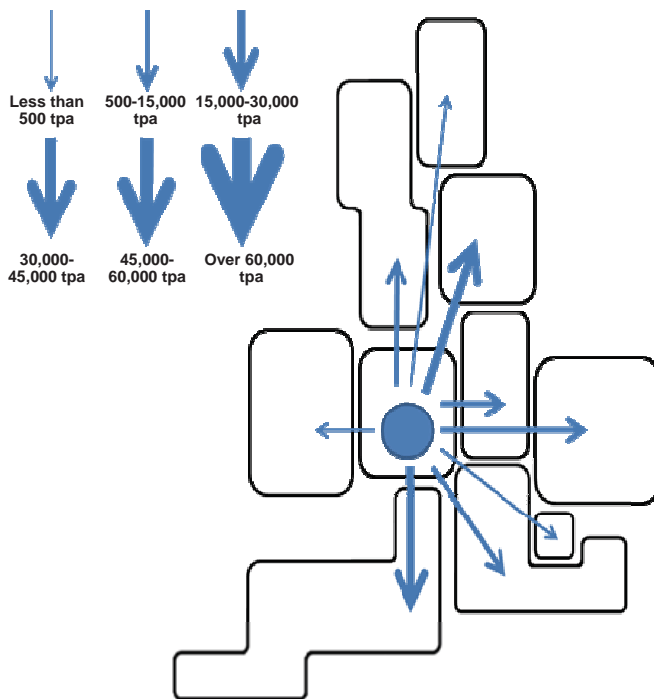


Figure 11. Waste exports from Worcestershire by Region





**2.58** Worcestershire is a net importer of hazardous waste <sup>48,49</sup> for waste sorting and transfer but is a net exporter for treatment.

**2.59** Due to the joint management of Herefordshire and Worcestershire's MSW, movements between the two counties are expected to occur for the lifetime of the integrated Municipal Waste Management contract (currently 2027).

**2.60** Imports and exports of waste will continue to occur during the life of the strategy due to economies of scale, specialised treatment requirements and market efficiencies. The Waste Core Strategy will not limit future imports and exports. However, in line with the West Midlands RSS and to reflect the consultation comments received, the Waste Core Strategy will aim for 'equivalent self-sufficiency' in waste management capacity. 'Equivalent self-sufficiency' means that Worcestershire's capacity will be adequate to treat waste that arises in the County but allows for inevitable cross-boundary movements that occur.



Photo courtesy of Recycle Now Partners.

48 See Waste Core Strategy background document "*Hazardous Waste*".

49 2009 data from Environment Agency, Hazardous Waste Interrogator.

## The vision and objectives

**2.61** The vision sets the direction for the strategy. Whilst the vision can be ambitious and inspiring, it needs to be realistic.

**2.62** The vision has been informed by national and local priorities and has been developed to take into account the unique characteristics of Worcestershire. This has been informed by the issues needs and constraints set out in the spatial portrait, the community's priorities reflected in Worcestershire's Sustainable Community Strategies and by consultations undertaken in developing the Waste Core Strategy.

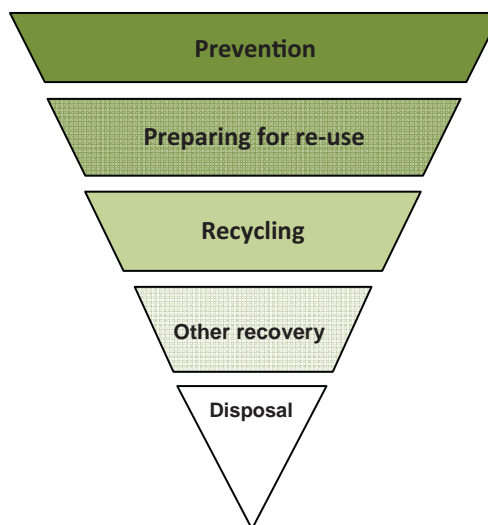
**2.63** The Worcestershire Sustainable Community Strategy *Partnership towards excellence 2008-2013* and Borough, City and District Sustainable Community Strategies identify three cross cutting themes: climate change, community engagement and community cohesion. These are reflected in the vision and objectives of the Waste Core Strategy. There has been a shift of focus in Worcestershire Partnership's emerging "A Single Sustainable Community Strategy for Worcestershire" which combines all of the districts' and county sustainable community strategies into one single strategy for Worcestershire. This now prioritises a skilled and prosperous economy, an environment that is cherished and resilient and improved health and well being. The vision and objectives of the Waste Core Strategy also contribute towards these aims.

### **What will waste management in Worcestershire be like in 2027?**

**2.64** By 2027, through timely provision over the plan period, Worcestershire will have achieved equivalent self-sufficiency in waste management capacity.

**2.65** Waste in Worcestershire will be managed increasingly as a resource. This means that it will be managed at the highest appropriate level of the waste hierarchy, see **Figure 12**.

**Figure 12: Waste hierarchy**



**2.66** Progressively, homes and businesses in the county will produce less waste and the Council will work in partnership with the general public, business community, development industry and other local authorities to help this happen. There will be enough facilities to enable the waste which is produced to be treated as a resource in accordance with the principles of the waste hierarchy.



**2.67** Waste management facilities will support the local economy without compromising the county's local characteristics and distinctive environmental and cultural assets. The waste management industry will be dynamic and respond to opportunities generated by other sectors, creating new employment opportunities, enhancing local economic resilience and contributing towards a green and low carbon economy.

**2.68** New waste management facilities will be resilient to, and mitigate against, climate change. They will be well designed to complement their surroundings and minimise any adverse impacts.

### **Where will new waste management infrastructure be developed?**

#### **Spatial Strategy**

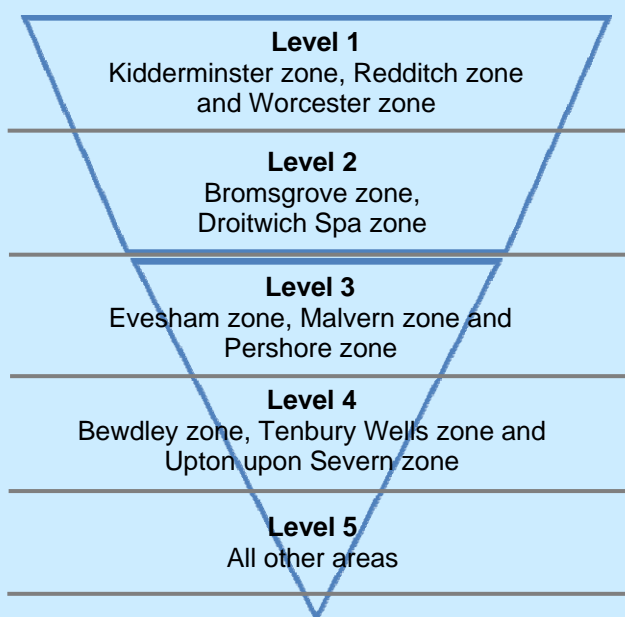
**2.69** Facilities will be directed to land that has had a previous economic use and will take advantage of opportunities for on-site management of waste where it arises. They will be located where they are best suited to serve the needs of local communities and the local economy and minimise the distance waste is moved by road.

**2.70** The distribution will be based on the geographic hierarchy (see **Figure 13** and **Figure 14**).

**2.71** This hierarchy takes account of patterns of current and predicted future waste arisings and resource demand<sup>50</sup>, onward treatment facilities, connections to the strategic transport network, and potential for the future

development of waste management facilities<sup>51</sup>. The Habitats Regulations Assessment<sup>52</sup> and City, Borough and District Strategic Flood Risk Assessment have also been taken into account<sup>53</sup>.

**Figure 13: Geographic Hierarchy for waste management in Worcestershire**



Note: Within each level of the hierarchy, zones are listed alphabetically, not in order of importance. The zones are illustrated on the **Key Diagram (Figure 14)**.

50 Refers to the demand for resources from organic waste recovery (e.g. composting), recycling and energy recovery, developed as part of the West Midlands Landfill Diversion Strategy (AWM 2009).  
 51 The broad geographic hierarchy and the proposed distribution of new development would be in accordance with the adopted WMRSS and the evidence base for the proposed Phase 2 revision. With the exception of Wyre Forest which now has an adopted Core Strategy, District Councils in, and County, District and Unitary councils adjoining the county are still developing their Core Strategies but the general pattern of development is expected to maintain and reinforce the current distribution of population and employment up to at least 2026.  
 52 "Worcestershire Waste Core Strategy Habitats Regulations Assessment Final Report March 2011" and "Worcestershire Waste Core Strategy Habitats Regulations Assessment Addendum September 2011"  
 53 See background document 'Spatial strategy'.



### Facilities that enable the re-use and recycling<sup>54</sup> of waste

**2.72** Re-use and recycling facilities (including treatment, storage, sorting and transfer facilities) will be enabled in all geographic zones. These facilities will be directed to the highest appropriate level of the geographic hierarchy.

### 'Other recovery' facilities<sup>55</sup>

**2.73** 'Other recovery' facilities will be necessary to manage waste which cannot be re-used or recycled and to ensure that it is treated as a resource. To be viable these facilities are often larger in scale and few will be needed to meet the capacity gap.

**2.74** To recognise their scale and role, 'other recovery' facilities will only be enabled in level 1 and 2 of the geographic hierarchy.

### Disposal and landfill

**2.75** The evidence base<sup>56</sup> demonstrates that there is no need for new landfill or disposal capacity. The strategy will encourage management of waste at higher levels of the waste hierarchy. Therefore landfill and disposal facilities will not be encouraged at any level of the geographic hierarchy.

### When will the strategy be delivered?

**2.76** Existing waste management facilities will be safeguarded and new facilities will be developed throughout the life of the strategy to fill the capacity gap and deliver equivalent self-sufficiency in waste management capacity in the county before 2027.

**2.77** There will be an early step change in the waste management industry in Worcestershire, with at least half of the increased waste management capacity required to meet the capacity gap by the end of the plan period being delivered by 2015/16.

**2.78** The drive for increased capacity will be sustained in the medium term to deliver equivalent self-sufficiency by 2020/21. Further capacity will be developed to ensure equivalent self-sufficiency is maintained up to 2025/26 and beyond.

**2.79** Throughout the life of the strategy and beyond, waste management capacity will to be developed in accordance with the waste hierarchy and the waste management sector in the county will be able to meet demand in the local economy. This will be in line with the delivery milestones set out in **Table 5**.

<sup>54</sup> Article 3(17) of the revised Waste Framework Directive 2008 specifically mentions the reprocessing of organic material as being included in the definition of recycling, therefore for the Waste Core Strategy open windrow composting, in-vessel composting and anaerobic digestion are included as recycling alongside other physical and chemical treatment processes.

<sup>55</sup> Article 3(15) of the revised Waste Framework Directive 2008 defines "Recovery" as "any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy". In the Waste Core Strategy "other recovery" includes thermal treatment and any recovery facilities that do not fall into the category of "re-use", "recycling" or "disposal".

<sup>56</sup> See background documents '*Landfill*' and '*Arising and capacity*'.

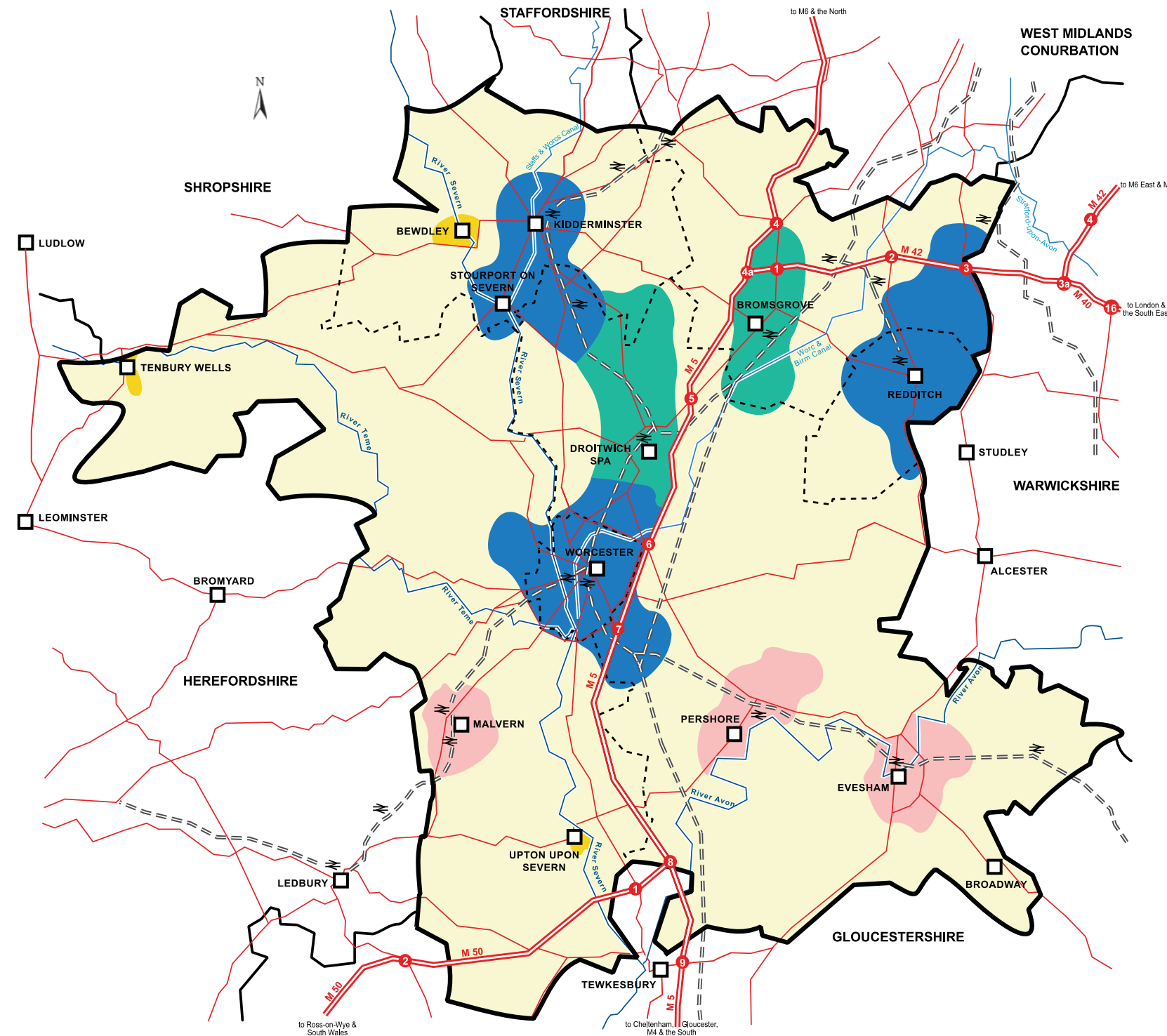
**Figure 14:  
Key diagram:  
Geographic hierarchy**

- Settlements
- Level 1 to 5**
- Level 1** - Kidderminster zone, Redditch zone and Worcester zone
- Level 2** - Bromsgrove zone and Droitwich Spa zone
- Level 3** - Evesham zone, Malvern zone and Pershore zone
- Level 4** - Bewdley zone, Tenbury Wells zone and Upton upon Severn zone
- Level 5** - All other areas

- Principal Roads and Lorry Routes
- Motorways
- Motorway Junction
- Railways
- Rail Stations
- Major Rivers
- Canals
- Worcestershire County Boundary
- District Boundary

This diagram is indicative only and should not be interpreted as showing specific site boundaries

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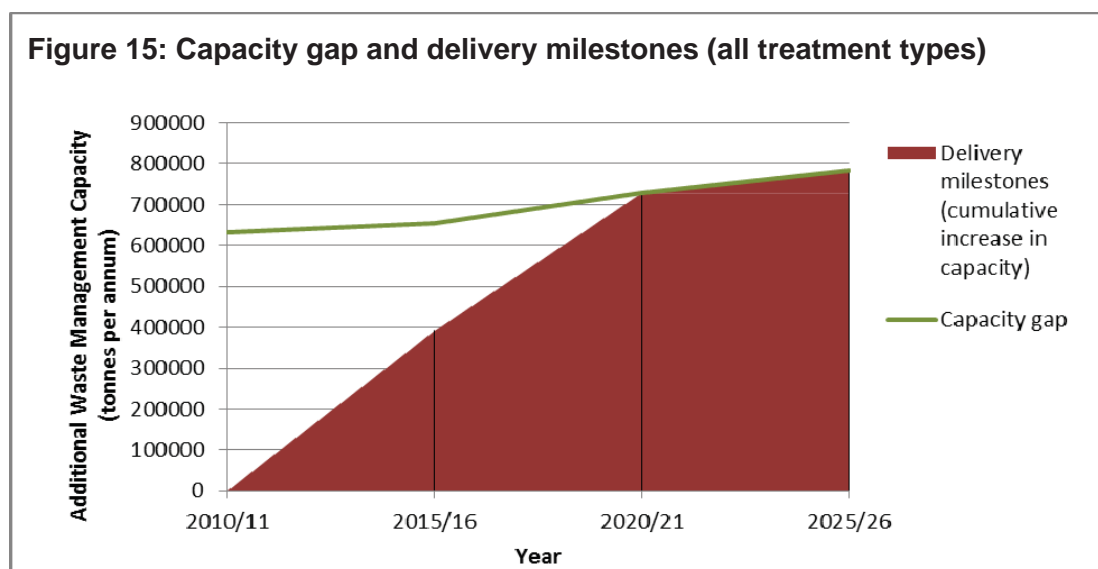




**Table 5: Re-use, recycling and 'other recovery' capacity gap and delivery milestones (tonnes per annum)<sup>57</sup>**

	2010/11	2015/16	2020/21	2025/26
<b>Total Capacity gap</b>	<b>631,500</b>	<b>654,000</b>	<b>728,000</b>	<b>782,000</b>
<b>Delivery milestones</b>	<b>-</b>	<b>391,000</b>	<b>728,000</b>	<b>782,000</b>

**Figure 15: Capacity gap and delivery milestones (all treatment types)**



<sup>57</sup> The capacity gap is based on the assumption of:

- Minimum recycling of 50% for MSW, and 55% for C&I and Hazardous waste, and 25% of C&D waste at static facilities; and
- Maximum landfill 25% C&I, C&D and Hazardous waste, 22% MSW; a working assumption for 'other recovery' 20% C&I and Hazardous waste, 28% for MSW. Further details are set out in the Waste Core Strategy Background document "Arisings and capacity".



## How will the strategy be delivered?

2.80 The objectives will direct the policy framework.

### The Objectives <sup>58</sup>

- WO1 To base decisions on the need to reduce greenhouse gas emissions and to be resilient to climate change.**
- WO2 To base decisions on the principles of sustainable development by protecting and enhancing the County's natural resources, environmental, cultural and economic assets, the character and amenity of the local area and the health and wellbeing of the local people.**
- WO3 To make driving waste up the waste hierarchy the basis for waste management in Worcestershire.**

The following minimum targets have been set in relation to this objective: Re-use and recycling, (including composting) and 'other recovery' by 2020: <sup>59</sup>

- **C&I including Agricultural Waste target:**

Re-use, recycling and 'other recovery'	Minimum 75%
With re-use and recycling at	Minimum 55%
- **C&D target:**

Re-use and recycling	Minimum 75%
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- **MSW target:**

Re-use, recycling and 'other recovery'	Minimum 78%
With re-use and recycling at	Minimum 50%
- **Hazardous waste target:**

Re-use, recycling and 'other recovery'	Minimum 75%
With re-use and recycling at	Minimum 55%

The long-term aim is for all waste to be treated as a resource and for 'zero-waste' to landfill or disposal. <sup>60</sup>

- WO4 To ensure that the waste implications of all new development in Worcestershire are taken into account.**
- WO5 To enable equivalent self-sufficiency in Waste Management in the County by addressing the "Capacity Gap" over the life of the strategy to 2027 and safeguarding existing waste management facilities from incompatible development.**
- WO6 To involve all those affected as openly and effectively as possible.**
- WO7 To develop a waste management industry that contributes positively to the local economy.**
- WO8 To direct development to the most appropriate locations in accordance with the Spatial Strategy.**

2.81 The policies contribute towards the objectives as indicated in **Table 6**.

<sup>58</sup> The objectives are numbered for convenience of referencing, not in order of significance.  
<sup>59</sup> Details of how these targets have been derived are set out in the Waste Core Strategy Background Document "Arising and Capacity".  
<sup>60</sup> Diverting all waste from landfill will require increased re-use and recycling and 'other recovery' capacity beyond that shown in the capacity gap analysis.



**Table 6: Relationship between objectives and policy framework**

		Objectives							
		WO1	WO2	WO3	WO4	WO5	WO6	WO7	WO8
<b>Policies</b>	WCS 1: Presumption in favour of sustainable development	✓	✓	✓	✓	✓	✓	✓	-
	WCS 2: Enabling equivalent self-sufficiency	✓	-	✓	-	✓	-	✓	-
	WCS 3: Re-use and Recycling	✓	-	✓	-	✓	-	-	✓
	WCS 4: Other recovery	✓	-	✓	-	✓	-	-	✓
	WCS 5: Landfill and disposal	✓	-	✓	-	✓	-	-	-
	WCS 6: Compatible land use	-	✓	-	-	-	-	✓	-
	WCS 7: Development associated with existing temporary facilities	-	✓	-	-	-	-	-	-
	WCS 8: Site Infrastructure and access	✓	✓	--	-	-	-	-	-
	WCS 9: Environmental Assets	✓	✓	-	-	-	-	-	-
	WCS 10: Flood risk and water resources	✓	✓	-	-	-	-	-	-
	WCS 11: Sustainable design and operation of facilities	✓	✓	-	✓	-	-	✓	-
	WCS 12: Local characteristics	-	✓	-	-	-	-	-	-
	WCS 13: Green Belt	-	✓	-	-	-	-	-	-
	WCS 14: Amenity	-	✓	-	-	-	-	-	-
	WCS 15: Social and economic benefits	-	✓	-	-	✓	✓	✓	-
	WCS 16: New development proposed on or near to waste management facilities	-	✓	-	✓	✓	✓	✓	-
	WCS 17: Making provision for waste in new development	-	-	✓	✓	-	-	-	-



## 3. Presumption in favour of Sustainable Development

3.1 The *National Planning Policy Framework* includes a presumption in favour of sustainable development but does not contain specific waste policies, since national waste planning policy will be published as part of the National Waste Management Plan for England. Local authorities preparing waste plans and taking decisions on waste applications should have regard to policies in the *National Planning Policy Framework* so far as it is relevant. The Waste Core Strategy accords with the policies in the *National Planning Policy Framework* and **Policy WCS 1** sets out how the presumption in favour of sustainable development will be applied locally.

**Objectives WO1, WO2, WO3, WO4, WO5, WO6, WO7**

### Policy WCS 1: Presumption in favour of sustainable development

a) When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the *National Planning Policy Framework*. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the county.

- b) Planning applications that accord with the policies in the Development Plan (and, where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise.
- c) Where there are no policies in the Development Plan which are relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise – taking into account whether:
  - i. any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the *National Planning Policy Framework* and national waste planning policy<sup>61</sup> taken as a whole; or
  - ii. specific policies in the *National Planning Policy Framework* or national waste planning policy indicate that development should be restricted.

61 Currently *Planning Policy Statement 10: Planning for Sustainable Waste Management*



## **Explanatory text**

- 3.2** The *National Planning Policy Framework* sets out the Government's view of what sustainable development in England means in practice for the planning system. The policies in the Waste Core Strategy guide how the presumption in favour of sustainable development will be applied locally.
- 3.3** The Council will work proactively with developers throughout the process to enable the delivery of proposals which secure development that improves the economic, social and environmental conditions in the county. The Council offers a pre-application advice service to assist with this at an early stage and developers are encouraged to use this service.
- 3.4** Pre-application advice can:
- help issues to be resolved at an early stage through the provision of advice in a timely manner,
  - avoid unnecessary delays and costs by making sure that the right information is provided, particularly where there is a need for formal assessments such as an Environmental Impact Assessment, Habitats Regulations Assessment or Flood Risk Assessment, and
  - provide the Council with the opportunity to highlight other consents which may be required and statutory consultees which developers should liaise with at an early stage.





## 4. Managing waste as a resource

- 4.1** Implementing the waste hierarchy is the basis for delivering sustainable waste management in Worcestershire. **Policies WCS 2, 3, 4 and 5** seek to deliver this objective, enabling sufficient capacity for the management of waste as a resource. **Policies WCS 3, 4 and 5** also direct the right development to the right places in accordance with the spatial strategy.
- 4.2** Enabling equivalent self-sufficiency in waste management in Worcestershire is one of the objectives of the Waste Core Strategy (**Objective WO5**). **Policy WCS 2** sets out the delivery milestones that should be achieved in order to meet the targets set out in **Objective WO3**, to address the capacity gap and to achieve equivalent self-sufficiency by the end of the life of the Strategy.
- 4.3** There are a variety of facilities that either recycle waste or prepare it for re-use or recycling. These are often supported by facilities for collection, storage, sorting, transfer or bulking of waste. **Policy WCS 3** enables all of these kinds of facilities.
- 4.4** **Policy WCS 4** addresses 'other recovery' processes. These processes can be used to recover resources from waste which cannot be recycled and can play an important part in balanced energy policy and in diverting waste from landfill.

- 4.5** The Waste Core Strategy aims to reduce the amount of waste being disposed of or landfilled and no new landfill or disposal capacity is expected to be required in the life of the strategy. However **Policy WCS 5** allows for any proposals for landfill or disposal to be assessed if they are brought forward.

### Policy WCS 2: Enabling Waste Management Capacity

In order to achieve the aims of the Waste Core Strategy and enable appropriate waste management development:

- a) proposals for waste management facilities will be permitted where they contribute towards the following delivery milestones to achieve equivalent self-sufficiency:<sup>62</sup>
- i) By 2015/16: At least 391,000 tonnes per annum additional re-use and recycling or 'other recovery' capacity comprising of:**
- Re-use and recycling capacity to manage at least:
    - 176,500** tonnes per annum of municipal and commercial and industrial waste,
    - 52,500** tonnes per annum of construction and demolition waste,
    - 20,250** tonnes per annum of hazardous waste.

Objectives WO1, WO3, WO5, WO7

<sup>62</sup> All capacity requirements are cumulative and are in addition to the existing capacity set out in **Table 2** (Spatial Portrait).



- 'Other recovery' capacity to manage the remainder:  
**138,500** tonnes per annum for municipal and commercial and industrial waste,  
**3,250** tonnes per annum for hazardous waste.

ii) By 2020/21: At least **728,000 tonnes per annum additional re-use and recycling or 'other recovery' capacity** comprising of:

- Re-use and recycling capacity to manage at least:  
**314,500** tonnes per annum for municipal and commercial and industrial waste,  
**105,000** tonnes per annum for construction and demolition waste,  
**40,500** tonnes per annum for hazardous waste.
- 'Other recovery' capacity to manage the remainder:  
**261,500** tonnes per annum for municipal and commercial and industrial waste,  
**6,500** tonnes per annum for hazardous waste.

iii) By 2025/26: **782,000 tonnes per annum additional re-use and recycling or 'other recovery' capacity** comprising of:

- Re-use and recycling capacity to manage at least:  
**353,000** tonnes per annum for municipal and commercial and industrial waste,  
**105,000** tonnes per annum for construction and demolition waste,  
**40,500** tonnes per annum for hazardous waste.

- 'Other recovery' capacity to manage the remainder:  
**277,000** tonnes per annum for municipal and commercial and industrial waste,  
**6,500** tonnes per annum for hazardous waste.

iv) **No additional sorting and transfer capacity is required to achieve equivalent self-sufficiency**, therefore no delivery milestones have been identified.

v) **No additional landfill or disposal capacity is required to achieve equivalent self-sufficiency**, therefore no delivery milestones have been identified.

The delivery milestones will be monitored in the *Annual Monitoring Report* throughout the life of the strategy. The 'other recovery' milestones will be reviewed as appropriate to reflect any changes in capacity requirements which may result from the provision of re-use and recycling facilities in excess of the minimum requirements for those facilities set out in the policy. This will also allow flexibility to increase the role of re-use, recycling or 'other recovery' in diverting waste from landfill.

b) where equivalent self-sufficiency has been achieved:

i) **proposals for additional re-use and recycling capacity** will be permitted where they benefit the local community or sub-regional economy in accordance with **Policy WCS 15**.



ii) proposals for additional 'other recovery' capacity will be permitted where it is demonstrated that they:

- do not compromise the achievement of equivalent self-sufficiency for re-use and recycling; and
- benefit the local community or sub regional economy in accordance with **Policy WCS 15**.

iii) proposals for sorting and transfer capacity will be permitted where it is demonstrated that they:

- enable waste to be managed at the highest appropriate level of the waste hierarchy; and
- benefit the local community or sub regional economy in accordance with **Policy WCS 15**.

iv) proposals for landfill and disposal capacity are not encouraged and will not be permitted unless they meet the criteria set out in **Policy WCS 5**.

## Explanatory text

### Capacity required to achieve equivalent self-sufficiency

#### Re-use, recycling and 'other recovery' capacity

**4.6** In order to achieve equivalent self-sufficiency and to ensure that the targets set in **Objective WO3** are met, it is estimated that Worcestershire will require 1,075,200 tonnes per annum of re-use, recycling or 'other recovery' capacity by 2025. There is currently<sup>63</sup> 318,450 tonnes per annum capacity which means that 781,750 tonnes per annum of additional capacity<sup>64</sup> will be required over the life of the strategy.

**4.7** **Policy WCS 2** sets delivery milestones for re-use, recycling and 'other recovery' at five year intervals. These are broken down into re-use and recycling capacity and 'other recovery' capacity. These delivery milestones will enable delivery of the Waste Strategy for England 2007 targets for 2020. Early delivery of facilities to help meet these milestones is encouraged. This will enable the development of a strong and prosperous waste management industry as part of the green economy in Worcestershire, as well as helping to contribute towards the Waste Strategy for England 2007 targets for 2015.

<sup>63</sup> As set out in Waste Core Strategy background document "Arising and capacity".

<sup>64</sup> Requirements for additional capacity have been calculated based on the assumption that composting at Hill and Moor will become inoperable from 2020 as the landfill operations progress (see background document "Arising and capacity"). This allows flexibility to ensure that adequate provision is made but will be monitored through the *Annual Monitoring Report*.



**4.8** The re-use and recycling component identified is the minimum contribution that re-use and recycling capacity should make to the achievement of the overall delivery milestones. It is based on the re-use and recycling capacity which will be required to achieve the targets set out in **Objective WO3**. However to enable the management of waste at the highest appropriate level of the geographic hierarchy, no limit is placed on the contribution that re-use and recycling can play in delivering the 782,000 tonnes of re-use, recycling and other recovery capacity that is required to achieve equivalent self-sufficiency by the end of the life of the strategy.

**4.9** The 'other recovery' component also reflects the targets set out in **Objective WO3**. These targets have been calculated based on the assumption that:

- The re-use and recycling targets set out in Objective WO3 are a **minimum**,
- a **maximum** of 25% of each of C&I, C&D and hazardous waste and 22% of MSW will be landfilled or disposed of, and
- the remainder will be managed through 'other recovery'.

The 'other recovery' milestones are intended to ensure that adequate capacity exists to divert waste from landfill and disposal. The re-use and recycling capacity milestones act as a minimum to prevent 'other recovery' capacity from crowding out re-use and recycling. However, 'other recovery' facilities play an important role in bridging the gap between recycling and disposal through the management of residual waste which cannot be recycled.

**4.10** The delivery milestones will be monitored throughout the life of the strategy and progress reported in the *Annual Monitoring Report*. The 'other recovery' milestones will be reviewed as appropriate to reflect any changes in capacity requirements which may result from the provision of re-use and recycling facilities in excess of the minimum requirements for those facilities set out in the policy. This will also allow flexibility to increase the role of re-use, recycling or 'other recovery' in diverting waste from landfill and disposal.

**4.11** The delivery milestones are intended to be read as a whole to enable the required capacity by 2025/2026 and early delivery is encouraged. Facilities which manage more than one waste stream will be encouraged where appropriate. There are likely to be natural synergies between MSW and C&I waste in particular, but any facilities which capitalise upon any synergies between other waste streams will also be supported.

**4.12** The re-use and recycling of C&D waste in-situ is encouraged, as mobile plant play an integral role in moving waste up the waste hierarchy and reducing waste miles. However, due to the temporary nature of this type of activity and the capacity it provides, the milestones only consider the level of capacity provision required from static plant <sup>65</sup>.

<sup>65</sup> Capacity gap for C&D waste calculated on the basis of provision for 25% of C&D waste arisings to be managed at static plant.



#### *Sorting and transfer capacity*

- 4.13** Based on projections of waste arisings and current capacity, no capacity gap has been identified for sorting and transfer for any waste stream. Any proposals will be considered under part b of **Policy WCS 2**.

#### *Landfill and disposal capacity*

- 4.14** Based on projections of waste arisings and current capacity, no capacity gap has been identified for landfill and disposal for any waste stream. Any proposals will be considered under part b of **Policy WCS 2**.

#### *Proposals for new capacity where equivalent self-sufficiency has been achieved*

#### *Re-use, recycling and 'other recovery' capacity*

- 4.15** The long-term aim of **Objective WO3** is for all waste to be treated as a resource and for 'zero-waste' to be landfilled or disposed of. In order to enable this to be achieved additional re-use and recycling or 'other recovery' capacity will be required beyond that identified in the delivery milestones in **Policy WCS 2**. The calculation of these milestones is based on the assumption that 25% of waste will continue to be landfilled or disposed of, however the Council does not wish to encourage the disposal of waste to landfill.

- 4.16** Diversion of waste from landfill and disposal should be at the highest appropriate level of the waste management hierarchy, therefore proposals for re-use and recycling capacity which exceed equivalent self-sufficiency will be encouraged where it is demonstrated that they benefit the local community or sub-regional economy in accordance with **Policy WCS 15**.

- 4.17** 'Other recovery' facilities can play an important role in the diversion of residual waste from landfill and disposal and will be encouraged where it can be demonstrated that they do not crowd out recycling and that they benefit the local community or sub-regional economy in accordance with **Policy WCS 15**.

#### *Sorting and transfer capacity*

- 4.18** Sorting and transfer facilities enable the management of waste at the highest appropriate level of the waste hierarchy, through sorting materials for recycling or 'other recovery' or bulking them for transfer to recycling facilities. They can form an integral part of the management chain allowing for movement of waste to more centralised treatment facilities.
- 4.19** It is not clear what levels of sorting and transfer capacity are optimal to support the waste management industry and the capacity gap has been calculated based on provision of sorting and transfer facilities for at least 30% of the waste arising in Worcestershire. This is in line with the regional average, but will be monitored through the life of the Strategy.



**4.20** For these reasons sorting and transfer capacity that will contribute towards the achievement of the objectives of the Waste Core Strategy will be encouraged.

*Landfill or disposal capacity*

**4.21** The Waste Core Strategy, in line with national policy, aims to drive waste up the waste hierarchy, to use it as a resource and to minimise the amount which is landfilled or disposed of. The existing landfill capacity in the county is sufficient for the lifetime of the Strategy <sup>66</sup>. This means that proposals for new landfill or disposal capacity are not encouraged.

**4.22** Any proposals for landfill or disposal capacity would need to meet the criteria set out in **Policy WCS 5** and will be considered against other policies in the development plan.

**Explanatory text**

*Demonstrating that the proposal is located at the highest appropriate level of the geographic hierarchy*

**4.23** **Figure 14: Key Diagram** shows the levels of the geographic hierarchy. It should be used by the applicant to identify which level of the geographic hierarchy the proposed site is located within.

**4.24** Level 1 is the highest level of the geographic hierarchy. If the proposed site is not in level 1 of the geographic hierarchy, applicants should demonstrate that proposals are located at the highest appropriate level. This should set out the special considerations that justify why it is more suitable for the development to be located on the proposed site than in the geographic zones at higher levels.

**Objectives WO1, WO3, WO5, WO8**

**Policy WCS 3: Re-use and Recycling**

In order to achieve equivalent self-sufficiency in waste management and deliver the spatial strategy:

- a) waste management facilities that enable re-use or recycling <sup>67</sup> of waste, including treatment, storage, sorting and transfer facilities, will be permitted at all levels of the geographic hierarchy where it is demonstrated that the proposed location is at the highest appropriate level of the geographic hierarchy.
- b) waste water treatment facilities will be permitted at all levels of the geographic hierarchy.

<sup>66</sup> See background documents "Arising and capacity" and "Landfill".

<sup>67</sup> Article 3(17) of the revised Waste Framework Directive 2008 specifically mentions the reprocessing of organic material as being included in the definition of recycling, therefore for the Waste Core Strategy open windrow composting, in-vessel composting and anaerobic digestion are included as recycling alongside other physical and chemical treatment processes.



**4.25** The geographic hierarchy and spatial strategy are based on the consideration of:

- patterns of current and predicted future waste arisings<sup>68</sup>,
- patterns of current and predicted future resource demand<sup>69</sup>,
- onward treatment facilities<sup>70</sup>,
- connections to the strategic transport network,
- potential for future development of waste management facilities, and
- City, Borough and District Councils' Strategic Flood Risk Assessments.

**4.26** Justification for the proposed location in lower levels of the geographic hierarchy would need to reflect these considerations, and may include:

- Proximity to the producers of the waste to be managed,
- Proximity to end users,
- Proximity to other waste management facilities in the same treatment chain,
- Proximity to synergistic development, enabling bulking, transfer and the use of reverse-logistics for the movement of material,
- Where heat or energy is produced, proximity to end users, heat distribution networks or grid connections, or
- Lack of suitable sites at higher levels of the geographic hierarchy.

<sup>68</sup> See Figure 5. Patterns of C&I Waste Arisings in Worcestershire (per Hectare by LSOA).

<sup>69</sup> See Figure 9. Patterns of resource demand for organics, energy and recyclate in Worcestershire, data from the evidence base for the AWM Landfill Diversion Strategy.

<sup>70</sup> Based on the presence of sorting or recycling facilities.

**4.27** In all cases the justification must be clearly set out and where alternative sites have been considered, it would be useful to include details of any constraints considered in site screening activities as part of the application. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity. In the case of EIA development this assessment will form part of the Environmental Statement.



Bales of crushed aluminium cans awaiting transfer to a recycling facility (Envirosort, Norton near Worcester, Photo courtesy of Severn Waste Services Ltd).

### *Waste water treatment facilities*

**4.28** Waste water treatment facilities may be required to meet an identified capacity gap, to alleviate environmental and amenity nuisance or to meet, or improve compliance with, regulatory standards. They form an important part of the infrastructure to support new development or could provide first time sewage for existing dwellings. This may be through mains sewerage facilities or through on-site management of waste water.



**4.29** It has been agreed with the City, Borough and District Councils and the Government Office for the West Midlands that the need for and general location of new waste water treatment infrastructure will be identified by the District Councils in their Development Plan Documents, and as part of the infrastructure needed for new development.

**4.30** There are two main ways to deal with waste water; either by the conventional treatment methods such as Sewage Treatment Works and their supporting infrastructure or low energy alternative methods such as Wetland Ecosystem Treatment (WET) Systems<sup>71</sup> and Sustainable Drainage Systems (SuDS). The Environment Agency seeks to ensure that the most environmentally effective means of disposal is used for any development. Considerable weight will be given to the Environment Agency's advice on these matters. It is unlikely that planning permission will be granted if it objects in such circumstances unless there are very good reasons to do so.

71 WET Systems are constructed wetland systems which function by harnessing the innate ability of natural wetland ecosystems to absorb and transform the organic nutrients found in wastewater, converting these into plant biomass and soil. A WET System is made up of a series of swales - specially designed and constructed earth banks and ponds.

72 Article 3(15) of the revised Waste Framework Directive 2008 defines "Recovery" as "any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy". In the Waste Core Strategy "other recovery" includes thermal treatment and any recovery facilities that do not fall into the category of 're-use', 'recycling' or 'disposal'.

## Policy WCS 4: Other recovery

- a) In order to achieve equivalent self-sufficiency in waste management, proposals for 'other recovery'<sup>72</sup> facilities will only be permitted where it is demonstrated that:
  - i. sorting of waste is carried out to optimise re-use and recycling; and
  - ii. resource recovery from outputs of the process, including by-products, is optimised and any residues can be satisfactorily managed and disposed of; and
  - iii. where thermal treatment is carried out, energy recovery is optimised; and
- b) In order to deliver the spatial strategy, proposals for 'other recovery' facilities will be permitted in levels 1 and 2 where it is demonstrated that the proposed location is at the highest appropriate level of the geographic hierarchy;
- c) Planning permission will not be granted for 'other recovery' facilities in level 3, 4 or 5 except where it is demonstrated that:
  - i. the proposed development cannot reasonably be located in levels 1 or 2 of the geographic hierarchy, and
  - ii. the proposed location is at the highest appropriate level of the geographic hierarchy.

Objectives WO1, WO3, WO5, WO8

4. MANAGING WASTE AS A RESOURCE • Worcestershire Waste Core Strategy



## Explanatory text

- 4.31** 'Other recovery' facilities are facilities that recover resources from waste which cannot be recycled. This includes but is not limited to facilities that carry out energy recovery<sup>73</sup>. Facilities which do not have resource recovery as a primary intention will be considered as disposal under **Policy WCS 5**, such proposals could include incineration without resource recovery, or landfill, even where landfill gas recovery is proposed. All proposals should include details of how waste will be sorted prior to treatment in order to optimise the re-use and recycling of materials. This could be done on-site or elsewhere.
- 4.32** Where thermal treatment is carried out, energy recovery must be optimised and the process used should provide the greatest practicable energy recovery, either as Combined Heat and Power (CHP) or with heat or power as a single energy recovery process. The potential to serve local users should be considered alongside the opportunity for grid connections.
- 4.33** Where the location of the facility has been influenced by the consideration of how best to maximise energy recovery, either at the present time or in the future, this will be a material planning consideration. However, the energy efficiency of any particular waste development will ultimately be defined at the Environmental Permitting stage.
- 4.34** All waste management processes have residues. Some processes may result in ash residues. The opportunities to recover value from these residues must be fully considered. However, other residues may be hazardous and must be managed or disposed of appropriately.

<sup>73</sup> Annex II of the Waste Framework Directive 2008 sets out a non-exhaustive list of recovery operations.



Energy from waste (© RecycleNow)



### *Proposals for 'other recovery' facilities in levels 1 and 2 of the geographic hierarchy*

**4.35** Many 'other recovery' facilities form a key part of wider waste management networks. To enable them to perform this role, 'other recovery' facilities will be directed to levels 1 and 2 of the geographic hierarchy. **Figure 14. Key diagram** shows the levels of the geographic hierarchy. It should be used by the applicant to identify which level of the geographic hierarchy the proposed site is located within.

**4.36** Level 1 is the highest level of the geographic hierarchy. If the proposed site is in level 2 of the geographic hierarchy, applicants should demonstrate why this is the highest appropriate level for the proposed development. This should set out the considerations that justify why it is more suitable for the development to be located on the proposed site than in the geographic zones in level 1 of the geographic hierarchy. These would need to reflect the considerations of the geographic hierarchy (see paragraph 4.25), and may include:

- Proximity to the producers of the waste to be managed,
- Proximity to end users,
- Proximity to other waste management facilities in the same treatment chain,
- Proximity to synergistic development, enabling bulking, transfer and the use of reverse-logistics for the movement of material,
- Where heat or energy is produced, proximity to end users, heat distribution networks or grid connections, or
- Lack of suitable sites at higher levels of the geographic hierarchy.

**4.37** In all cases the justification must be clearly set out and where alternative sites have been considered, it would be useful to include details of any constraints considered in site screening activities as part of the application. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity.

### *Proposals for 'other recovery' facilities in levels 3, 4, and 5*

**4.38** Where 'other recovery' facilities are proposed in levels 3, 4 or 5 it will be necessary for all proposals to demonstrate that there are no suitable sites available at higher levels of the geographic hierarchy. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity. This will need to be based on robust evidence that is presented as part of the application.

**4.39** If it has been demonstrated that there are no suitable sites in levels 1 or 2 of the geographic hierarchy, developments in level 3 will be considered to be at the highest appropriate level of the geographic hierarchy.



- 4.40** In addition to demonstrating that there are no suitable sites in level 1 or 2, proposals in levels 4 and 5 of the geographic hierarchy will also need to justify why the location is at the highest appropriate level. Justification for the proposed location in lower levels of the geographic hierarchy may include:
- Proximity to the producers of the waste to be managed,
  - Proximity to end users,
  - Proximity to other waste management facilities in the same treatment chain,
  - Proximity to synergistic development, enabling bulking, transfer and the use of reverse-logistics for the movement of material,
  - Where heat or energy is produced, proximity to end users, heat distribution networks or grid connections, or
  - Lack of suitable sites at higher levels of the geographic hierarchy.

- 4.41** In all cases the justification must be clearly set out and where alternative sites have been considered, it would be useful to include details of any constraints considered in site screening activities as part of the application. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity.

## Policy WCS 5: Landfill and disposal

No capacity gap has been identified for the landfill or disposal of waste.

- a) Planning permission will not be granted for the landfill or disposal of waste except where it is demonstrated that:
- re-use, recycling, or energy or resource recovery are not practicable for the waste type to be managed and no landfill or disposal capacity exists in the county for that type of waste; or
  - there will be a shortfall in landfill or disposal capacity necessary to achieve the aims and purpose of the strategy; or
  - the proposal is essential for operational or safety reasons or is the most appropriate option.

### Disposal other than landfill

- b) In order to deliver the spatial strategy, proposals for disposal facilities other than landfill:
- will only be permitted in levels 1 and 2 where it is demonstrated that the proposed location is at the highest appropriate level of the geographic hierarchy;



- ii. will not be permitted in levels 3, 4 or 5 except where it is demonstrated that:
  - the proposed development cannot reasonably be located in levels 1 or 2 of the geographic hierarchy, and
  - the proposed location is at the highest appropriate level of the geographic hierarchy.

#### Landfill

- c) Proposals for landfill<sup>74</sup> facilities will only be permitted in locations which are clearly demonstrated to be geologically suitable.
- d) Any proposals for landfill must include:
  - i. landfill gas management systems, with energy recovery where practicable unless exceptional circumstances are clearly justified by the applicant, and
  - ii. a restoration scheme which contributes positively to the objectives of the development plan, with details of aftercare for a minimum period of 5 years.

<sup>74</sup> The term landfill refers to the deposit of waste into or onto land and as such also includes landraising.

<sup>75</sup> The Landfill (England & Wales) Regulations 2002

<sup>76</sup> Where the deposit of waste material above existing or original ground level raises land (this does not include landspreading - adding material to land to improve its fertility or soil texture).

<sup>77</sup> For more information see Waste Core Strategy background document "Landfill".

## **Explanatory text**

### *Landfill or disposal of waste*

- 4.42** The term landfill refers to sites for the deposit of waste into or onto land<sup>75</sup> and as such also includes landraising<sup>76</sup>. Other disposal activities include treatment processes that do not recover energy or resources, such as incineration without energy recovery.
- 4.43** The Waste Core Strategy aims to reduce the amount of waste being disposed of and landfilled and anticipates that existing landfill and disposal capacity in Worcestershire will be sufficient to meet need during the lifetime of the strategy. However there will, for the foreseeable future, be a proportion of waste which, due to its nature, cannot be managed through any other means<sup>77</sup>.
- 4.44** Where a new landfill or disposal facility is required because adequate capacity does not currently exist in the county, proposals should include details to demonstrate this, including evidence of the capacity gap for this specific waste and details of how it is currently managed.
- 4.45** Landfill or disposal may also be necessary for a variety of operational or safety reasons. Landfill is often an essential component in the restoration of mineral workings and can also be used in the restoration of previously developed or derelict land.



**4.46** Excavation activities, a normal part of the construction process, can result in considerable arisings of subsoils. In some cases, this type of waste can usefully be re-used for purposes such as flood management schemes, landscaping, levelling of sites, the construction of bunds, embankments or features for noise attenuation. However, to prevent inappropriate development, these kinds of proposals will be considered against **Policy WCS 5: Landfill and disposal**. The decision on whether proposals are a form of disposal will be guided by the Environment Agency's advice<sup>78</sup>.

**4.47** There is some cross-over between the responsibilities of the County Council and the City, Borough and District Councils, as most applications which include the use of subsoils on-site will normally be decided by the City, Borough and District Councils. In order to ensure the sustainable management of subsoils and prevent inappropriate disposal in artificial mounds, the Council will request that District Councils include policies to manage this waste in the development of the relevant development plan documents. This matter will be monitored and the Council will produce a Supplementary Planning Document if necessary.

**4.48** It is possible that during the life of the strategy, proposals may be put forward to recover resources from historic landfill sites (landfill mining). Any proposals for landfill mining would need to be assessed in accordance with the development plan and would be considered in consultation with the Environment Agency, Health and Safety Executive, Environmental Health Officers and any other relevant body.

*Proposals for disposal facilities other than landfill in levels 1 and 2 of the geographic hierarchy*

**4.49** Disposal facilities other than landfill will be directed to levels 1 and 2 of the geographic hierarchy. **Figure 14: Key diagram** shows the levels of the geographic hierarchy. It should be used by the applicant to identify which level of the geographic hierarchy the proposed site is located within.

**4.50** Level 1 is the highest level of the geographic hierarchy. If the proposed site is in level 2 of the geographic hierarchy, applicants should demonstrate why this is the highest appropriate level for the proposed development. This should set out the considerations that justify why it is more suitable for the development to be located on the proposed site than in the geographic zones in level 1 of the geographic hierarchy. These would need to reflect the considerations of the geographic hierarchy (see paragraph 4.25), and may include:

- Proximity to the producers of the waste to be managed,
- Proximity to other waste management facilities in the same treatment chain,
- Proximity to synergistic development, enabling bulking, transfer and the use of reverse-logistics for the movement of material,
- Lack of suitable sites at higher levels of the geographic hierarchy.

<sup>78</sup> Currently set out in "Defining Waste Recovery: Permanent Deposit of Waste on Land" (Regulatory Guidance Series No EPR 13).



**4.51** In all cases the justification must be clearly set out and where alternative sites have been considered, it would be useful to include details of any constraints considered in site screening activities as part of the application. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity.

*Proposals for disposal facilities other than landfill in levels 3, 4, and 5 of the geographic hierarchy*

**4.52** Where disposal facilities other than landfill are proposed in levels 3, 4 or 5 it will be necessary for all proposals to demonstrate that there are no suitable sites available at higher levels of the geographic hierarchy. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity. This will need to be based on robust evidence that is presented as part of the application.

**4.53** If it has been demonstrated that there are no suitable sites in levels 1 or 2 of the geographic hierarchy, developments in level 3 will be considered to be at the highest appropriate level of the geographic hierarchy.

**4.54** In addition to demonstrating that there are no suitable sites in level 1 or 2, proposals in levels 4 and 5 of the geographic hierarchy will also need to justify why the location is at the highest appropriate level. Justification for the proposed location in lower levels of the geographic hierarchy may include:

- Proximity to the producers of the waste to be managed,
- Proximity to other waste management facilities in the same treatment chain,
- Proximity to synergistic development, enabling bulking, transfer and the use of reverse-logistics for the movement of material, or
- Lack of suitable sites at higher levels of the geographic hierarchy.

**4.55** In all cases the justification must be clearly set out and where alternative sites have been considered, it would be useful to include details of any constraints considered in site screening activities as part of the application. This could take account of the constraints which are considered in other policies in the Waste Core Strategy, including environmental assets, flood risk, water resources, local characteristics or amenity.

### The location of landfill facilities

- 4.56** The development of landfill facilities is limited by the presence of suitable geology, as well as other factors addressed in the Waste Core Strategy such as impacts on water resources (**Policy WCS 10**). It is therefore not appropriate to direct any proposals for the development of landfill facilities in line with the geographic hierarchy. However proposals must address the other policies in the Development Plan to ensure that potential impacts are managed appropriately.
- 4.57** The geology of the location will be a key consideration in the development of proposals for new or extended landfill sites. The character of the geology will need to be considered in developing working plans and restoration proposals and will influence the type of waste that can be disposed of. Where geological conditions are suitable, proposals should consider the potential for creating separate appropriately engineered cells for stabilised non-reactive hazardous waste.

### Landfill gas management

- 4.58** Landfill can cause greenhouse gas emissions through the uncontrolled release of landfill gas from the breakdown of biodegradable material. Landfill sites are responsible for approximately 40% of the UK's methane emissions<sup>79</sup>. Where gas is collected and burned in a gas engine to produce electricity or is flared, the production of greenhouse gas is considerably reduced and energy can be recovered.
- 4.59** The design and management of each site will mean that some sites are more suited to energy recovery than others. In the first instance gas management systems should use landfill gas for energy production and only where it is demonstrated that this is not possible would flaring of gas be acceptable.



Landfill gas management plant (Hill and Moor Landfill site, near Pershore)

<sup>79</sup> For more information see Waste Core Strategy background document "Climate change and waste management in Worcestershire".



### *Landfill restoration schemes*

- 4.60** All proposals for new landfill capacity need to consider the whole life of the landfill site, from engineering through to restoration. The restoration of landfill sites can provide opportunities to create new or enhance existing habitats and provide valuable open space for communities or recreational facilities and should maximise the opportunities to do so. The restoration scheme should be developed taking into account the considerations in **Policy WCS 9**, and the objectives of relevant City, Borough, District, parish and neighbourhood plans.
- 4.61** An aftercare period will be required which is adequate to ensure that a satisfactory outcome is produced and that all planting and landscaping is established. This will be for a minimum of 5 years and will be distinct from any period set by the pollution control authority with regard to surrendering licences.



## 5. Location of new waste management development

5.1 Most types of waste management facilities are akin to business or industrial activities. When directed to the right locations they can provide economic opportunities without having adverse impacts on their surroundings:

- **Policy WCS 6** directs waste management development to land with compatible uses, including industrial land, contaminated derelict or employment land and redundant agricultural or forestry buildings.

- **Policy WCS 7** sets out requirements that where compatible uses are temporary, any permitted waste management facilities are also time-limited.

- **Policy WCS 8** ensures that site access and infrastructure are adequate.

### Objectives WO2, WO7

#### Policy WCS 6: Compatible land uses

Proposals for new waste management facilities will be permitted where it is demonstrated that they are located on a type of land that is identified as compatible in **Table 7. Compatible land uses:**

Table 7: Compatible land uses	Enclosed facilities <sup>80</sup>		Enclosed or unenclosed	Unenclosed facilities		
	Re-use and recycling <sup>81</sup>	'Other recovery' or disposal <sup>82</sup>	Waste water treatment facilities	Open windrow composting	Other unenclosed facilities	Landfill
Existing or allocated industrial land	✓	✓	✓	✗	◆	✗
Contaminated or derelict employment land <sup>83</sup>	✓	✓	✓	◆	◆	✗
Redundant agricultural or forestry buildings or their curtilage	✓	◆	✓	✓	◆	✗
Sites with current use rights for waste management Purposes	✓	✓	✓	✓	◆	✗
Active mineral workings or landfill sites	■	■	■	■	■	■
Land within or adjoining a waste water treatment works	■	■	■	■	■	✗
Co-location with producers, end users or other complementary activities	■	■	■	■	■	✗
Greenfield land	✗	✗	◆	◆	✗	◆

**Key** ✓ = A compatible land use = Where strongly justified  
 ✗ = Not a compatible land use = Where a clear operational relationship is demonstrated

<sup>80</sup> Enclosed facilities may not always be within a building. The degree of enclosure which is necessary will depend on the nature of the waste management activity and the context of the site.

<sup>81</sup> Re-use and recycling includes treatment, storage, sorting and transfer facilities.

<sup>82</sup> Article 3 (15) of the revised Waste Framework Directive 2008 defines recovery as "any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy". Disposal includes, but is not limited to, thermal treatment without recovery.

<sup>83</sup> This includes former airfields.



## Explanatory text

5.2 Different types of waste management facility have different requirements and impacts and are therefore more suited to different types of land. Where it is indicated that proposals must be operationally related, this must be clearly demonstrated. **Table 8** gives some examples of operational relationships which may apply.

5.3 Where it is indicated that proposals must be strongly justified, it is for applicants to justify these circumstances. Full details of the considerations that have influenced the proposed location should be provided.



Recycled fridges (copyright RecycleNow)

**Table 8: Examples of operational relationship**

Type of land	Examples of operational relationship
Active mineral workings or landfill sites	<p>Sorting or other activities that reduce waste being landfilled where it is most appropriate to undertake this on site.</p> <p>Treatment of waste water or leachate from mineral workings or landfill operations.</p> <p>Proposals that form a necessary part of a restoration scheme for the site.</p>
Land within or adjoining a sewage treatment works	Proposals to increase the capacity or support the operation of the treatment works.
Co-location with producers, end users or other complementary activities	<p>Proposals for facilities that are co-located with:</p> <ul style="list-style-type: none"> <li>• the producers of the specific waste to be managed; or</li> <li>• other waste management facilities in the same treatment chain; or</li> <li>• the end-users of recyclate produced by the facility; or</li> <li>• the end-users of heat or energy produced by the facility, including heat distribution networks or grid connections where relevant; or</li> <li>• other complementary activities, such as resource recovery parks.</li> </ul>



**Objectives WO2**

**Policy WCS 7:  
Development  
associated with  
existing temporary  
facilities**

Where waste management proposals are operationally related to, or located on a mineral working, landfill site or other waste management facility of a temporary nature, permission will only be granted:

- i. for a temporary period commensurate with the permitted use on site; and
- ii. where they do not have an adverse impact on the restoration of the site.

**Explanatory text**

**5.4** Mineral workings and landfill sites are temporary uses of land, although they may be long-term. Associated developments including waste management facilities should be removed once the original justification (the relationship with the active mineral working or landfill site) no longer applies.



Composting at Hill and Moor



## **Policy WCS 8: Site infrastructure and access**

Proposals for new waste management facilities will be permitted where it is demonstrated that:

- a) infrastructure on the site is adequate to support the proposed waste management facility, either as it is or with improvements that form part of the application; and
- b) the site is well connected to the strategic transport network and uses alternatives to road transport where practicable; and
- c) vehicular and pedestrian access to the site is safe and adequate to support the proposed waste management facility, either as it is or with improvements that form part of the application; and
- d) proposals will not have an unacceptable adverse impact on safety or congestion on the transport network or amenity along transport routes.

Cumulative effects must be considered and details of any mitigation or compensation proposals must be included.

### ***Explanatory text***

#### ***Infrastructure on the site***

- 5.5** The infrastructure on site will need to be adequate for all of the proposed operations. This infrastructure may include water, electricity, waste-water disposal and internal access routes. Where new or additional infrastructure is required it must not place undue strain on existing networks.

- 5.6** Water shortages could frustrate development in Worcestershire. Consideration should be given to the ability of Severn Trent Water 'Severn Zone' (Resource Zone 3) to supply the needs of the development.
- 5.7** In order to demonstrate the adequacy of the infrastructure, proposals should include an assessment of the quality of buildings, internal access roads and other site infrastructure.
- 5.8** Where improvements are necessary to make the on-site infrastructure adequate to support the proposed use, full details should be included in the proposal outlining how this will be addressed as part of the development.

#### ***Connections to the strategic transport network and vehicular and pedestrian access***

- 5.9** All developments must take into account local movement and transportation policies in the adopted Local Transport Plan, Local Plans and Local Development Frameworks. They should aim to minimise the impact of the development by reducing the need to transport waste and the need for visitors and the workforce to travel by road. These measures can reduce greenhouse gas emissions associated with the waste management facility.



**5.10** All proposals should include an assessment of connectivity of the site, with specific reference to the potential for using alternatives to road transport. This assessment should:

- Identify potential connections to:
  - The waterways network;
  - The rail network<sup>84</sup>; and
  - The strategic highway network.
- Assess the quality of the connections, including:
  - Capacity of the local and strategic transport network;
  - Suitability for vehicles/vessels; and
  - Loading and unloading opportunities.
- Identify how these connections will be used throughout the lifetime of the proposal and where alternatives to road transport are not used this should be clearly justified.

**5.11** Vehicular and pedestrian access to the site should be considered in accordance with Worcestershire Highways Design Guide.

**5.12** The impact of the development and its associated traffic movements on the safety, integrity and amenity of the transport network must be considered. Where there is likely to be any impact on the safe and efficient functioning of the transport network the appropriate authorities<sup>85</sup> should be involved from the outset to agree the scope and nature of any mitigation that might be necessary. Where the proposal might be expected to have any impact on the Strategic Road Network, the Highways Agency should also be involved at an early stage to ensure that any concerns they might have are addressed.

84 Rail generally handles trainloads conveying up to 1000 tonnes payload and even on a weekly train basis a terminal/waste transfer station would need to have throughput of 52,000 tonnes a year.

85 This might include any or all of the following: the Highways Agency, the county Highways Authority; Network Rail; or British Waterways.



## 6. Ensuring sustainable waste management development

- 6.1** Sustainable development is a core principle underpinning planning<sup>86</sup>. It looks to balance the protection and enhancement of the environment, social cohesion and sustainable economic development in decision making. The development of waste management facilities can contribute positively to each of these aspects.
- 6.2** In Worcestershire the protection and enhancement of biodiversity, geodiversity and the historic environment have been identified as important issues in the county's Sustainable Community Strategies and consultation responses. They are important both in their own right and as part of networks of 'green infrastructure'<sup>87</sup>. They are dealt with in **Policy WCS 9** and the protection and enhancement of local characteristics is addressed in **Policy WCS 12** and **Policy WCS 13**.
- 6.3** Climate change mitigation and resilience and resource efficiency are also identified as a priority in the Sustainable Community Strategy and in the objectives of the Waste Core Strategy. Design and operation features and practices to promote these are set out in **Policy WCS 11**, with flood risk and water quality addressed in **Policy WCS 10**.
- 6.4** **Policy WCS 14** protects social and economic concerns by ensuring that there are no unacceptable adverse impacts on amenity. **Policy WCS 15** ensures that social or economic benefits are delivered from all waste management proposals.

### Policy WCS 9: Environmental assets

In order to protect and enhance Internationally, Nationally and Locally designated sites, habitats, species and heritage assets and their settings, proposals for waste management facilities will be permitted where:

- a) the proposal, including its location, design, operation, landscaping and/or restoration:
  - i will have no adverse effects on the integrity of a site designated Internationally for its nature conservation importance, either alone or in combination with other plans or projects; or is necessary for the management of an Internationally designated site.

Where the proposed development would or may have adverse effects on the integrity of an site designated Internationally for its nature conservation importance, development will only be permitted where there are:

  - no alternative solutions; and
  - imperative reasons of overriding public interest

and

<sup>86</sup> National Planning Policy Framework 2012.

<sup>87</sup> Further guidance on green infrastructure in Worcestershire is set out in "Planning for a Multifunctional Green Infrastructure Framework in Worcestershire: Green Infrastructure Study" and applicants may benefit from considering the 'GI Environmental Character Areas' and associated advice.

Objectives WO1, WO2



- b) the proposal, including its location, design, operation, landscaping and/or restoration:
- i will have no unacceptable adverse impacts on other internationally, nationally or locally designated or identified habitats, species or nature conservation sites <sup>88</sup>; and
  - ii will not lead to substantial harm to or loss of significance of designated or non-designated heritage assets or their settings <sup>89</sup>. Where the proposed development would have unacceptable adverse impacts on environmental assets, development will only be permitted where it is demonstrated that the benefits of the development at the proposed site clearly outweigh any unacceptable adverse impacts. Proportionate consideration will be given in accordance with their degree of protection and significance.
- and
- c) the proposal, including its design, landscaping and/or restoration, takes advantage of opportunities to enhance the character, quality and significance of environmental assets <sup>90</sup>, and their settings or linkages between them.



Hartlebury Common

### **Explanatory text**

**6.5** Internationally, Nationally and Locally identified sites, habitats, species and heritage assets are listed in **Table 9** <sup>91</sup>.

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88 See Table 9: Environmental Assets  
 89 See Table 9: Environmental Assets  
 90 See Table 9: Environmental Assets  
 91 Areas of Outstanding Natural Beauty and Green Belt are considered in **Policy WCS 12: Local Characteristics** and **Policy WCS 13: Green Belt**



**Table 9: Environmental Assets** <sup>92</sup>

	Sites identified for their nature conservation importance	Habitats	Species	Heritage assets
<b>International</b>	<ul style="list-style-type: none"> <li>Ramsar</li> <li>Natura 2000 (SAC and SPA)</li> </ul>	<ul style="list-style-type: none"> <li>Any internationally Designated habitats</li> </ul>	<ul style="list-style-type: none"> <li>Any international protected species</li> <li>European Protected Species <sup>93</sup></li> </ul>	<ul style="list-style-type: none"> <li>World Heritage Sites</li> <li>Any heritage assets of international significance</li> </ul>
<b>National</b>	<ul style="list-style-type: none"> <li>National Nature Reserves</li> <li>Sites of Special Scientific Interest (SSSI) <sup>94</sup></li> </ul>	<ul style="list-style-type: none"> <li>Ancient Semi-Natural Woodland</li> <li>National BAP habitats</li> </ul>	<ul style="list-style-type: none"> <li>National BAP species</li> <li>Section 41 notable and protected species list <sup>95</sup></li> </ul>	<ul style="list-style-type: none"> <li>Registered Battlefields</li> <li>Registered Historic Parks and Gardens</li> <li>Scheduled Ancient Monuments</li> <li>Listed Buildings</li> <li>Conservation Areas</li> </ul>
<b>Local</b>	<ul style="list-style-type: none"> <li>Local Nature Reserves</li> <li>Local sites:               <ul style="list-style-type: none"> <li>Geological Sites <sup>96</sup></li> <li>Special Wildlife Sites <sup>97</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Local BAP Habitats</li> </ul>	<ul style="list-style-type: none"> <li>Local BAP species</li> </ul>	<ul style="list-style-type: none"> <li>Historic environment and heritage assets recorded on county historic environment record and local lists or identified through pre-determination investigation, including archaeological features, and landscapes and their settings</li> <li>Historic farmsteads</li> <li>Vernacular or locally important features</li> </ul>

<sup>92</sup> This table identifies sites, habitats, species and heritage assets identified or designated at the time of preparation. There may be future designations which should be taken into account.

<sup>93</sup> European Protected Species receive protection under *The Conservation of Habitats and Species Regulations 2010*

<sup>94</sup> SSSIs are designated for either biological or geological interest.

<sup>95</sup> *Natural Environment and Rural Communities Act, 2006.*

<sup>96</sup> Information on sites of geodiversity importance is available from Herefordshire and Worcestershire Earth Heritage Trust - [www.earthheritagetrust.org](http://www.earthheritagetrust.org)

<sup>97</sup> Information on Special Wildlife Sites, including Roadside Verge Nature Reserves, is available from Worcestershire Wildlife Trust - [www.worcswildlifetrust.co.uk](http://www.worcswildlifetrust.co.uk)



### *Protection of sites identified internationally for their nature conservation importance*

- 6.6** Internationally, nationally and locally designated sites all play a role in preserving and enhancing biodiversity and geodiversity. These are given different degrees of protection through legislation and national policy.
- 6.7** The following international sites have the potential to be affected by waste management development in Worcestershire<sup>98</sup>:
- Bredon Hill SAC (Worcestershire)
  - Lyppard Grange Ponds SAC (Worcestershire)
  - Dixton Woods SAC (Gloucestershire)
  - Fens Pools SAC (Dudley)
  - River Wye/Afon Gwy SAC (Monmouthshire, Gloucestershire, Herefordshire, Powys)
  - Walmore Common SPA and Ramsar (Gloucestershire)
  - Severn Estuary SAC, SPA and Ramsar (Vale of Glamorgan, Cardiff, Newport, City of Bristol, Monmouthshire, Gloucestershire, North Somerset, Somerset, South Gloucestershire).
- 6.8** If a plan or project is not connected with, or necessary for the maintenance of an internationally designated site, and it is likely to have a significant effect, an "appropriate assessment" is required<sup>99</sup> to determine whether the proposal will have an adverse effect on the integrity of the site.

- 6.9** Modelling was undertaken as part of the Habitats Regulations Assessment of the Waste Core Strategy. The results (set out in **Appendix 3**) identify those areas where it could not be concluded that there would be no likely significant effect from waste management development on internationally designated sites.
- 6.10** The Waste Core Strategy is a high level plan which is not technology specific and does not make site allocations. The results of the modelling are based on broad assumptions and provide an appropriate level of certainty for this level of plan. The potential effects from individual waste management facilities will vary and must be assessed as part of the planning application. Policy **WCS 9** sets out safeguards to ensure that this assessment of lower tier plans or projects is undertaken.
- 6.11** The identification of the areas in **Appendix 3** does not mean that the development of a waste management facility cannot happen in these areas, but that development may be constrained. Equally it does not mean that development of a waste management facility outside of these areas will have no impact on internationally designated site and these issues should be considered where relevant.

<sup>98</sup> As identified by the Habitats Regulations Assessment (February 2011).

<sup>99</sup> The Conservation of Habitats and Species Regulations 2010.



**6.12** However due to the increased uncertainty relating to the impact of development within the areas identified in **Appendix 3**, proposals for waste management development in these areas should include sufficient information to enable a screening assessment of likely significant effects to be undertaken. This should take into account:

- key sensitivities of the internationally designated sites; and
- impacts both within and beyond the site boundary of the proposed development; and
- direct and in-direct effects; and
- broader impacts that the proposal is likely to have on wider networks or populations, including the severing of links between dependant sites; and
- any cumulative impacts or in-combination effects; and
- any mitigation proposals.

A screening assessment may also be required for development proposals outside of the areas identified in **Appendix 3**, which are capable of affecting an internationally designated site. If the proposal is likely to have a significant effect, an 'appropriate assessment' will be required.

### *Protection of sites identified nationally and locally for their nature conservation importance*

**6.13** Nationally designated and locally important sites<sup>100</sup> are important in themselves and can form networks of natural habitats providing routes or stepping stones for migration, dispersal and genetic exchange of species and provide biodiversity with an improved capacity to adapt to likely changes in climate. Both individual sites and networks of which they are part should be protected.

**6.14** An assessment of likely impacts on national and local sites must take into account:

- impacts both within and beyond the site boundary of the proposed development; and
- direct and in-direct effects; and
- broader impacts that the proposal is likely to have on wider networks or populations, including the severing of links between dependant sites; and
- any cumulative impacts; and
- any mitigation proposals.

*Worcestershire's Green Infrastructure Framework<sup>101</sup>, Worcestershire Biodiversity Action Plan and Geodiversity Action Plan should inform the assessment.*

<sup>100</sup> In Worcestershire locally important sites include Local Nature Reserves, Special Wildlife Sites and Roadside Verge Nature Reserves, and Local Geological Sites.

<sup>101</sup> The Green Infrastructure Framework will be developed into the Green Infrastructure Strategy, this should be taken into account once it is in place.

### *Protection of habitats and species*

- 6.15** The *Worcestershire Biodiversity Action Plan* (BAP) contains Action Plans for Worcestershire's key wildlife habitats and species. These have been chosen because of their threatened status or because important national strongholds occur in Worcestershire, or both. In addition Generic Action Plans are presented for common themes that permeate many aspects of biodiversity conservation in the county. Each plan gives an overview of the current status of the habitat or species within the county and identifies particular threats to it.
- 6.16** Where proposals are likely to have a significant effect on species or habitats identified in **Table 9**, appropriate surveys should be carried out by a suitably qualified ecologist<sup>102</sup> and submitted with the application. These should be carried out in line with the requirements of legislation and best practice and take the *Worcestershire Habitat Inventory* into account. Advice relating to protected species is available from Natural England<sup>103</sup>.

102 See the Institute of Ecology and Environmental Management for a list of qualified ecologists - <http://www.ieem.net/ieemdirectory.asp>  
 103 [www.naturalengland.org.uk](http://www.naturalengland.org.uk)

### *Protection of the historic environment and heritage assets*

- 6.17** The historic environment includes all aspects of the environment resulting from the interaction between people and places through time. This can include designated heritage assets as well as non-designated buildings, monuments, sites, places and landscapes (see **Table 9**). These are given different degrees of protection through legislation, and national and local policy. It is important to consider historic landscapes and townscapes as a whole to understand what gives an area its sense of place and identity.
- 6.18** The significance of a heritage asset can be harmed or lost through inappropriate alteration or destruction, or from development within its setting. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact.



Broadway Tower



- 6.19** All proposals should therefore consider the historic environment and include details of how any heritage assets identified, and their settings, have been taken into account in the development of the proposal.
- 6.20** Proposals likely to affect the significance of known heritage assets or their settings, or which have the potential to affect currently unrecorded heritage assets, should be accompanied by a relevant assessment. This will contain sufficient information to establish the significance of any heritage assets, the contribution of their setting to the significance, and the potential impact of the proposal on them. This should be proportionate to the scale and nature of the proposal and reflect the type and status of the heritage assets affected.
- 6.21** Assessment may require a desk-based assessment or field evaluation before any decision on the proposal can be made. The desk-based assessment or field evaluation should give details of any heritage assets identified, including their level of designation, their significance and their vulnerability to the type of development proposed. Where development is likely to affect a registered battlefield, park or garden, or its setting, a historic landscape appraisal may be required. Proportionate consideration will be given to heritage assets in accordance with their degree of significance.
- 6.22** Early consultation with the County Council is advised, this includes checking the *Historic Environment Record*. Other relevant information sources may include Historic Environment Assessments, local lists, Conservation Area appraisals and management plans, and for proposals likely to affect historic farm buildings the products of the *West Midlands Farmsteads and Landscape Project*, such as the *Farmstead Character Statements*<sup>104</sup>.
- 6.23** Any proposals which are likely to cause unacceptable harm to or loss of significance of a heritage asset will not be permitted unless such harm or loss is clearly justified by the benefits of the development clearly outweighing any unacceptable adverse impacts on the historic environment.
- 6.24** In the case of proposals affecting nationally designated assets of the highest level (i.e. Grade I and II\* listed buildings, Grade I and II\* registered parks and gardens, battlefields and Scheduled Ancient Monuments), substantial harm to or loss of these assets will be wholly exceptional and for Grade II listed buildings and parks and gardens exceptional. Where locally or regionally significant assets are affected, mitigation to offset the impact of the proposals on the heritage assets may be appropriate. Details of any proposed mitigation should be provided in the form of a written scheme of investigation.

104 See [www.english-heritage.org.uk/wmidlandsfarmsteads](http://www.english-heritage.org.uk/wmidlandsfarmsteads)



- 6.25 Any archaeological works, whether carried out to inform the planning application (pre-determination) or required as part of the planning permission, will need to comply with an agreed written scheme of investigation, and be based on a written brief provided by the County Planning Authority.
- 6.26 The scope of the mitigation, whether by design or recording, should be proportionate to the asset's significance and the impact of the development on the asset. The information and understanding gained should be made publicly available, as a minimum through the relevant *Historic Environment Record*.

### Enhancement of Environmental Assets

- 6.27 The design, landscaping and restoration of waste management development can contribute positively to the environmental assets listed in **Table 9** through incorporating beneficial features as part of the design of the development. The scale of enhancement possible will depend on the scale and nature of the proposed development.
- 6.28 For example, where the proposal involves landscaping or restoration of the site, proposals might include repairing the fragmentation of networks of biodiversity sites or contributing to *Worcestershire's Green Infrastructure Framework*<sup>105</sup> and BAP targets for maintenance, restoration, expansion or creation of habitats. Where proposals are for the re-use of existing buildings

other beneficial biodiversity features or enhancement measures may be more relevant, such as the provision of bird, bat or bug boxes.

- 6.29 Enhancement of heritage assets may include improvements to the setting of listed buildings, conservation areas, vernacular or locally important features, creating new viewpoints or bringing heritage assets back into use.

## Policy WCS 10: Flood risk and water resources

Waste management facilities will be permitted where it is demonstrated that the design of buildings, layout, landscaping and operation of the facility, and any restoration proposals:

- a) consider flood risk to ensure that facilities:
  - i will remain safe and operational during flooding events<sup>106</sup>; and
  - ii will have no unacceptable adverse impact on flood risk; and
  - iii will have no likely significant effects on any International designated site; and

Objectives WO1, WO2

105 The Green Infrastructure Framework will be developed into the Green Infrastructure Strategy, this should be taken into account once it is in place.

106 In accordance with **Annex B: Considering Flood Risk in Waste Management Development**.



- b) consider any potential impacts on surface and ground water to ensure that facilities:
- i will not result in pollution or have unacceptable adverse impacts on:
    - surface water quality, quantity, biodiversity or the natural flow, and
    - ground water quality, quantity, biodiversity or the natural flow, and
  - ii will have no likely significant effects on any international designated site.

Cumulative effects must be considered and details of any mitigation or compensation proposals must be included.

### **Explanatory text**

#### *Flood risk*

- 6.30** Flooding and its impacts are major challenges to be tackled in Worcestershire and climate change is likely to result in greater frequency of extreme flood events.
- 6.31** **Annex B** sets out the how the sequential and exceptions tests should be applied to guide the location of waste management development in Worcestershire in relation to flood risk. These and other relevant considerations<sup>107</sup> should be set out in a flood risk assessment (FRA) accompanying the planning application.
- 6.32** In order to remain safe and operational during flood events, waste management facilities should be designed to ensure that materials are stored in a way that would not result in pollution on-site during flooding, and would not allow materials to be washed away and result in pollution problems elsewhere. Safe access for

vehicles and pedestrians to the development in the event of flooding should also be considered.

- 6.33** New development can avoid increasing flood risk on the site and elsewhere by incorporating sustainable drainage systems (SuDS)<sup>108</sup>, such as green roofs and permeable car parks, that can cope with high levels of rainfall and improve attenuation of run-off and do not result in either deterioration in water quality or pollution being discharged into local watercourses. There should be no net reduction in flood storage areas and development should not impede flood flow routes.
- 6.34** To ensure that the most vulnerable elements of a development are located in the lowest risk areas of the site, the 'sequential test'<sup>109</sup> should be used. Consideration should be given to water courses and topography as these can influence both the impact the site could have on flooding, as well as the impact of flooding on the operation of the site.
- 6.35** Any development that falls within Flood Zones 2 or 3 would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects. This should take account of likely significant effects on internationally and nationally designated features within and beyond the site.

<sup>107</sup> Including but not limited to the *Flood and Water Management Act 2010* and the emerging *Local Flood Risk Management Strategy for Worcestershire*

<sup>108</sup> The uptake of sustainable drainage systems is likely to increase as a result of the *Flood and Water Management Act 2010* removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SuDS for new developments and redevelopments.

<sup>109</sup> The 'sequential test' as set out in *Technical Guidance to the National Planning Policy Framework* is to "demonstrate that there are no reasonably available sites in areas with a lower probability of flooding that would be appropriate to the type of development or land use proposed."



## Water systems

- 6.36** Waste management activities can potentially have a serious impact on surface and ground water quality unless properly controlled and suitably located. The pollution control regime<sup>110</sup> has a significant role in regulating waste management activities to prevent harm to surface and ground water, however planning also has a part to play.
- 6.37** Developers and operators can ensure that proposals will not have an unacceptable adverse impact on water systems by assessing the area of influence of their activities, and taking into account surface and ground water uses and dependent ecosystems. This should take account of both the construction and operation of the proposed development.
- 6.38** The potential impacts on water systems depend on the nature of the facility. Leachate is an important consideration at sites which manage biodegradable wastes.
- 6.39** Where substances that can potentially result in an unacceptable release to water systems are handled, used, stored or treated, sufficient detail will be required to allow the potential impact of the proposal to be assessed.
- 6.40** Water courses are rated according to their biodiversity and water quality. Current compliance with *Water Framework Directive* specification for water quality is poor in some of the county's rivers and there is some potential for deterioration if the location of new growth is not properly controlled.
- Careful consideration of surface run-off, discharges and cumulative effects can avoid negative impacts on water systems.
- 6.41** Any development that falls within groundwater Source Protection Zones 1, 2 or 3 would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects. This should take account of likely significant effects on internationally and nationally designated features within and beyond the site.
- 6.42** The Environment Agency's advice is that no waste management facilities should be permitted in Source Protection Zone 1 and that a risk assessment must be undertaken where proposals are:
- on or in a Major/Principal Aquifer;
  - within Source Protection Zones 2 or 3; or
  - in the case of landfill, below the water table in any strata where the groundwater provides an important contribution to river flow or other sensitive surface waters.
- Current Environment Agency policy is to object to these proposals unless it is demonstrated that there will be no risk to groundwater.

<sup>110</sup> The Environment Agency regulates waste management activity in order to prevent harm to human health and the environment from pollution and emissions, currently through Environmental Permitting.



**6.43** The Environment Agency also advises that new sewage discharges to groundwater in an area of existing discharges are likely to lead to an unacceptable cumulative impact.

**6.44** Considerable weight will be given to the Environment Agency's advice on these matters. It is unlikely that planning permission will be granted if it objects in such circumstances unless there are very good reasons to do so.

- d) all new built development or significant alterations to buildings which create a gross building footprint of 1000 square metres or more gaining at least 10% <sup>111</sup> of energy supply annually from on-site renewable or low carbon sources. Where it is demonstrated that this is not practicable, this should be achieved through off-site solutions; and
- e) the consideration of land stability and subsidence; and
- f) landscaping which enhances, links and extends natural habitats, reflects landscape character or acts as a carbon 'sink'.

Cumulative effects must be considered and details of any mitigation or compensation proposals must be included.

### *Explanatory text*

**6.45** Climate change is one of the cross cutting themes adopted in the County, City, District and Borough Councils' Community Strategies. There are two aspects to climate change that need to be considered:

- Mitigation – reducing the extent of potential climate change by reducing carbon emissions resulting from human activities; and
- Resilience – how the development can be designed to cope with the changes in our climate and severe weather events caused by increasing levels of greenhouse gases.

Mitigation and resilience should be considered in parallel in relation to issues of climate change.

<sup>111</sup> Or more if local targets are higher in the District, City or Borough Councils' Development Plan Documents.

**Objectives WO1, WO2, WO4, WO7**

## **Policy WCS 11: Sustainable design and operation of facilities**

Waste management facilities will be permitted where it is demonstrated that the design of buildings, layout, landscaping and operation of the facility, and any restoration proposals take account of sustainable development practices and climate change mitigation and resilience through:

- a) the re-use of existing buildings where appropriate and the minimisation of the use of primary materials in construction of new buildings and alterations; and
- b) reducing water demand where possible and considering water efficiency in the design and operation of all new built development; and
- c) reducing energy demand where possible and considering energy efficiency in the design and operation of all new built development; and



### *Re-using buildings and minimising construction materials*

- 6.46** Re-using existing buildings reduces the consumption of building materials, energy and the generation of waste from the construction of replacement buildings.
- 6.47** Design and construction of new buildings where the re-use of existing buildings is not appropriate and any alterations to existing buildings should consider resource efficiency. Minimising the use of virgin materials could be done in part by re-using materials or using recycled materials where appropriate. On-site recycling of construction and demolition waste is encouraged due to its role in enabling management of waste at source, and reducing waste miles.
- 6.48** *Site Waste Management Plans* are currently a legal requirement for all construction projects with an estimated construction cost of over £300,000<sup>112</sup>. Information relating to smaller proposals is expected to be commensurate to the scale of the development and should consider what types of waste will be produced and how this will be minimised, re-used or recycled.

### *Efficient use of water*

- 6.49** To reduce water demand, the design of new facilities could incorporate rain and grey water harvesting systems and operations could re-use water where possible. This will help to reduce demands for fresh water, pressures on water supply in the county and carbon emissions resulting from water treatment, which can require high energy use.

### *Efficient use of energy*

- 6.50** Energy demand in the wider economy can be reduced by some waste management facilities that form part of an integrated process enabling recycling or recovery. In most cases the recycling of materials has lower energy demands than the processing of virgin materials. Facilities which prepare materials for re-use, or which sort or process waste as part of a recycling or recovery chain can form part of this integrated process and can contribute towards these reductions.
- 6.51** However, even where there are wider benefits, energy efficiency in the design and operation of waste management facilities must still be considered. This can be achieved through the use of materials, design features, site layout and building orientation which enable the use of natural heating, cooling, lighting and ventilation. Climate sensitive design, layout and building orientation will need to be holistic in its approach and should be guided by the principles of national and local policies and guidance<sup>113</sup>. Energy efficiency can also be achieved through operations which make more efficient use of equipment, machinery or other processes.

112 Further information is available on [www.netregs-swmp.co.uk](http://www.netregs-swmp.co.uk)

113 Including *National Planning Policy Framework 2012*, Defra/CABE guidance "*Designing Waste Facilities: a guide to modern design in waste*" and standards identified in Local Plans or adopted Local Development Frameworks.



## Renewable energy

- 6.52** Renewable energy generation could be from photovoltaic panels, roof-mounted solar hot water panels, biomass boilers, ground-source or air-source heat pumps, wind sources, water sources or energy recovery from waste management processes<sup>114</sup>.
- 6.53** The suitability and viability of particular methods will depend on the type of development and the proposed location. The design and operation of proposals for renewable energy provision should address potential amenity and environmental effects in line with the requirements of the Development Plan.

## Land stability and subsidence

- 6.54** Parts of the County are underlain by sandstone and mudstone and landslips in these areas could become a more frequent occurrence as a result of warmer wetter winters. Subsidence can also occur as a result of drought caused by warmer, drier summers. These issues will need to be taken into consideration and appropriate designs and construction techniques will need to be used to overcome these risks.
- 6.55** Parts of the county have areas of former mining activity. This may have implications for land stability. There is also a greater risk in areas of former made-ground.

## Landscaping

- 6.56** The need for sites to be landscaped will depend on the nature, scale and location of the development. Landscaping and restoration can improve sense of place and provide opportunities to create new or enhance existing habitats.
- 6.57** Landscaping should, where possible, incorporate elements of the existing landscape character,<sup>115</sup> such as aged or veteran trees and mature or diverse hedges. It can be designed to have a role in climate amelioration, for example through the development of carbon sinks, connectivity of habitats, contribution to green infrastructure, or, on some sites, flood attenuation. It can also result in the development having a positive effect on biodiversity and its capacity to adapt to likely changes in the climate, particularly where schemes take into account the local Biodiversity Action Plan.
- 6.58** Landscaping can often perform more than one function; for instance a Sustainable Drainage System may incorporate planting which also serves to provide screening between neighbouring properties and create an opportunity for enhanced habitats.

<sup>114</sup> Including biological processes, thermal treatment activities or landfill gas collection and management systems.

<sup>115</sup> See *Worcestershire Landscape Character Assessment* at [www.worcestershire.gov.uk/lca](http://www.worcestershire.gov.uk/lca)



## Policy WCS 12: Local characteristics

Waste management facilities will be permitted where it is demonstrated that the design of buildings, layout, landscaping and operation of the facility, and any restoration proposals:

- a) contribute positively to the character and quality of the local area and protect and enhance local characteristics, through consideration of:
  - i the character of the built environment, including appropriate use of form, mass, scale, detailing, materials and green spaces; and
  - ii the local landscape character as identified in the *Worcestershire Landscape Character Assessment* and the *Worcestershire Historic Landscape Characterisation*; and
  - iii other features identified in Local Development Frameworks, Parish or other Neighbourhood Plans, or other Local Authority strategies, and
- b) within or impacting upon the Malvern Hills and/or Cotswolds Areas of Outstanding Natural Beauty (AONB), conserve, enhance or restore the natural beauty of the landscape and have no unacceptable adverse impact on the special qualities of the AONB as defined by the relevant AONB Management Plan.

Where there will be unacceptable adverse impacts on local characteristics or an AONB, proposals will only be permitted where it is demonstrated that the benefits of the development at the proposed site clearly outweigh any unacceptable adverse impacts.

### Explanatory text

#### Character of the built environment

**6.59** Development, landscaping and restoration can contribute positively to the quality and character of the built environment through design which takes into account local characteristics. These include, but are not limited to:

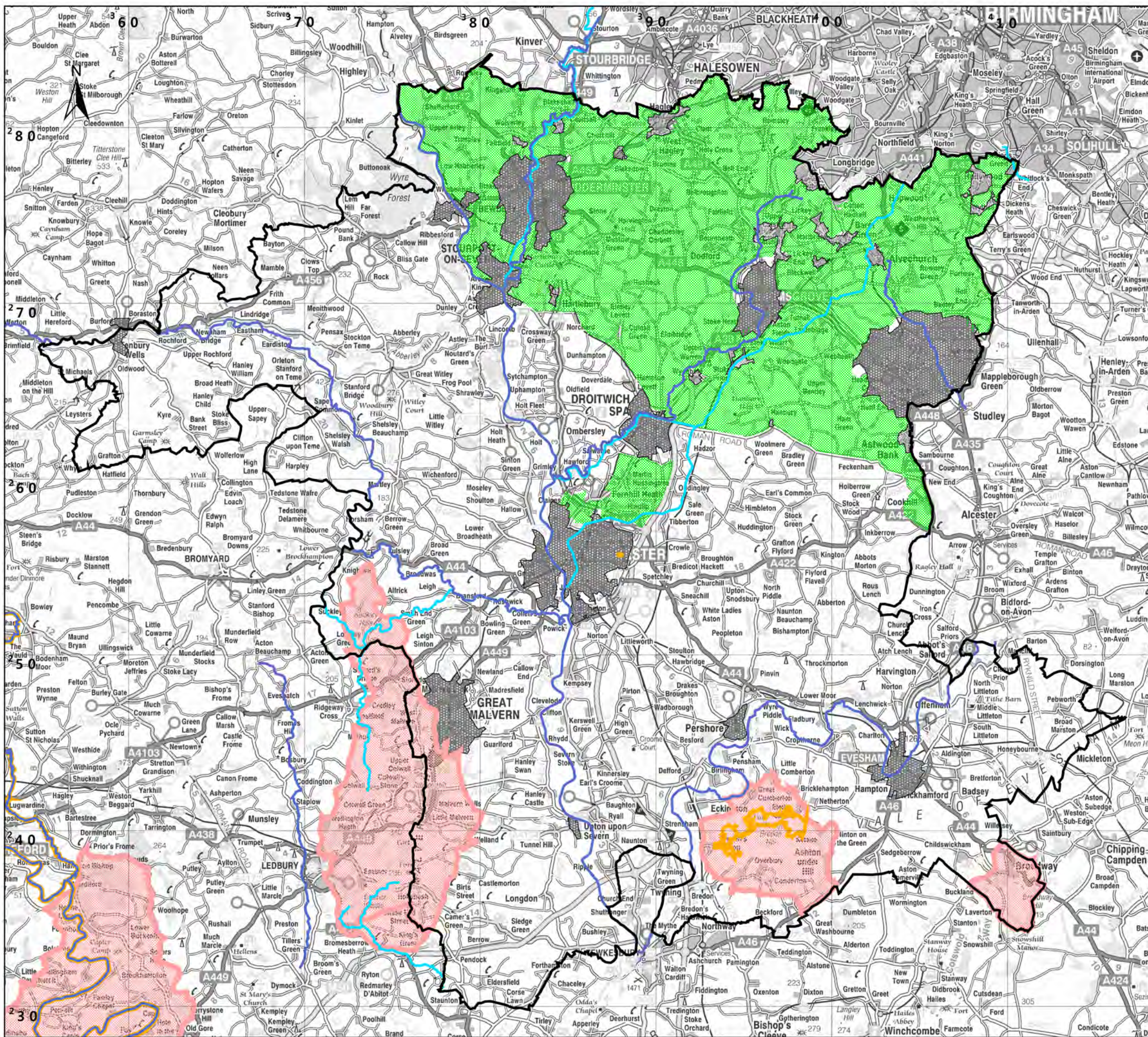
- listed buildings, conservation areas and their settings;
- the historic environment, historic environment record, designated and locally valued heritage assets and archaeological features;
- green infrastructure; and
- the local vernacular.

**6.60** Good design will use an assessment of these local characteristics to inform the form, mass, scale, detailing and materials of the proposed development and will incorporate access to green spaces in the development wherever possible. Design should also be guided by the principles of national and local policies and guidance including Playing Pitch assessments and Green Infrastructure Strategies<sup>116</sup>.











Evesham Town Centre © Worcestershire County Council

<sup>116</sup> National Planning Policy Framework (2012), Defra/CABE guidance "Designing Waste Facilities: a guide to modern design in waste" and standards identified in Local Plans or adopted Local Development Frameworks.



# Waste Core Strategy for Worcestershire

Figure 16: Worcestershire Areas of Outstanding Natural Beauty and Green Belt

-  County Boundary
-  Principal Urban Areas
-  Other Settlements
-  Major Rivers
-  Canals
-  Green Belt
-  Area of Outstanding Natural Beauty
-  Special Area of Conservation

NB: Due to the scale of map certain constraints may be concealed behind others





## Landscape character

**6.61** In determining the location of the development, its design and setting, the visual impact of the proposals should be taken into account and be guided by the principles laid down by The Landscape Institute and the Institute of Environmental Assessment, the principles of the *Worcestershire Landscape Character Assessment*, the *County's Historic Landscape Characterisation*, *Historic Farmstead Characterisation* and the principles of Landscape Ecology.

## Areas of Outstanding Natural Beauty

**6.62** The Malvern Hills Area of Outstanding Natural Beauty (AONB) and the Cotswolds AONB are partially within Worcestershire, see **Figure 16**. Where an application could affect an AONB or its setting, an assessment of the landscape impact on the affected areas must be included in the application. This should:

- be based on a visual impact assessment and on the descriptions and guidelines outlined in the *Worcestershire Landscape Character Assessment*; and
- take into account the relevant AONB Management Plan and any relevant AONB position statements or guidance documents.

**6.63** Impacts could be mitigated where it is demonstrated that visual impact on the key characteristics of the AONB beyond the boundaries of the development site is limited.



View from the Malvern Hills AONB © Marianne Joynes



Objectives WO2

## Policy WCS 13: Green Belt

Waste management facilities will be permitted in areas designated as Green Belt <sup>117</sup> where the proposal does not constitute inappropriate development, or where very special circumstances exist.

### *Explanatory text*

#### *Green Belt*

**6.64** Large areas to the north of the County are designated as Green Belt (see **Figure 16**). There is a presumption against inappropriate development in the Green Belt in national policy<sup>118</sup> and in such cases applicants must clearly justify the very special circumstances why permission should be granted. Very special circumstances, individually or cumulatively, will not exist unless the harm to the Green Belt by reason of inappropriateness and any other harm is clearly outweighed by other considerations.

**6.65** Some types of waste management development have particular locational needs. It would be expected that these locational needs, together with the wider environmental and economic benefits of sustainable waste management, are material considerations that will be given significant weight in determining whether proposals for waste management facilities should be given planning permission. When considering development proposals, the Council will have regard to the cumulative effect of development.

Objectives WO2

## Policy WCS 14: Amenity

Waste management facilities will be permitted where it is demonstrated that the operation of the facility and any associated transport will not have unacceptable adverse impacts on amenity. This must consider impacts on or of:

- i. air quality, including any fumes, dust, odours or bioaerosols. Where relevant, the issues identified in the Herefordshire and Worcestershire Air Quality Management Plan, and those of adjoining authorities, must be taken into account; and
- ii. planned or unplanned fires; and
- iii. noise and vibrations; and
- iv. insects, vermin and birds; and
- v. litter and windblown materials; and
- vi. visual intrusion and light pollution; and
- vii. health

Cumulative effects must be considered. Details of any mitigation or compensation proposals must be included; this may be through enclosing operations or through other appropriate measures.

Where there will be unacceptable adverse impacts on amenity, proposals will only be permitted where it is demonstrated that the benefits of the development at the proposed site clearly outweigh any unacceptable adverse impacts.

<sup>117</sup> Inappropriate development is defined in the *National Planning Policy Framework (2012)*.

<sup>118</sup> Currently the *National Planning Policy Framework (2012)*.



## Explanatory text

### Amenity

**6.66** Relevant assessments should be undertaken to demonstrate that the proposals will not have unacceptable adverse impacts on amenity or health<sup>119</sup>. This should include consideration of any impacts from transport. The issues to be considered will depend on the nature, scale and location of the proposed development. Distances from residential and recreation areas, waterways, waterbodies and other agricultural or urban sites should also be considered where appropriate and should always be taken into account where the proposal relates to landfill<sup>120</sup>.

**6.67** Where amenity impacts are likely applicants should discuss proposals and mitigation measures with the relevant Environmental Health Officer. Where health impacts are likely applicants should discuss proposals and mitigation measures with Environment Agency and the health protection authorities. Possible amenity and health impacts should be identified before applications for planning permission are submitted.

**6.68** In the case of air quality, special attention should be given where the processes could affect:

- national or international sites designated for nature conservation;

- Worcestershire's Air Quality Management Areas (AQMAs), or those of neighbouring authorities, or other areas where air quality is likely to be poor (including the consideration of cumulative impacts of developments on air quality); or
- listed heritage façades through damage or soiling as a result of emissions from point or mobile sources.

**6.69** In most cases, waste management operations are expected to be enclosed. However, the appropriateness of this as a method of mitigating amenity impacts will depend on the nature and scale of the operation. For some processes it may be appropriate to consider techniques such as dust suppression or sheeting of vehicles.

**6.70** Other facilities may need to be located at a suitable distance from sensitive receptors; for example the Environment Agency requires a bioaerosol risk assessment for development managing biodegradable waste within 250 metres of sensitive receptors. Any such assessment should be included as part of the planning application.

119 Health issues are a material consideration in determining applications for planning permission. The Environment Agency regulates waste management activity in order to prevent harm to human health and the environment from pollution and emissions, currently through Environmental Permitting.

120 In accordance with the *Waste (England and Wales) Regulations 2011*.



## Policy WCS 15: Social and economic benefits

Proposals for waste management facilities will be permitted where it is demonstrated:

- a) That they will benefit the local community and sub-regional economy through:
  - i contributing towards Worcestershire's equivalent self-sufficiency in waste management capacity; or
  - ii supporting the development of the local green economy; or
  - iii the operation of community or voluntary sector waste management services; or
  - iv educating communities about sustainable waste management.
- b) That they will not sterilise safeguarded mineral resources.
- c) How the applicant has carried out community involvement and the ways in which this has informed the development of the proposal.

### Explanatory text

#### Equivalent self-sufficiency

6.71 Worcestershire's capacity gap is indicated in **Table 4** and delivery milestones are set out in **Policy WCS 2**. These will be reviewed and updated in the *Annual Monitoring Report*<sup>121</sup>.

### Local green economy

6.72 The objectives of the *Economic strategy for Worcestershire 2010-2020* are to support the development of a dynamic and diverse business base, enhance employability and improve skills. Environmental technologies are identified as a key growth sector. The waste management industry has a role to play through developing technology, improving skills in the green economy and facilitating the management of waste as a resource.

### Community and voluntary sector

6.73 Some waste management facilities are operated by the community or voluntary sector. In 2005 it was estimated that these organisations re-used, recycled or composted approximately 11% of all household waste recycled or composted in England<sup>122</sup>. This does not include textiles re-used or recycled through charity shops.



Furniture Recycling. Photo courtesy of Recycle Now Partners.

121 The *Annual Monitoring Report* will be published in December each year and will be available on the minerals and waste policy pages of the Council's website at [www.worcestershire.gov.uk](http://www.worcestershire.gov.uk)

122 Figures for England, set out in *Review of the Voluntary and Community Waste Sector in England Final Report* (Defra 2005)



- 6.74** Community or voluntary waste management facilities can benefit local communities or the sub-regional economy by allowing waste to be re-used, recycled or recovered close to its source and may provide a source of local employment.

### *Educating communities*

- 6.75** In Worcestershire there are facilities, such as learning disability day services, that play a small role in waste management but have an important educational or social development role. Where facilities have a primarily educational or social development purpose this could be used as part of their justification.
- 6.76** Some waste management facilities may include visitor centres or educational facilities in addition to the main development and this is encouraged. However, where education or social development are a secondary part of the proposal this can not be used to justify the development as a whole.

### *Safeguarded mineral resources*

- 6.77** Sand and gravel, hard rock, clay and coal deposits are important in Worcestershire. Identified deposits are safeguarded due to their long-term importance to the economy. Safeguarded mineral resources are currently identified on *The County of Hereford and Worcester Minerals Local Plan Proposals Map*<sup>123</sup>.
- 6.78** Where waste management development could sterilise a safeguarded mineral deposit it may be appropriate to carry out extraction ahead of the development.

### *Community involvement*

- 6.79** Community engagement and community cohesion are cross cutting themes in the County, City, District and Borough Councils' Community Strategies and have an important role to play in contributing towards sustainable development. Community views have shaped the development of the Waste Core Strategy and the community should also be given the opportunity to influence any development proposals brought forward. Guidance is set out in Worcestershire's *Statement of Community Involvement*.
- 6.80** It is expected that developers will consult with local communities and other stakeholders on all proposals for waste management development before planning applications are submitted. This should be demonstrated in a Consultation Statement<sup>124</sup>.
- 6.81** Public consultation and involvement (pre-application stage) can be very constructive, helping to avoid misinformation, address fears expressed by the public and allow suggested changes to be incorporated in the final submitted application and therefore should be proportionate to the scale and nature of the proposal. This can make the process of determining the planning application more inclusive and reflect local community concerns.

123 Available at <http://www.worcestershire.gov.uk> minerals and waste planning pages.

124 For further information refer to *Worcestershire County Council's Validation Document*.



## 7. Safeguarding existing waste management facilities

- 7.1 Existing facilities form the infrastructure for waste management in Worcestershire. Such sites may have the potential to increase their capacity or to diversify to provide additional waste services or facilities. Some are seen as relatively low value land uses and could therefore be vulnerable to redevelopment for other uses. Relocating a waste management operation can be difficult. Existing facilities should therefore be safeguarded from development of non waste-related uses. **Policy WCS 16** sets out to do this.
- 7.2 In order to safeguard existing waste management capacity and minimise this conflict, the relationship between the new and existing land uses should be considered before new permissions are granted. If the potential impacts are considered in advance as part of the design and development of the proposal, it will usually be possible to minimise conflict between the existing waste management facility and the proposed development.

### Policy WCS 16: New development proposed on or near to existing waste management facilities

Existing waste management facilities will be safeguarded from non waste-related uses where they meet local environmental and amenity considerations in the Development Plan, conform to the pollution control regime and do not pose a risk to sites protected at the European or National level.

- a) Development on or adjacent to a site with planning permission or existing use rights for waste management development will be permitted:
- i. where the proposed development does not prevent, hinder or unreasonably restrict the operation of the waste development; or
  - ii. in cases where the proposed development could prevent, hinder or unreasonably restrict the operation of the waste development, where:
    - it can be satisfactorily demonstrated that there is no longer a need for the permitted waste management operation
    - suitable alternative provision is made for the waste operation at the same or higher level of the geographic hierarchy or
    - the impacts can be satisfactorily mitigated.



- b) Development within 250 metres of a site with planning permission or existing use rights for waste management that would introduce a new sensitive receptor to the area will be permitted where it is demonstrated that the proposed development would not be unacceptably adversely affected by bio-aerosols or other emissions from the waste management operation.

Where this is not the case the County Council will oppose proposals and will expect District Councils to refuse permission on the grounds that it would compromise the achievement of the Waste Core Strategy.

Any mitigation required will be the responsibility of the developer of the new proposal<sup>125</sup>.

### ***Explanatory text***

- 7.3 The County Council should be consulted by the Local Planning Authority on any application that is on or adjoining a site with planning permission or existing use rights for waste management or introduces a new sensitive receptor within 250 metres of such a site.
- 7.4 Facilities with planning permission or existing use rights for waste management<sup>126</sup> are shown on **Figure 6**. A web-tool has been developed to map all sites with existing use rights or planning permission for waste management facilities. It shows a 250 metre buffer around these facilities and should be used to identify where proposals fall into these areas. The web-tool will be updated when new permissions are granted. It is available on [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs).

- 7.5 Part b of **Policy WCS 16** only applies where a new sensitive receptor is introduced, as such it would not apply to household extensions or other similar proposals.

### ***Development on or adjacent to waste management facilities***

- 7.6 In order to safeguard existing waste management capacity the County Council will object to proposals that do not comply with the policy, outlining the reasons for this objection.

### ***New sensitive receptors***

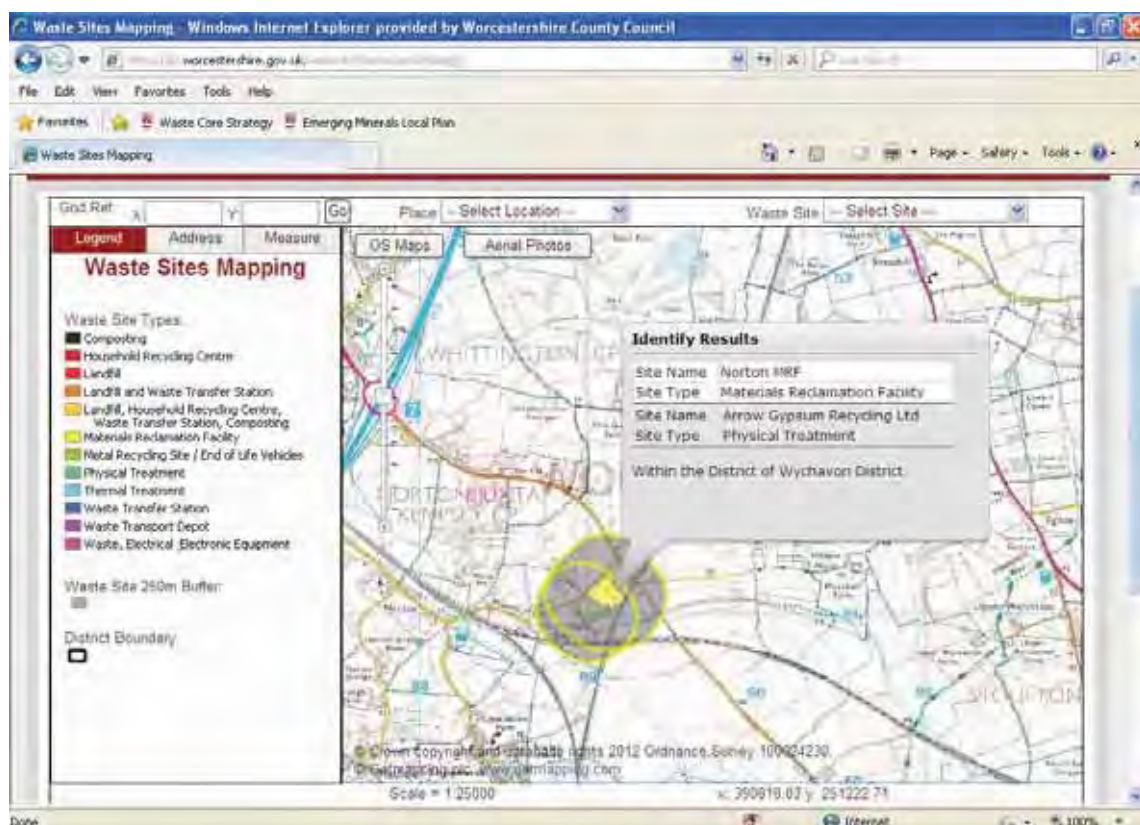
- 7.7 When planning permission is granted for waste management development, the impacts of the proposal on the amenity of the surrounding area are considered in order to ensure that there are no unacceptable adverse impacts. However the introduction of a new sensitive receptor (typically a dwelling or workplace) near to a waste management facility may mean the new development could be affected in ways which were not assessed as part of the original waste application.
- 7.8 Where new sensitive receptors are introduced within 250 metres of an existing or permitted waste management facility, any potential conflicts between users of the proposed development and existing waste management facilities must be considered.

125 Provided that the operator is operating within the terms of the planning permission(s) and licensing permits for the site.

126 At February 2011. The web-tool itself will be regularly updated.



- 7.9** Applicants may need to assess issues such as any noise, vibrations, dust, odours or fumes that may result from the normal operation of the site. Bio-aerosols should be considered where the waste management facility handles biodegradable waste. Where impacts are likely to affect the proposed development, considered design, site layout and landscaping or screening of the proposal will normally be adequate to mitigate any impacts.
- 7.10** Liaison with the waste site operator is encouraged; however, where the waste management facility is operating within the conditions of their planning permission and the requirements of the pollution control regime, any required mitigation will be the responsibility of the developer of the proposed new development.



Web-tool showing sites with existing use rights or planning permission for waste management facilities available on [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)



## 8. Considering waste from all new development

- 8.1** The County, City, District and Borough Councils' Community Strategies aim to provide opportunities for communities to reduce, re-use and recycle waste. In order to support this aim and to drive waste up the waste hierarchy, the waste implications of all new development must be considered. **Policy WCS 17** relates to all types of development proposals, including but not limited to residential, commercial, industrial and waste management development.

**Objectives WO3, WO4**

### Policy WCS 17: Making provision for waste in all new development

Proposals for new development will be permitted where:

- a) they incorporate facilities into the design that allow occupiers to separate and store waste for recycling and recovery; or
- b) developer contributions are made, for proposals where this is more appropriate than provision of on-site facilities; or
- c) the existing provision is adequate.

### Explanatory text

- 8.2** The level of on-site provision of facilities for the separation or storage of waste should be adequate to meet the needs of the proposed development and the type and amount of waste arising from occupation.
- 8.3** On smaller sites provision might include collection points for segregated waste. On larger sites, particularly where significant areas of new housing or employment land are proposed, waste storage facilities will almost always be needed and provision might also include on-site treatment facilities such as community composting, anaerobic digestion forming part of a district heating system or, in the case of industrial operations, the management of specific wastes produced on site.
- 8.4** The ADEPT report "*Making Space for Waste*" (June 2010)<sup>127</sup> sets out specifications for the minimum standards for the type, and scale of facilities and vehicular manoeuvrability needed for new residential, commercial and mixed use developments. All applications will be assessed against this or other appropriate guidance.
- 8.5** Where developer contributions are more appropriate than on site provision, the level of contribution will be determined in accordance with the City, Borough, District or County Council's policy on developer contributions as appropriate.

127 The Association of Directors of Environment, Economy, Planning and Transport guidance "*Making Space for Waste Designing Waste Management in New Developments: A Practical Guide for Developers and Local Authorities*" available on [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)



## 9. Implementation and monitoring framework

### Implementation

- 9.1** The key mechanisms for implementing the Waste Core Strategy will be through the determination of planning applications and the provision of pre-application advice by the County Council in its role as a Waste Planning Authority (WPA). The City, Borough and District Councils in the county will also have an important role to play in how they consider the waste implications of all applications for planning permission.
- 9.2** The County Council also has an important part to play in its role as Waste Disposal Authority (WDA), major landowner and developer and in its other functions, including economic development and sustainability.
- 9.3** The implementation of the Waste Core Strategy will be affected by the application of other policies, work of other agencies, behaviour of the general public, and actions of industry. This includes the programmes and projects of the statutory agencies, procurement decisions of companies and organisations and decisions of infrastructure providers.
- 9.4** The Waste Core Strategy must be flexible and responsive to changing circumstances. It will be monitored on an annual basis and reviewed and revised as appropriate (see **Paragraphs 9.63 - 9.67, Figure 18 and Table 15**). However in order not to stifle development whilst

the policies are being reviewed, **Policy WCS 1** sets out provisions for circumstances where there are no policies in the Development Plan that are relevant to the application or where relevant policies are out of date.

#### *Deliverability*

- 9.5** In order to be effective, the Waste Core Strategy must be deliverable. Each of the objectives of the Strategy is considered below along with the policy framework which will facilitate their delivery. Where the objective is contributed to by many of the policies, only those that make the most significant contributions are considered in this section.

*WO1: To base decisions on the need to reduce greenhouse gas emissions and to be resilient to climate change.*

- 9.6** The reduction of greenhouse gas emissions will be contributed to by policies **WCS 1, WCS 2, WCS 3, WCS 4 and WCS 5** all of which seek to implement the waste hierarchy. Waste management facilities at higher levels of the hierarchy on the whole have lower greenhouse emissions.



- 9.7** This approach reflects international and national policy and is thought to be deliverable in Worcestershire, as almost all of approved waste management capacity in the last 5 years has been for re-use or recycling and policy **WCS 5** will prevent new landfill or disposal facilities being developed unless absolutely necessary. During this time only one permission has been granted to increase landfill capacity; this forms part of the restoration of a mineral working. Permission has also been granted for a reduction in landfill at another mineral working.
- 9.8** Greenhouse gas emission can also be reduced by the design and operation of facilities. Policy **WCS 11** requires the consideration of climate change mitigation in the design of buildings, layout, landscaping and operation of the facility, and any restoration proposals. This policy is based on national policy and best practice and has remained deliberately flexible to enable the most appropriate measure to be used and to allow for technical innovation. The measures used are expected to be commensurate to the scale of the development.
- 9.9** In addition policy **WCS 5** requires landfill gas management schemes where practicable. This will reduce emissions of methane from landfill and can, in some cases, supply alternative sources of energy.
- 9.10** Transport is another important issue in relation to greenhouse gas emissions in the county. At present there are limitations in the potential for waste freight movements by sustainable transport modes. This is encouraged by policy **WCS 8**; however the most realistic approach to reducing waste miles is through the delivery of the spatial strategy (as set out in Policy **WCS 3, WCS 4** and **WCS 5**), which directs development to areas where arisings, onward treatment opportunities and end-users are concentrated and where strategic transport links are strong.
- 9.11** Climate change resilience is a key consideration in Policy **WCS 11** which aims to ensure that facilities are designed to adapt to potential climate change impacts, Policy **WCS 9** protects networks of habitats and therefore the capacity of biodiversity to adapt to climate change, and Policy **WCS 10** which considers increased flood risk.
- 9.12** Whilst all towns in the county are affected by flooding there are believed to be adequate sites outside of Flood Zone 3 to deliver the strategy<sup>128</sup>. The Council has not permitted any waste management facilities against Environment Agency advice on flood risk.

<sup>128</sup> All of the *areas of search* in Annex A have been assessed and are not in Flood Zone 3.



*WO2: To base decisions on the principles of sustainable development by protecting and enhancing the County's natural resources, environmental, cultural and economic assets, the character and amenity of the local area and the health and wellbeing of the local people.*

**9.13** Together, policies **WCS 6**, **WCS 9**, and **WCS 13** direct new waste management development away from identified biodiversity, geodiversity, heritage assets, the Green Belt and greenfield land and policies **WCS 9** and **WCS 11** require the conservation and enhancement or restoration of environmental assets. Policy **WCS 10** ensures that waste management facilities will not adversely impact upon water quality or increase flood risk; whilst policy **WCS 12** prevents unacceptable adverse impacts on the AONB and requires the consideration of local characteristics in the design of buildings, layout, landscaping and operation of the facility and any restoration proposals. These policies also seek to protect the character of the local area.

**9.14** In the two most recent monitoring years (2007-2008 and 2008-2009) none of the minerals or waste planning applications determined by the County Council has had an unacceptable adverse effect on natural or historic assets or amenity, including designated assets. 100% of applications were also modified/conditioned in order to protect designated assets or amenity. Based on this evidence, it is believed that policies contributing towards this objective will be deliverable.

**9.15** The implementation of these policies is supported by a number of tools prepared by the County Council and other partners, including the *Landscape Character Assessment* and *Worcestershire Biodiversity Action Plan*, *Geodiversity Action Plan* and AONB management plans. Implementation could be compromised if these strategies are not maintained, however this is considered to be very unlikely.

**9.16** Amenity and health are addressed through policy **WCS 14**, with policy **WCS 8** also considering amenity impacts along transport routes and policy **WCS 16** ensuring that the amenity of new sensitive receptors is considered in applications for development close to existing waste management facilities. The implementation of these policies will depend in part on advice from the district council Environmental Health and Highways Authority officers. At present the quality of advice is good and this is not felt to present any challenges. Amenity is currently considered in the determination of planning applications. Existing permissions are monitored and amenity impacts are not generally an issue.

*WO3: To make driving waste up the waste hierarchy the basis for waste management in Worcestershire.*

**9.17** The following minimum targets for re-use, recycling (including composting) and 'other recovery' have been set in relation to this objective:

<b>C&amp;I</b> (including agricultural waste)	75%
<b>C&amp;D</b>	75%
<b>MSW</b>	78%
<b>Hazardous waste</b>	75%



These targets are purposefully ambitious, so that the approach in the Waste Core Strategy does not inhibit the delivery of facilities at the highest appropriate level of the waste hierarchy and contributes towards the long-term aim for all waste to be treated as a resource and for 'zero-waste' to landfill or disposal.

- 9.18** Policy **WCS 2** drives forward the delivery of these targets setting out milestones for additional capacity which will be required for their achievement.

*C&I targets*

- 9.19** The C&I target is based on the "Waste Scenarios Study" (WMRA/ Enviro) (Final Report July 2005) commissioned by the West Midlands Regional Technical Advisory Body. This study assessed 8 scenarios for how C&I waste in the region might be managed. It included a Sustainability Assessment which

assessed the sustainability of the Scenarios and concluded that two of the scenarios, one based on 75% recycling and recovery rate<sup>129</sup> and the other on 65% recycling and recovery rate<sup>130</sup>, were reasonable, sustainable and the most likely to be achievable within the life of the RSS.

- 9.20** The 75% recycling and recovery rate scenario has been used in the Waste Core Strategy for these reasons and because it is based on clearly set out assumptions<sup>131</sup>, giving it a secure foundation. The assumptions behind the 65% recycling and recovery rate scenario are less clear.

- 9.21** Evidence of waste managed in Worcestershire, shows a decrease in the proportions of household, commercial and industrial waste sent to landfill over the past 3 years and a corresponding increase in waste treated (see **Table 10**).

**Table 10: Household, Commercial, Industrial (HCI) waste managed in Worcestershire**

	2008	2009	2010
<b>Re-use and Recycling</b>	24%	33%	39%
<b>'Other recovery'</b>	0%	0%	0%
<b>Landfill and Disposal</b>	76%	67%	61%

Note: sorting and transfer not considered in these figures; treatment includes physical treatment and MRS.

- 9.22** Although this is some way off the 75% recycling targets, there is a national drive to increase recycling from business and several national and local programmes to support its delivery.

<sup>129</sup> Scenario 1  
<sup>130</sup> Scenario 5  
<sup>131</sup> set out in detail in the Phase 2 report



### C&D targets

- 9.23** At present data about C&D arisings or treatment is not as good as that for other waste streams. The 75% target has however been included to indicate a direction of travel. It will be monitored as better information becomes available.

### MSW targets

- 9.24** The reviewed Joint Municipal Waste Management Strategy (JMWMS) is already committed to achieving this target for household waste and as such the likelihood of delivery is expected to be high. The reviewed JMWMS makes waste minimisation its priority and proposes to increase the % recycled through efficiencies, the adoption of joint collection and disposal systems and the development of new residual treatment processes. It does not identify the kind, number or location/s of facilities needed. The Waste Core Strategy would enable sites to be developed if necessary.

### Zero-waste to landfill as a long-term aim

- 9.25** The targets in **Objective WO3** have formed the basis of the capacity gap shown in **Table 4** and have informed the delivery milestones set out in Policy **WCS 2** of the Waste Core Strategy. These represent a level of re-use, recycling and 'other recovery' which, based on the available evidence, is considered to be ambitious yet achievable. However, the *Government Review of Waste Policy in England 2011*, and its emphasis on moving towards a zero waste economy <sup>132</sup>,

requires some consideration of how all waste could be diverted from landfill in the long-term. To enable this to happen, waste arisings will need to be minimised and increased capacity for recycling or 'other recovery' will be required.

- 9.26** The potential capacity gap and land requirements to enable zero-waste to landfill have been considered in "*Annex A to Waste Core Strategy Background Document Arisings and Capacity: September 2011*" <sup>133</sup> which demonstrates that the capacity gap in a zero-waste scenario would be greater than that indicated in **Table 4**. These calculations provide an indication of likely need but take no account of the mix of technologies which may be feasible or waste minimisation measures and any reduction in arisings.
- 9.27** Further issues relating to the deliverability of the capacity required to meet these targets and the long-term aim are considered in Paragraph 9.47 alongside deliverability of **Objective WO5**, as many of the considerations overlap.

<sup>132</sup> Paragraph 28 of the *Government Review of Waste Policy in England 2011* (Defra, 2011) states: "We need to move beyond our current throwaway society to a "zero waste economy" in which material resources are re-used, recycled or recovered wherever possible, and only disposed of as the option of very last resort."

<sup>133</sup> Available at [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)



**WO4:** *To ensure that the waste implications of all new development in Worcestershire are taken into account.*

**9.28** Policy **WCS 16** ensures that new development will not sterilise existing waste management facilities without providing adequate alternative provision and policy **WCS 17** requires the provision of facilities which allow waste to be stored for recycling in all new development.

**9.29** The incorporation of facilities for the separation and storage of waste is expected to be commensurate to the scale of the development, as based on the *Association of Directors of Environment, Economy, Planning and Transport guidance "Making Space for Waste Designing Waste Management in New Developments: A Practical Guide for Developers and Local Authorities"*<sup>134</sup>. Councils, developers and the waste industry have contributed to the guidance and as such it is not expected to place any unacceptable burden on developers.

**9.30** Delivery of this objective will depend on the District, City and Borough Councils, as well as the County Council, in determining all planning applications. City, Borough and District Councils in Worcestershire have particularly been involved in the development of policies **WCS 16** and **WCS 17** and have raised no concerns about the implementation of these policies in their current form. There is no conflict between these policies and the Wyre Forest adopted Core Strategy.

**WO5:** *To enable equivalent self-sufficiency in waste management in the county by addressing the 'capacity gap' over the life of the strategy to 2027 and safeguarding existing waste management facilities from incompatible development.*

**9.31** Policy **WCS 2** sets out delivery milestones for the achievement of equivalent self-sufficiency in waste management in Worcestershire. They require the delivery of the following milestones:

**Table 11: Re-use, recycling and 'other recovery' capacity gap and delivery milestones (tonnes per annum)**

	2010/11	2015/16	2020/21	2025/26
<b>Delivery milestones</b>	-	391,000	728,000	782,000

Note: this is illustrated in **Figure 15**.

134 Available in the research section at <http://www.adeptnet.org.uk/>



**9.32** In the last 2 years <sup>135</sup> permission has been granted for 47,200 tonnes per annum re-use and recycling capacity. This means that even without the impetus of the Waste Core Strategy the waste management industry in the county has delivered about a 10% increase in re-use and recycling capacity. In addition there are currently three planning applications which are yet to be determined for re-use, recycling or 'other recovery' in Worcestershire, amounting to 415,000 tonnes per annum capacity. Whether these proposals are permitted will depend on the merits of each case; however this indicates that the capacity required is likely to be deliverable in the current market. There are also additional undetermined applications for sorting and transfer capacity.

**9.33 Policy WCS 1** sets out the presumption in favour of sustainable development, however applications will only be brought forward if there is adequate land available and this is an important consideration when looking at whether the Waste Core Strategy is deliverable.

**9.34** The capacity gap and therefore the land requirements identified in the Vision (**Table 4**) are based on the following assumptions:

- **Estimates of projections based on the assumptions in Table 12:** In practice these projections are likely to be above actual levels of waste arisings. They are already higher than the figures for actual waste arisings for comparable years as set out in the Waste Data Interrogator (WDI). The WDI shows a 28% decrease in the amount of HCI waste managed in

Worcestershire between 2007-2009 and a 21% decrease in waste managed in England over the same period. The recent Waste Data Overview <sup>136</sup> also showed a decrease in waste arisings across all waste streams nationally of 11.3% between 2004-2008.

The projections make no allowance for the possibility that fiscal and regulatory policies and national and local initiatives will themselves foster more efficient industrial practices and further reductions in waste production. In the short term at least the current economic downturn has already led to reduced output and it is possible that waste arisings will remain lower for some years to come.

The projections of MSW, clinical waste and C&D waste arisings in the strategy are based on household growth targets set out in the proposed *RSS Phase Two Revision*. However the proposed revision has not been adopted and the Secretary of State has expressed his intention to revoke the existing RSS. At the time of publication the only planning authority in Worcestershire with an adopted Core Strategy is Wyre Forest District Council and several local planning authorities across Worcestershire have yet to locally determine future housing and employment provision. This will need to be monitored and any impacts on the projections and the deliverability of the Waste Core Strategy will be considered in the Annual Monitoring Report.

<sup>135</sup> January 2010 – January 2012

<sup>136</sup> Defra (June 2011)



**Table 12: Assumptions for Waste Arisings Projections**

Waste Stream	Assumption
<b>C&amp;I</b>	ADAS study baseline for 2006/07, projected as per Waste Strategy 2007 (Commercial = 49% increasing at 2.6% per annum, Industrial = 51% at 0% growth).
Agricultural element of C&I	WMRA Waste Scenarios Study baseline, projected as per Industrial waste (0% growth).
<b>Hazardous</b>	Scott Wilson West Midlands Landfill Capacity Study 2009 update
Clinical & Radioactive element of Hazardous	Correspondence with Primary Care Trust, projected to increase at same rate as MSW.
<b>C&amp;D</b>	WMRA Phase 2 Future Capacity Study.
<b>MSW</b>	JMWMS: 2007 baseline, increasing in line with household change as per proposed Phase 2 Revision of the West Midlands Regional Spatial Strategy.

Note: These projections are based on the best available data; following consideration against alternative options along with a risk assessment in the background document "Arisings and capacity".

- All existing facilities will continue to operate at their current capacity<sup>137</sup> and increased capacity will be realised through new facilities:**  
 This is important as it allows for adequate capacity to be planned for, however in practice it is very possible that some additional capacity will be provided through the intensification of existing sites. This will be monitored through the AMR.

The West Midlands Regional Assembly *Treatment Facilities and Capacity Survey (2007)* found that waste facilities in the West Midlands utilise only 59% of their theoretical maximum capacity and that intensification and

re-organisation of existing facilities may provide some increased capacity. Of the facilities that responded to this study 65% indicated that the facility had potential to expand its throughput with only 35% indicating that they were at their maximum capacity.

Evidence from waste operators in the county<sup>138</sup> suggests that this trend is likely to be true of facilities in Worcestershire, with several existing sites sub-dividing in recent years or only operating within part of their permitted area.

<sup>137</sup> Except Hill and Moor composting facility, see background document "Arisings and capacity" for details.

<sup>138</sup> Gathered during site visits to all facilities in the County 2008-9



- **Sorting and transfer facilities do not treat waste:** This ensures that adequate treatment and transfer capacity is identified, however Advantage West Midlands *Waste – A future resource for business (2008)* found that 70% of transfer facilities that responded to the study performed some form of pre-treatment, resulting in 27% - 100% diversion from landfill. The most common response was 60% diversion, indicating that much of the capacity we currently count as 'sorting and transfer' in the region contributes toward re-use and recycling capacity and diverts significant volumes of waste from landfill. None of this activity is counted as treatment capacity at present.

These factors mean that the capacity gap and land-requirements are likely to be an over-estimate (see **Table 13**).

**9.35** Estimating the numbers, types and size of facilities that will provide for the identified capacity gap is difficult. Uncertainties exist in relation to:

- how much capacity will be delivered from new facilities and how much from extensions or intensifications of existing sites;
- the impacts of fiscal incentives and fiscal and supply constraints on the market; and
- competing technologies and future innovation;

all of which will ultimately influence the investment choices of the industry.

**9.36** Worcestershire's specific circumstances have been used to give some indication of what the capacity gap and delivery milestones may mean in terms of:

- a) Land requirements; and
- b) Facility numbers



**Table 13: Capacity gap, land requirements and facility numbers**

	2010/11	2015/16	2020/21	2025/26
<b>Capacity gap (total) tpa</b>	<b>631,500</b>	<b>654,000</b>	<b>728,000</b>	<b>782,000</b>
<b>Delivery milestones</b>				
	2010/11	2015/16	2020/21	2025/26
<b>Delivery milestones</b>	-	<b>391,000</b>	<b>728,000</b>	<b>782,000</b>
Re-use and recycling	-	249,250	460,000	498,500
'Other recovery'	-	141,750	268,000	283,500
Sorting and transfer	-	0	0	0
Landfill and disposal	-	0	0	0
<b>Land requirements to meet the delivery milestones</b>				
	2010/11	2015/16	2020/21	2025/26
<b>Land requirements (total)</b>	-	<b>15ha</b>	<b>29 ha</b>	<b>30 ha</b>
Re-use and recycling	-	11 ha	20 ha	21 ha
'Other recovery'	-	4ha	9 ha	9 ha
Sorting and transfer	0	0	0	0
<b>Number of facilities required to meet the delivery milestones</b>				
	2010/11	2015/16	2020/21	2025/26
<b>number of facilities (total)</b>	-	<b>14-19</b>	<b>26-35</b>	<b>28-38</b>
Re-use and recycling	-	13-18	24-33	26-36
'Other recovery'	-	1	2	2
Sorting and transfer	0	0	0	0
Landfill and disposal	0	0	0	0

**Note:**

Further details and projections beyond the life of the strategy are given in **Table 4**.

a) land requirements are based on average throughputs per hectare per annum for facilities in Worcestershire: Re-use and recycling – 23,500 tpa; 'Other recovery' – 32,000 tpa; Sorting and transfer – 57,000 tpa

b) number of facilities based on average throughput for each facility in Worcestershire per annum: Re-use and recycling 14,000 tpa (all facilities) – 19,000 tpa (urban facilities); 'Other recovery' 130,000 tpa (all facilities applied for); Sorting and transfer 17,000 (urban facilities) - 25,000 (all facilities).



**9.37** Sites in Worcestershire are smaller than the regional average and it is expected that new sites will be both larger in scale and have higher throughputs in line with modern facilities elsewhere in the region. These estimates therefore represent the worst case scenario. The RSS Phase Two Revision evidence base was based on a much higher average site throughput of 50,000 tpa which would amount to about 18 facilities by 2025/26<sup>139</sup>. This is roughly half the current estimate for Waste sites required in Worcestershire (see **Table 13**).

*Identifying whether adequate land is available*

**9.38** In order to identify whether adequate land is available to enable facilities which fill the capacity gap to be delivered, a high-level assessment of locations has been undertaken and 58 *Areas of Search* have been identified as potentially suitable for waste management facilities (see **Annex A**). This has assessed all known industrial and derelict employment land in the county. It has not taken into account other potentially suitable land as identified in policy **WCS 6**, including redundant agricultural or forestry buildings or co-location opportunities.

**9.39** Existing landfill capacity in Worcestershire is sufficient to meet need during the lifetime of the strategy<sup>140</sup> and no disposal requirement has been identified. Therefore, landfill and disposal have not been considered in assessing the areas of search.

**9.40** In December 2010/January 2011 the availability of units on the identified areas of search was assessed. This is only a snap-shot but is useful in indicating likely land availability. The Council's database held details of a total of over 270 units available for rent/sale<sup>141</sup> totalling 34 hectares of suitable land (see **Table 14**).

**9.41** The County Council has commissioned research<sup>142</sup> on the location, extent and availability of land suitable for waste facilities in the county. In this research discussions with the property management companies indicated that likely turnover of sites and anticipated attitude of the site owners and managers should mean that other sites become available on these and other estates throughout the life of the Strategy. Discussions with the County Economic Development Forum have supported this.

**9.42** The 34 hectares currently available is little above the 30 hectares required by the end of the strategy to deliver the capacity gap (see **Table 13**), however as discussed above, the capacity gap and land requirement figures are likely to be a worst-case scenario. In addition the assessment of land available only considers derelict or industrial land and does not include new industrial estates currently being developed or that will be brought forward through the City, District and Borough Development Frameworks.

139 West Midland Regional Assembly (2004) *West Midlands Waste Capacity Study. Phase 2: Future Capacity requirements.*

140 For more information see Waste Core Strategy background document "Landfill" or "Arising and capacity" background document.

141 Based on areas of search only.

142 See background document "Industrial estates study" by ERM



**9.43** The proposed *Phase Two Revision* of the WMRSS included proposals for the Employment Land Provision needed to achieve a 5 year reservoir of "readily available employment land" outside of town centres, regional employment sites, regional and major investment sites. The reservoir includes "*land suitable for development within use classes B1 (except offices located in town centres), B2 and B8 uses and also some sui generis uses such as waste management facilities which have characteristics and require land and property requirements that would normally only be found in employment areas*".<sup>143</sup>

**9.44** The rolling 5 year provision of employment land for Worcestershire would be 96 hectares. On average therefore new waste management capacity will require approximately 2% of this provision over the life of the strategy<sup>144</sup>, although this will be front loaded to meet the delivery milestones shown in **Table 13**<sup>145</sup>. The Panel report into the Examination accepted the thoroughness of the evidence base on which the assessments were made and endorsed the principles adopted, the scale of the provision and the use of this land for waste management purposes. At present this evidence is the best available assessment of industrial land needs.

**9.45** The County Council will engage with City, Borough and District Councils to ensure that waste management is considered when allocating future employment land.

**9.46** As already noted the *areas of search* do not include redundant agricultural or forestry buildings or co-location opportunities. Normal market practices will also result in suitable land becoming available that could not be identified during the preparation of the Waste Core Strategy. This has happened in Worcestershire with the Estech site at Hartlebury, the Forge site in Kidderminster and the EnviroSort site at Norton near Worcester; all of which were on existing industrial land, that was not known to be available until applications for planning permission for waste management facilities on them were submitted. Together the three sites have planning permission and environmental permits for over 500,000tpa of waste management capacity. It is realistic to expect that other proposals will come forward during the life of the strategy to re-use existing employment land for waste facilities in Worcestershire, a county with a large but declining industrial and manufacturing sector.

<sup>143</sup> WMRSS Phase 2 Revision p 96 footnotes 1 and 2.

<sup>144</sup> Based on the assumption that 31 hectares is required between 2010/11 and 2025/6 averaging 2 hectares per annum. This equates to an average of approximately 2% of the 96 hectare land provision per year.

<sup>145</sup> Based on the assumption that 15 hectares is required between 2010/11 and 2015/16, and a further 14 hectares is required between 2015/16 and 2020/21, averaging 3 hectares per annum. This equates to an average of approximately 3% of the 96 hectare land provision per year, but with a much lower requirement towards the end of the Strategy.



### *Realising zero-waste to landfill in the long term*

**9.47** The "Annex A to Waste Core Strategy Background Document Arisings and Capacity: September 2011"<sup>146</sup> indicates that in order to meet the capacity gap to achieve zero-waste to landfill by the end of the strategy, approximately 40-44 hectares of land would be required<sup>147</sup>. This is over and above the 34 hectares of suitable land that is currently available. However zero-waste is a long-term aim. The targets set in **Objective WO3** will help to move waste management in the county towards this zero-waste aim and there is adequate land available to deliver the capacity gap to meet these targets. District Council plans will enable the rolling 5 year provision to be implemented and ensure that sufficient land is available. It is therefore not felt that land availability at the present time would undermine the Strategy.

### *Deliverability of development on land identified in Policy WCS 6*

**9.48** Another fundamental consideration in the deliverability of this objective is whether it is realistic to expect facilities to be delivered on the land types identified in policy **WCS 6**.

### **Industrial Estates:**

**9.49** *The Industrial Estates Study*<sup>148</sup> commissioned by the County Council, looked at industrial sites and spoke to property management companies in Worcestershire<sup>149</sup>. It found that:

- It would be feasible to find units on industrial estates that could be used for waste management facilities.
- In general, owners of industrial property will view any proposition in purely commercial terms and will not be concerned about the actual use provided that the facility is well maintained, visually unobtrusive and in-keeping with surrounding units.
- This would be an economically feasible option in this County. This took into account average capital and operational costs of different waste management operations and the average costs of renting or purchasing industrial land.
- In the short term the falling prices of industrial land along with the potential of significantly longer lease periods were likely to make waste facilities very attractive propositions for landowners in the current economic climate.

**9.50** In Worcestershire many existing waste management operations currently take place on industrial estates. This trend and the findings of the *Industrial Estates Study* indicate that this element of the Waste Core Strategy will be deliverable. However at the time of publication local planning authorities across

<sup>146</sup> Available at [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)

<sup>147</sup> These calculations only provide an indication of likely need as they take no account of the mix of technologies which may be feasible or waste minimisation measures and a reduction in arisings.

<sup>148</sup> See background document "*Industrial estates study*" by ERM

<sup>149</sup> GVA Grimley, Harris Lamb, Halls Commercial, John Trustlove, Jonathan Chilton and King Sturge



Worcestershire, with the exception of Wyre Forest, have yet to locally determine future provision of employment land. Development plan documents will need to be monitored as they emerge, to ensure that the Waste Core Strategy remains deliverable in the medium to long-term.

#### **Active mineral workings or landfill sites and redundant agricultural and forestry buildings:**

- 9.51** There is a natural, symbiotic relationship between some kinds of waste management facilities and these locations. Permissions have already been granted in Worcestershire for the treatment and transfer of C&D waste at working mineral sites, for recycling and sorting facilities at landfill sites and open windrow composting on redundant agricultural land.
- 9.52** It is believed that these kinds of locations are likely to be brought forward to contribute towards this objective.

#### **Co-location opportunities:**

- 9.53** Sites with current use rights for waste management purposes, active minerals workings or landfill sites, land within or adjacent to waste water treatment works and opportunities for co-location with producers or end users of waste have not been included in the identified areas of search as they were felt to be too vulnerable to commercial decisions. However waste management developments on these types of sites are common in Worcestershire.

#### *Safeguarding existing facilities*

- 9.54** Policy **WCS 16** requires new development on or adjacent to an existing waste operation to consider whether it would have adverse implications for the continued operation of the waste management facility, and for development within 250 metres to ensure that new sensitive receptors would not be adversely affected by bioaerosols or other emissions. A web tool has been developed to allow waste site locations (site boundary) and 250m buffer around them to be identified. The web tool will include details of site name, operator and type of facility and will be available for use on our website. This is intended to inform the City, District and Borough Councils' planning and environmental health officers, developers and other parties. The possibilities of "broadcasting" this to other councils' internal mapping systems are being investigated.

#### *WO6: To involve all those affected as openly and effectively as possible.*

- 9.55** It is expected that developers will consult with local communities and other stakeholders on all proposals for waste management facilities prior to submitting planning applications. Policy **WCS 15** requires applicants to demonstrate how they have carried out this engagement and how it has influenced the submitted proposal.



**9.56** Current performance with regard to this indicator is encouraging and between 2008 and 2009 the number of applications submitted to the County Council with consultation statements rose from 18% to 22% <sup>150</sup>. It is believed that other proposals that did not include a consultation statement had also undertaken pre-application consultation with local communities. With the added impetus provided by Policy **WCS 15** and the explanatory text this objective is felt to be deliverable.

*WO7: To develop a waste management industry that contributes positively to the local economy.*

**9.57** The Strategy will enable the delivery of new waste management facilities. Not only does this have the potential to create new employment opportunities, and result in skills, training and technical innovation within the industry, but it could also support the local economy as a whole.

**9.58** Policies **WCS 2** and **WCS 15** address the issue of economic benefit. Policy **WCS 15** is the main driver for this and looks at contributions towards the capacity gap, deliverability of which has already been discussed above. It also considers the contribution towards the local green economy.

**9.59** The majority of commercial and industrial activities produce some form of waste, and in Worcestershire over 730,000 tonnes per annum is currently managed <sup>151</sup>. Businesses must pay for the management and disposal of this waste and over the coming years the costs of waste

management are expected to increase. Costs of landfill will increase significantly due to increases in landfill tax and other factors, whereas the costs of other treatment methods are expected to increase at a much lower rate, as illustrated in **Figure 17**. The Waste Core Strategy seeks to enable a greater range of waste management options in the county. This will give businesses greater opportunities to choose treatment methods that best suit the wastes they produce and to avoid the financial implications of sending waste to landfill.

*WO8: To direct development to the most appropriate location in accordance with the Spatial Strategy.*

**9.60** The geographic hierarchy and spatial strategy are based on the consideration of opportunities in the form of:

- patterns of current and predicted future waste arisings,
- patterns of current and predicted future resource demand,
- onward treatment facilities,
- connections to the strategic transport network,
- potential for future development of waste management facilities,

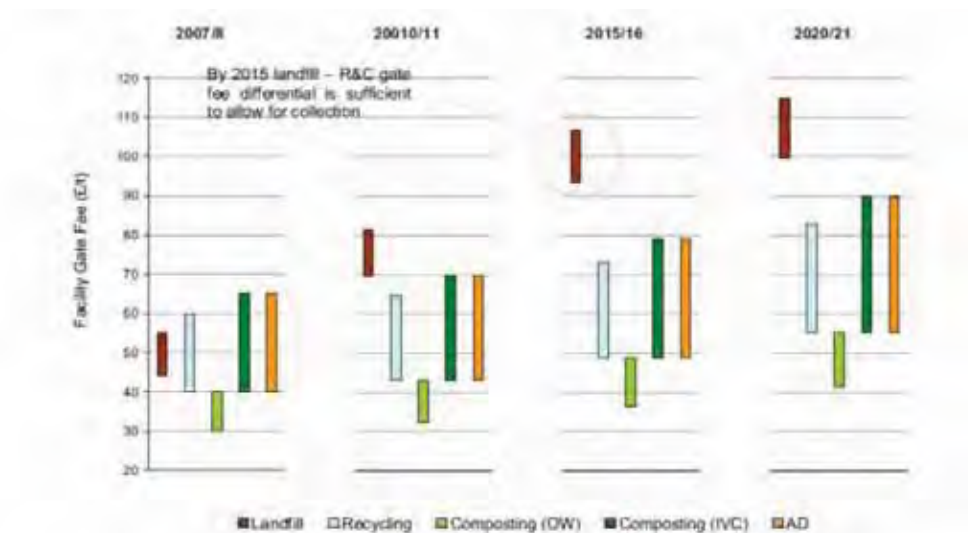
and limitations identified by City, Borough and District Councils' Strategic Flood Risk Assessments. See background document 'Developing the Spatial Strategy' for details of alternative considerations.

<sup>150</sup> Worcestershire County Council "Minerals and Waste Local Development Scheme: The Fifth Annual Monitoring Report 2008-2009" December 2009.

<sup>151</sup> 2007 figures: EA Waste Data Interrogator total HIC arising in Worcestershire minus municipal waste in Worcestershire 2006/07.



**Figure 17. Comparative gate fees for landfill, recycling and composting facilities 2007/8 - 2020/21**



Source: Advantage West Midlands (2008) *Waste – Future Resource for Business*

**9.61** The policies drive waste management development to the highest appropriate level of the geographic hierarchy. The land availability in the areas of search, as discussed above, is also concentrated at the higher levels of the hierarchy (see **Table 14**). This approach is therefore felt to be deliverable.

**Table 14: Land availability by level of the Geographic Hierarchy** <sup>152</sup>

Level	Available land	Available units
Level 1	16.88 ha	150
Level 2	9.06 ha	101
Level 3	7.74 ha	21
Level 4	0.03 ha	1
Level 5	-	-

<sup>152</sup> Source: Worcestershire County Council "Worcestershire Property Search" website 11<sup>th</sup> February 2011.



## Conclusion

**9.62** All objectives should be deliverable through the policy framework. In general each objective is contributed to by a number of policies, making failure to deliver less likely. Some potential limitations in policy delivery have been identified but these are not considered to undermine the delivery of the objectives.

## Monitoring framework

**9.63** The Council is committed to monitoring the Waste Core Strategy in order to achieve the vision and strategic objectives it sets out.

**9.64** The purposes of monitoring are:

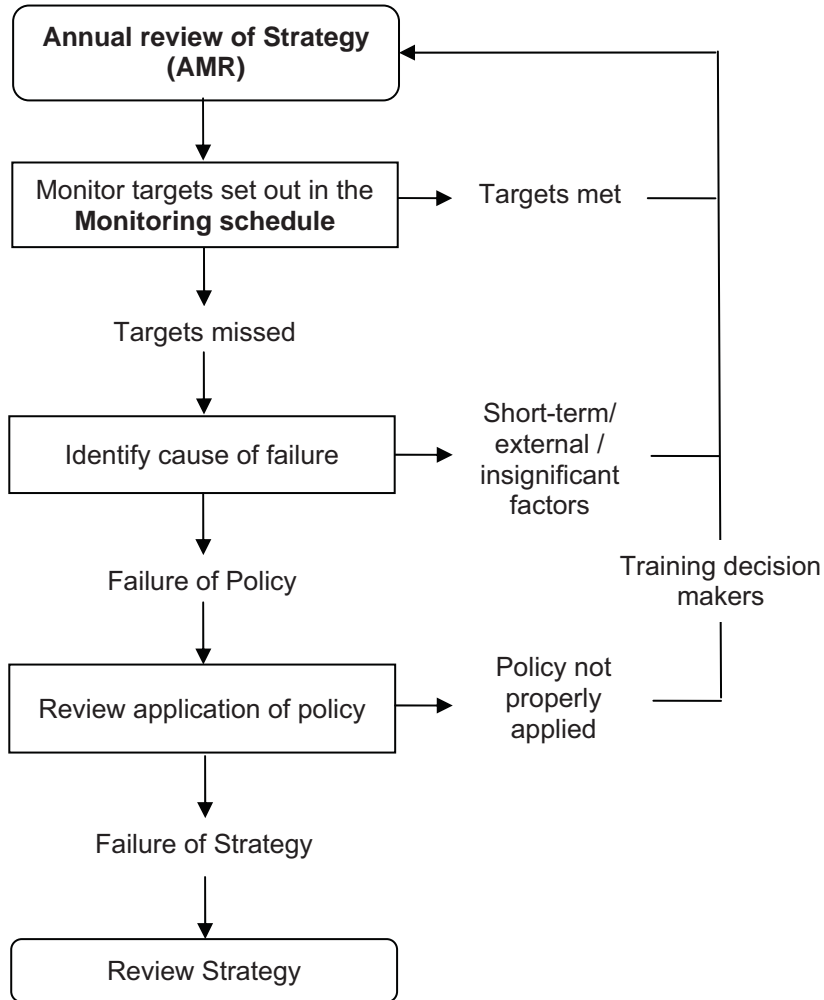
- To assess the extent to which policies in the Core Strategy are being implemented.
- To identify policies that may need to be amended or replaced.
- To measure the performance of the Core Strategy against the vision and strategic objectives.
- To establish whether policies have had unintended consequences.
- To establish whether assumptions and objectives behind policies are still relevant.
- To establish whether targets are being achieved.
- Indicate where and when it is necessary to revise the Core Strategy.

**9.65** This section sets out arrangements for monitoring the effectiveness of the Waste Core Strategy in a **Monitoring Schedule**. The results will be reported in the Council's *Mineral and Waste Local Development Framework Annual Monitoring Report* (The AMR). The monitoring period for the AMR is currently April to March. All indicators will be monitored on an annual basis with explicit reference made to the review triggers where appropriate.

**9.66** If monitoring indicates that targets have been missed, the process outlined in **Figure 18** will be followed. The process sets out to establish if a failure to meet a target is significant, in which case we need to review and correct the Strategy, or whether it is the result of short-term or other factors which are not significant. It may be possible to correct some failures through mechanisms such as adopting a Supplementary Planning Document (SPD) rather than formally reviewing the entire strategy.



**Figure 18: Policy review process**



*Monitoring schedule*

**9.67** The Monitoring Schedule in **Table 15** considers how each of the objectives will be implemented and how their achievement will be monitored. The approach taken has also been informed by the Sustainability Appraisal.



Table 15: Monitoring Schedule

<i>What do we want to achieve?</i>	
<p><b>Objective WO1: To base decisions on, the need to reduce greenhouse gas emissions and to be resilient to climate change.</b>                  SA objectives – SA1, SA2, SA4, SA7, SA8, SA12</p>	
<i>How will this be achieved</i>	
<b>Policy framework</b>	<p><b>WCS 1: Presumption in favour of sustainable development, WCS 2: Enabling waste management capacity; WCS 3: Reuse and recycling; WCS 4: Other recovery; WCS 5: Landfill and disposal; WCS 9: Environmental assets; WCS 10: Flood risk and water resources; and WCS 11: Sustainable design and operation of facilities</b></p>
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>• Worcestershire County Council as Planning Authority, Waste Disposal Authority and landowner</li> <li>• City, Borough and District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission.</li> <li>• Environment Agency or other appropriate body for technical advice.</li> </ul>
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>• Pre-application advice</li> <li>• Waste Planning Applications (Public and private sector)</li> </ul>
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>• Potential for additional costs to make developments less viable.  <i>Impact: Medium</i>  <i>Likelihood: Medium</i></li> <li>• Possible gap in applicant's knowledge relating to delivering energy efficiency or renewable energy and design taking into account climate change adaptation and mitigation could result in a time lag in adoption/acceptance of innovative design approaches.  <i>Impact: Medium</i>  <i>Likelihood: Medium</i></li> <li>• No suitable land available in Flood zone 1 or 2.  <i>Impact: High</i>  <i>Likelihood: Low overall (medium in some districts. The SFRAs for all District Council Core Strategies have been considered.)</i></li> </ul>



<i>How will we know it is being achieved?</i>			
Indicators and targets	Indicator	Target	Review trigger
	1. Permissions for waste management development granted contrary to the EA advice on flooding	0	One permission granted contrary to Environment Agency advice.
	2. Permissions for waste management development granted contrary to the EA advice on water quality.	0	One permission granted contrary to Environment Agency advice.
	3. Permissions for waste management development that include measures for energy efficiency.	100%	Less than 90% of permissions comply <sup>153</sup> for three years in any five.
	4. Permissions for waste management development with a gross floor space of over 1000 sq m gaining at least 10% of energy supply annually from renewable energy supplies.	100%	One permission granted that does not comply.
	5. Permissions for waste management development that include measures for water efficiency.	100%	Less than 90% of permissions comply <sup>154</sup> for three years in any five.
	6. Permissions for new landfill capacity that include landfill gas management systems.	100%	One permission granted for landfill without landfill gas management systems where such a system would be practicable.
<b>Other issues that will be monitored</b>	Changes in national policies or targets relating to climate change, flood risk, energy efficiency and water efficiency. Review trigger: conflict with national policy.		

153

This is less than 100% as it may not be possible for some small developments to include provision for this. These will be identified in the AMR.

154

This is less than 100% as it may not be possible for some small developments to include provision for this. These will be identified in the AMR.



<p><i>What do we want to achieve?</i></p> <p><b>Objective WO2: To base decisions on the principles of sustainable development by protecting and enhancing the county's natural resources, environmental, cultural and economic assets, the character and amenity of the local area and the health and wellbeing of the local people</b> SA objectives – SA3, SA9, SA11, SA12, SA13, SA16, SA18</p>	
<p><i>How will this be achieved?</i></p>	
<p><b>Policy framework</b></p>	<p><b>WCS 1: Presumption in favour of sustainable development; WCS 6: Compatible land use; WCS 7: Development associated with existing temporary facilities; WCS 8: Site infrastructure and access; WCS 9: Environmental Assets; WCS 10: Flood risk and water resources; WCS 11: Sustainable design and operation of facilities; WCS 12: Local characteristics; WCS 13: Green Belt; WCS 14: Amenity; WCS 15: Social and economic benefits; and WCS 16: New development proposed on or near to existing waste management facilities.</b></p>
<p><b>Responsible bodies</b></p>	<ul style="list-style-type: none"> <li>• Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> <li>• City, Borough and District Councils as Local Planning Authorities addressing implications of general applications for planning permission near to existing waste management facilities.</li> <li>• Environment Agency, Natural England, English Heritage, Worcestershire Wildlife Trust and appropriate health authority for technical advice.</li> <li>• Environment Agency and Defra for data collection.</li> </ul>
<p><b>Delivery mechanism</b></p>	<ul style="list-style-type: none"> <li>• Pre-application advice</li> <li>• Waste Planning Applications (Public and private sector)</li> </ul>
<p><b>Risk assessment</b></p>	<ul style="list-style-type: none"> <li>• Indicators depend on availability of data and advice from outside bodies. <i>Impact: Medium</i> <i>Likelihood: Medium</i></li> <li>• Presence and significance of features outside of the application site may not be recognised. <i>Impact: High</i> <i>Likelihood: Low</i></li> </ul>



<i>How will we know it is being achieved?</i>			
Indicators and targets	Indicator	Target	Review trigger
	7. Permissions for new built waste management development that include provision for biodiversity enhancement.	100%	Less than 90% over three years in any five.
	8. Permissions that have an unacceptable adverse impact on landscape character, scheduled ancient monuments, listed buildings, conservation areas, battlefields or registered historic parks and gardens.	None	Permission granted for one application that does not comply.
	9. Permissions for new waste management development granted in the Malvern Hills or Cotswolds AONB.	No unacceptable adverse change.	One permission. Proposals will be considered to have an unacceptable adverse impact where this is identified by a statutory body, AONB JAC or in the committee or delegated report prepared.
	10. Permissions for new waste management development that take into account local characteristics.	No unacceptable adverse impact.	One permission. Proposals will be considered to have an unacceptable adverse impact where this is identified by a statutory body or in the committee or delegated report prepared.
	11. Permissions for new waste management development take into account amenity considerations.	No unacceptable adverse impact.	One permission. Proposals will be considered to have an unacceptable adverse impact where this is identified by Environmental Health Officer or a statutory body or in the committee or delegated report prepared.
	12. Permissions for new waste management development on Greenfield sites	None	One permission for development other than landfill, composting or waste water treatment.
	13. Permissions for new waste management development in the Green Belt	No unacceptable cumulative impact on the purposes of Green Belt designation.	Periodic review every 5 years to assess impact of permissions granted for waste management development within the Green Belt.
	14. Permissions granted in accordance with highways advice.	100%	One permission granted contrary to advice from the County Council's Highway department or the Highways Agency.
<b>Other issues that will be monitored</b>	Facilities permitted on each of the land types identified in Policy <b>WCS 6</b> . Changes in national policy or targets. Review trigger: conflict with national policy.		



<i>What do we want to achieve?</i>	
<p><b>Objective WO3: To make driving waste up the waste hierarchy the basis for waste management in Worcestershire</b>                  SA objectives – SA1, SA2, SA5, SA7, SA8, SA9, SA10, SA18</p>	
<i>How will this be achieved?</i>	
<b>Policy framework</b>	<p><b>WCS 1: Presumption in favour of sustainable development; WCS 2: Enabling waste management capacity; WCS 3: Re-use and recycling; WCS 4: Other recovery; WCS 5: Landfill and disposal and WCS 17: Making provision for waste in all new development.</b></p>
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>• Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> <li>• City, Borough and District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission.</li> <li>• Environment Agency and Defra for data collection.</li> </ul>
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>• Pre-application advice</li> <li>• Waste Planning Applications (Public and private sector)</li> </ul>
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>• No appropriate land available at the higher levels of the geographic hierarchy:  <i>Impact: High</i>  <i>Likelihood: Medium</i></li> </ul> <p>In order to address this WCC will engage with City, Borough and District Councils in the allocation of employment land to make sure that waste management facilities are included in this classification. The strategy would be at risk if this were not the case.</p> <ul style="list-style-type: none"> <li>• Capacity must be delivered at the higher levels of the waste hierarchy to enable disposal to be minimised. The strategy would be at risk if this was not the case.  <i>Impact: High</i>  <i>Likelihood: Low</i></li> <li>• Indicators depend on availability of data and advice from outside bodies.  <i>Impact: Medium</i>  <i>Likelihood: Medium</i></li> </ul>



<i>How will we know it is being achieved?</i>			
<b>Indicators and targets</b>	<b>Indicator</b>	<b>Target</b>	<b>Review trigger</b>
	15. Progress towards equivalent self-sufficiency in re-use and recycling based on headline delivery milestones in Table 5 and Policy WCS 2.	Increase in % of waste recycled	Decrease in % waste being recycled for two years in a five year period.
	16. Waste sent to landfill (Defra annual reports on waste managed)	Decrease	Increase in % waste managed sent to landfill for two years in a five year period.
	17. Re-use, recycling and 'other recovery' of waste	By 2020, re-use, recycling and 'other recovery' of: <ul style="list-style-type: none"> <li>• 78% of MSW (with a minimum of 50% re-use &amp; recycling)</li> <li>• 75% of C&amp;I and hazardous waste (with a minimum of 55% re-use &amp; recycling)</li> <li>• 75% of C&amp;D waste</li> </ul>	Objective WO3 targets for 2020 not met.
	18. Adoption of appropriate policies regarding managing waste arising from all new development in City, Borough and District Councils' DPDs	Adopted by all City, Borough and District Councils	One relevant DPD adopted without appropriate policies.
<b>Other issues that will be monitored</b>	<ul style="list-style-type: none"> <li>• Best available data on waste arisings and capacity will be monitored through the life of the strategy in order to determine changes in the capacity gap. This information will be monitored as part of the AMR. (See WO5 for more details).</li> <li>• Availability of land at each level of the geographic hierarchy. Review trigger: Inadequate land availability at higher levels of the geographic hierarchy (See WO8).</li> <li>• Changes in national policy or targets. Review trigger: conflict with national policy.</li> </ul>		

<i>What do we want to achieve?</i>										
<b>WO4: To ensure that the waste implications of all new development in Worcestershire are taken into account.</b> <b>SA objectives:</b> SA1, SA2, SA14, SA16										
<i>How will this be achieved?</i>										
<b>Policy framework</b>	<b>WCS 1: Presumption in favour of sustainable development; WCS 11: Sustainable design and operation of facilities; WCS 16: New development proposed on or near to existing waste management facilities and WCS 17: Making provision for waste in all new development.</b>									
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>• Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> <li>• City, Borough and District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission.</li> </ul>									
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>• Pre-application advice</li> <li>• District Council LDFs</li> <li>• Waste planning applications (Public and private sector)</li> <li>• Other planning applications</li> </ul>									
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>• Policies <b>WCS 16</b> and <b>WCS 17</b> will be applied by several different planning authorities. Consistency of implementation may be an issue.</li> </ul> <p><i>Impact: Medium</i> <i>Likelihood: Low</i></p>									
<i>How will we know it is being achieved?</i>										
<b>Indicators and targets</b>	<table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> <th>Review trigger</th> </tr> </thead> <tbody> <tr> <td>19. Development permitted within 250m of waste management facilities against County Council advice.</td> <td>None</td> <td>One permission granted against County Council advice.</td> </tr> <tr> <td>(18) Adoption of appropriate policies regarding managing waste arising from all new development in City, Borough and District Councils' DPDs</td> <td>Adopted by all City, Borough and District Councils</td> <td>One relevant DPD adopted without appropriate policies.</td> </tr> </tbody> </table>	Indicator	Target	Review trigger	19. Development permitted within 250m of waste management facilities against County Council advice.	None	One permission granted against County Council advice.	(18) Adoption of appropriate policies regarding managing waste arising from all new development in City, Borough and District Councils' DPDs	Adopted by all City, Borough and District Councils	One relevant DPD adopted without appropriate policies.
Indicator	Target	Review trigger								
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(18) Adoption of appropriate policies regarding managing waste arising from all new development in City, Borough and District Councils' DPDs	Adopted by all City, Borough and District Councils	One relevant DPD adopted without appropriate policies.								
<b>Other issues that will be monitored</b>	<ul style="list-style-type: none"> <li>• Changes in national policy or targets. Review trigger: conflict with national policy.</li> </ul>									





<b>What do we want to achieve?</b>	
Objective W05: To enable equivalent self-sufficiency in waste management in the County by addressing the “Capacity Gap” over the life of the strategy to 2027 and safeguarding existing waste management facilities from incompatible development. SA objectives – SA1; SA2; SA5; SA7; SA18	
<b>How will this be achieved?</b>	
<b>Policy framework</b>	<b>WCS 1: Presumption in favour of sustainable development; WCS 2: Enabling waste management capacity; WCS 3: Reuse and recycling; WCS 4: Other recovery; WCS 5: Landfill and disposal; WCS 15: Social and economic benefits and WCS 16: New development proposed on or near to existing waste management facilities.</b>
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>• Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> <li>• City, Borough and District Councils as Local Planning Authorities addressing implications of general applications for planning permission on existing waste management facilities.</li> <li>• Environment Agency and Defra for data collection.</li> </ul>
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>• Pre-application advice</li> <li>• Waste Planning Applications (Public and private sector)</li> </ul>
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>• Capacity must be delivered at the higher levels of the waste hierarchy to enable disposal to be minimised. The strategy would be at risk if this was not the case. <i>Impact: High</i> <i>Likelihood: Low</i></li> <li>• Policy <b>WCS 16</b> will be applied by several different planning authorities. Consistency of implementation may be an issue. <i>Impact: Medium</i> <i>Likelihood: Low</i></li> <li>• Indicators depend on availability of data and advice from outside bodies. <i>Impact: Medium</i> <i>Likelihood: Medium</i></li> </ul>

<i>How will we know it is being achieved?</i>			
Indicators and targets	Indicator	Target	Review trigger
	20. Progress towards equivalent self-sufficiency in re-use and recycling capacity based on headline delivery milestones in Table 5 and Policy WCS 2.	Achievement of headline delivery milestones for re-use and recycling capacity set out in Policy WCS 2	The contribution of re-use and recycling to the delivery milestones for re-use and recycling and 'other recovery' capacity as set out in Table 5 is less than: <ul style="list-style-type: none"> <li>• 391,000 tonnes per annum additional capacity by 2015/16</li> <li>• 728,000 tonnes per annum additional capacity by 2020/21</li> <li>• 782,000 tonnes per annum additional capacity by 2025/26.</li> </ul>
	21. Progress towards equivalent self-sufficiency in 'other recovery' capacity, based on headline delivery milestones in Table 5 and Policy WCS 2.	Achievement of delivery milestones for 'other recovery' capacity set out in Policy WCS 2	Delivery milestones for re-use and recycling and 'other recovery' capacity as set out in Table 5 not met.
	22. Maintain equivalent self-sufficiency in sorting and transfer capacity.	No capacity gap for sorting or transfer	Capacity gap identified for sorting or transfer
	23. Maintain equivalent self-sufficiency in disposal and landfill capacity.	No capacity gap for disposal or landfill	Capacity gap identified for disposal or non-hazardous, hazardous or inert landfill
	24. Applications for Waste Management development determined within 13 weeks.	100%	One application not determined within 13 weeks
	25. Number of proposals discussed with Worcestershire County Council at pre-application stage.	Increase	Decrease
	(19) Development permitted within 250m of waste management facilities against County Council advice.	None	One permission granted against County Council advice.
	<b>Other issues that will be monitored</b>		<ul style="list-style-type: none"> <li>• Best available data on waste arisings and capacity will be monitored through the life of the strategy in order to determine changes in the capacity gap. This information will be monitored as part of the AMR.</li> <li>• Changes in national policy or targets. Review trigger: conflict with national policy.</li> </ul>





<i>What do we want to achieve?</i>		
<b>WO6: To involve all those affected as openly and effectively as possible SA objectives – SA 6</b>		
<i>How will this be achieved?</i>		
<b>Policy framework</b>	<b>WCS 1: Presumption in favour of sustainable development; WCS 15: Social and economic benefits; WCS 16: New development proposed on or near to existing waste management facilities and The Statement of Community Involvement (SCI).</b>	
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> <li>City, Borough and District Councils as Local Planning Authority addressing implications of general applications for planning permission.</li> </ul>	
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>Pre-application advice</li> <li>Waste Planning Applications (Public and private sector)</li> <li>Other planning applications</li> </ul>	
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>It is possible that consultation may lead to a more lengthy design process, and that additional costs may make developments less viable.</li> </ul> <p style="text-align: center;"><i>Impact: High</i> <i>Likelihood: Low</i></p>	
<i>How will we know it is being achieved?</i>		
<b>Indicators and targets</b>	<b>Indicator</b>	<b>Review trigger</b>
	<p>26. Permitted applications for waste management which include a consultation statement.</p> <p>27. Decisions where there are no policies in the Development Plan which are relevant to the application or relevant policies are out of date at the time of making the decision.</p>	<p>100%</p> <p>None</p> <p>One permission granted without a consultation statement.</p> <p>One decision</p>
<b>Other issues that will be monitored</b>	<ul style="list-style-type: none"> <li>Changes in national or local policy or targets. Review trigger: conflict with national policy</li> </ul>	



<i>What do we want to achieve?</i>										
W07: To develop a waste management industry that contributes positively to the local economy SA objectives – SA5; SA7										
<i>How will this be achieved?</i>										
<b>Policy framework</b>	WCS 1: Presumption in favour of sustainable development; WCS 2: Enabling waste management capacity; WCS 6: Compatible land use; WCS 11: Sustainable design and operation of facilities; WCS 15: Social and economic benefits and WCS 16: New development proposed on or near to existing waste management facilities									
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority, landowner and in its Economic Development role.</li> </ul>									
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>Pre-application advice</li> <li>Waste Planning Applications (Public and private sector)</li> </ul>									
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>Damage to the existing economy</li> </ul> <p><i>Impact: High</i> <i>Likelihood: Low</i></p>									
<i>How will we know it is being achieved?</i>										
<b>Indicators and targets</b>	<table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> <th>Review trigger</th> </tr> </thead> <tbody> <tr> <td>(15, 20, 21, 22, 23) Progress towards equivalent self-sufficiency based on headline delivery milestones in Table 5 and Policy <b>WCS 2</b> or as updated in the AMR. (See indicators 15, 20, 21, 22, 23)</td> <td>See indicators 15, 20, 21, 22, 23</td> <td>See indicators 15, 20, 21, 22, 23</td> </tr> <tr> <td>28. Increase in GVA in Worcestershire from Waste Management.</td> <td>Increase</td> <td>Decrease in GVA in Worcestershire from Waste Management over three years in any five.</td> </tr> </tbody> </table>	Indicator	Target	Review trigger	(15, 20, 21, 22, 23) Progress towards equivalent self-sufficiency based on headline delivery milestones in Table 5 and Policy <b>WCS 2</b> or as updated in the AMR. (See indicators 15, 20, 21, 22, 23)	See indicators 15, 20, 21, 22, 23	See indicators 15, 20, 21, 22, 23	28. Increase in GVA in Worcestershire from Waste Management.	Increase	Decrease in GVA in Worcestershire from Waste Management over three years in any five.
Indicator	Target	Review trigger								
(15, 20, 21, 22, 23) Progress towards equivalent self-sufficiency based on headline delivery milestones in Table 5 and Policy <b>WCS 2</b> or as updated in the AMR. (See indicators 15, 20, 21, 22, 23)	See indicators 15, 20, 21, 22, 23	See indicators 15, 20, 21, 22, 23								
28. Increase in GVA in Worcestershire from Waste Management.	Increase	Decrease in GVA in Worcestershire from Waste Management over three years in any five.								
<b>Other issues that will be monitored</b>	<ul style="list-style-type: none"> <li>Changes in national or local policy or targets. Review trigger: conflict with national policy</li> </ul>									



<b>What do we want to achieve?</b>			
W08: To direct development to the most appropriate locations in accordance with the Spatial Strategy. SA objectives – SA2; SA4; SA6			
<b>How will this be achieved?</b>			
<b>Policy framework</b>	WCS 1: Presumption in favour of sustainable development; WCS 2: Enabling waste management capacity; WCS 3: Reuse and recycling and WCS 4: Other recovery		
<b>Responsible bodies</b>	<ul style="list-style-type: none"> <li>Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.</li> </ul>		
<b>Delivery mechanism</b>	<ul style="list-style-type: none"> <li>Pre-application advice</li> <li>Waste Planning Applications (Public and private sector)</li> </ul>		
<b>Risk assessment</b>	<ul style="list-style-type: none"> <li>No suitable sites available at the most appropriate level of the geographic hierarchy.</li> </ul> <p><i>Impact: High</i> <i>Likelihood: Medium</i></p> <p>In order to address this WCC will engage with City, Borough and District Councils in the allocation of employment land to make sure that waste management facilities are included in this classification. The strategy would be at risk if this were not the case.</p>		
<b>How will we know it is being achieved?</b>			
<b>Indicators and targets</b>	<b>Indicator</b>	<b>Target</b>	<b>Review trigger</b>
29.	Permitted 'other recovery' and disposal (excluding landfill) capacity at each level of the geographic hierarchy.	100% of new 'Other recovery' and disposal (excluding landfill) capacity at level 1 and 2 of the geographic hierarchy	One permission granted for 'other recovery' or disposal (excluding landfill) capacity at level 3, 4 or 5 of the geographic hierarchy
30.	Permitted re-use, recycling, storage, sorting and transfer capacity at each level of the geographic hierarchy.	Over 50% of new re-use, recycling, storage, sorting and transfer capacity at levels 1 and 2 of the geographic hierarchy	Less than 50% of new re-use, recycling, storage, sorting and transfer capacity at levels 1 and 2 of the geographic hierarchy over a three year period.
<b>Other issues that will be monitored</b>	<ul style="list-style-type: none"> <li>Changes in national or local policy or targets. Review trigger: conflict with national policy</li> </ul>		



# Appendix 1: Acronyms, abbreviations and glossary of terms

## Acronyms and abbreviations

<b>AMR</b>	Annual Monitoring Report
<b>AONB</b>	Area of Outstanding Natural Beauty
<b>AQMA</b>	Air Quality Management Areas
<b>BAP</b>	Biodiversity Action Plan
<b>C&amp;D</b>	Construction and Demolition Waste
<b>C&amp;I</b>	Commercial and Industrial Waste
<b>CHP</b>	Combined Heat and Power
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>EA</b>	Environment Agency
<b>FRA</b>	Flood Risk Assessment
<b>ha</b>	Hectare(s)
<b>JMWMS</b>	Joint Municipal Waste Management Strategy
<b>LDF</b>	Local Development Framework
<b>LSOA</b>	Lower-level Super Output Areas are the smallest scale at which Census data can be used. They roughly equate to 1,500 people.
<b>MRS</b>	Metal Recycling Site
<b>MSW</b>	Municipal Solid Waste
<b>RSS</b>	Regional Spatial Strategy (for the West Midlands unless otherwise stated)
<b>SAC</b>	Special Areas of Conservation (EU designation)
<b>SCI</b>	Statement of Community Involvement
<b>SuDS</b>	Sustainable Drainage Systems
<b>SPA</b>	Special Protection Areas (for Birds) (EU designation)
<b>SSSI</b>	Site of Special Scientific Interest
<b>tpa</b>	Tonnes per annum
<b>WET</b>	Wetland Ecosystem Treatment: WET Systems are constructed wetland systems which function by harnessing the innate ability of natural wetland ecosystems to absorb and transform the organic nutrients found in wastewater, converting these into plant biomass and soil. A WET System is made up of a series of swales - specially designed and constructed earth banks and ponds.
<b>WMRSS</b>	West Midlands Regional Spatial Strategy
<b>WPA</b>	Waste Planning Authority



## Glossary

<b>Adaptation (climate change)</b>	How development can be designed to cope with the changes in our climate and severe weather events caused by increasing levels of greenhouse gases.
<b>Agricultural waste</b>	All substances or objects from agricultural premises such as plastics, pesticide and oil containers, scrap metal, batteries, veterinary waste, paper and cardboard that are discarded by the holder, are now subject to control as waste. On-farm animal and plant wastes currently fall outside the scope of the legal definition of controlled waste in England and Wales and will not be considered in the Waste Core Strategy.
<b>Air Quality Management Areas</b>	Declared where air quality objectives are not likely to be achieved.
<b>Ancient semi-natural woodland</b>	Woodland which developed naturally on undisturbed soils. The long continuity of semi-natural ancient woods and their undisturbed soils makes it one of the most valuable natural habitats. It supports a huge range of wildlife and often these species are unable to colonise new areas easily.
<b>Annual Monitoring Report</b>	A statutory requirement which assesses the effectiveness of the Council's planning policies, particularly regarding Mineral and Waste development, and progress in developing Development Plan Documents. The current report includes details of both national and local Core Indicators and a range of locally set targets.
<b>Areas of Outstanding Natural Beauty</b>	Areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes.
<b>Battlefields</b>	English Heritage keeps a register of Historic Battlefields which comprises the sites of the most important military battles on English soil. These were often the turning points in English history but are vulnerable to many different modern-day pressures.
<b>Biodiversity</b>	"The variability among living organisms from all sources including, <i>inter alia</i> , terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." – Convention on Biological Diversity Article 2. UNEP 1992.
<b>Biodiversity Action Plan</b>	UK (UK BAP) and local (LBAP) action plans to identify, conserve and protect existing biological diversity, and to enhance it wherever possible. The UKBAP describes the biological resources of the UK and provides detailed plans for conservation of these resources, at national and devolved levels. Action plans for the most threatened species and habitats have been set out to aid recovery, and reporting rounds show how the UKBAP has contributed to the UK's progress towards the significant reduction of biodiversity loss called for by the Convention on Biological Diversity.



<b>Capacity gap</b>	The difference between how much waste management capacity we have and what we need over the plan period to 2027.
<b>Carbon sinks</b>	Atmospheric carbon in the form of carbon dioxide is captured and stored in living (trees and other green vegetation) or non-living reservoirs (soil, geological formations, oceans, wood products). Land uses which absorb and store carbon over long periods of time ('carbon sinks') may help to offset carbon dioxide emissions, at least in the short to medium term.
<b>Climate change</b>	See Adaptation and Mitigation
<b>Clinical waste</b>	Waste consisting of human or animal tissues, blood, bodily fluids, excretions, drugs, pharmaceutical products, syringes, needles or other similar waste from medical, dental, veterinary or similar practices that may pose a risk of infection or may prove hazardous to any person coming into contact with it.
<b>Coal resource</b>	Worcestershire has coal resources which are capable of extraction by surface mining operations. The Coal Authority is keen to ensure that coal resources are not unduly sterilised by new development. Whilst most past mining is generally benign in nature, potential public safety and stability problems can be triggered and uncovered by development activities.
<b>Combined heat and power</b>	A single thermal treatment plant which generates and captures both heat and electricity. In conventional power generation and incineration large quantities of energy are wasted in the form of heat.
<b>Commercial and industrial waste</b>	Includes commercial waste arising from wholesalers, catering establishments, retail premises and offices, Industrial waste arising from factories and industrial plants and packaging waste.
<b>Conservation areas</b>	Conservation areas are places which are desirable to preserve as a result of special architectural or historic interest.
<b>Construction and demolition waste</b>	Waste produced as a result of building, engineering or other activities which include construction, demolition or excavation. It mostly includes brick, concrete, hardcore, subsoil and topsoil.
<b>Disposal</b>	The Waste Framework Directive Article 3 (19) defines 'disposal' as "any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy".
<b>End users</b>	The final link in the chain of sustainable waste management, such as communities which can benefit from heat and energy from thermal treatment facilities or the users of soil conditioner from anaerobic digestion plant.
<b>Equivalent self-sufficiency</b>	Equivalent self-sufficiency means Worcestershire's capacity to treat waste that arises in the County; however cross-boundary movements are inevitable as specialised facilities exist, often benefiting from economies of scale. As such, some facilities perform a regional or even national function and the concept of equivalent self-sufficiency allows imports and exports of waste to be taken into account. Some cross boundary movements of waste will occur due to the waste management industry being market driven.



**Flood Risk Assessment**

An assessment which identifies the main risks to a development site from flooding and recommends mitigation measures to reduce the impact of flooding to the site and surrounding area.

**Flood zones**

These are areas which could be affected in the event of flooding from rivers.

- Flood zone 3 indicates the extent of a flood with a 1 per cent (1 in 100) chance of happening in any year.
- Flood zone 2 indicates the extent of an extreme flood with a 0.1 per cent (1 in 1000) chance of happening in any year.
- Flood zone 1 is land assessed as having a less than 1 in 1000 probability of river or sea flooding in any year.

Flood zones are defined in planning policy for England (currently defined in Technical Guidance to the National Planning Policy Framework) and are produced ignoring the presence of existing flood defences, since defences can be 'overtopped' if a flood occurs which is higher than the defences are designed to withstand. Defences can even fail in extreme events.

**Geodiversity**

The range of geological features (rocks, minerals, fossils, structures) geomorphological features (landforms and processes) and soil features that make up the landscape. It includes their assemblages, relationships, properties, interpretations and systems.

**Geographic hierarchy**

Settlements within Worcestershire perform different waste management functions. The broad geographic hierarchy takes into account current waste arisings, resource demand and existing waste management capacity of each settlement. The settlements which have a major role to play in waste management are in the top levels and those which have only a minor role are in the bottom levels of the geographic hierarchy.

**Green Belt**

Areas of land designated in the development plan (Local Development Framework Core Strategies, or previously Structure Plans). The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important attribute of Green Belts is their openness. Green Belts can shape patterns of urban development at sub-regional and regional scale, and help to ensure that development occurs in locations allocated in development plans. There are five purposes of including land in Green Belts:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns from merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.



<b>Green infrastructure</b>	Green infrastructure is a multifunctional network of green space, natural and historic features. It is a resource capable of delivering a wide range of environmental and quality of life benefits for local communities. Green Infrastructure includes parks, open spaces, playing fields, woodlands, allotments, private gardens and open countryside. Key considerations for green infrastructure are the functions or ecosystem services it provides. It should be considered at a broader scale than is necessarily the case for individual areas of open space, including the landscape context, hinterland and setting, as well as strategic links of sub-regional scale and beyond.
<b>Greenfield land</b>	Land that has not previously been developed. This is not the same as land designated as Green Belt.
<b>Hazardous waste</b>	<p>Waste that contains hazardous properties that may render it harmful to human health or the environment.</p> <p>The list of hazardous wastes was updated in July 2002. From this date the term special waste was dropped and waste such as florescent tubes, televisions and refrigerators were required to be consigned as hazardous waste.</p> <p>Hazardous wastes include many substances generally recognised as potentially dangerous such as pesticides, asbestos and strong acids. However, a number of wastes that result from everyday activities have also been designated hazardous waste, for example mobile phone batteries and used engine oils, scrap cars (End of Life Vehicles) and some Waste Electrical and Electronic Equipment (WEEE)</p>
<b>Landfill</b>	Disposal of material by burying into the ground, includes landraising, the disposal of material by burial above ground.
<b>Listed buildings and their settings</b>	Buildings with exceptional architectural or historic special interest. Listing means that listed building consent must be applied for in order to make any changes to that building which might affect its special interest.
<b>Local Development Framework</b>	A folder of local development documents that outline the spatial planning strategy for the local area.
<b>Local Geological Sites</b>	Non-statutory areas of local importance for nature conservation that complement nationally and internationally designated geological and wildlife sites. Previously known as Regionally Important Geological Sites (RIGS).
<b>Local Nature Reserves</b>	Places with wildlife or geological features that are of special interest locally. They offer people special opportunities to study or learn about nature or simply to enjoy it.
<b>Lower-level Super Output Areas</b>	The smallest scale at which Census data can be used. They roughly equate to 1,500 people.
<b>Material consideration</b>	There is no definition in legislation of what constitutes a material consideration, but case law has said that any consideration which relates to the use and development of land is capable of being a planning consideration.
<b>Mineral resources</b>	Mineral deposits which are identified as preferred areas for extraction by "saved" policy number 1 in the Hereford and Worcester Minerals Local Plan, April 1997, or any areas identified in future adopted policy.



<b>Mitigation (climate change)</b>	Reducing the extent of potential climate change by reducing carbon emissions resulting from human activities.
<b>Mitigation (impacts from development)</b>	Putting in place measures to reduce the potential impacts from development.
<b>Municipal Solid Waste</b>	All waste collected or disposed of by local authorities or agents acting on their behalf, principally domestic "dustbin" waste.
<b>National Nature Reserves</b>	Sites designated by Natural England to protect the most important areas of habitat and geological formations and to promote scientific research.
<b>Natura 2000 sites</b>	Natura 2000 sites are a network of European designated sites for wildlife, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
<b>Onward treatment</b>	Facilities which use the products from waste management activities, such as recyclate from materials reclamation facilities.
<b>Other recovery</b>	Article 3(15) of the revised Waste Framework Directive defines "Recovery" as "any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy". In the Waste Core Strategy "other recovery" includes thermal treatment and any recovery facilities that do not fall into the category of 're-use', 'recycling' or 'disposal'.
<b>Proximity</b>	How near a location is to waste arisings, onward treatment facilities or end users.
<b>Ramsar sites</b>	Wetlands of international importance, designated under the Ramsar Convention.
<b>Recovery</b>	Article 3 (15) of the Revised Waste Framework Directive defines recovery as "any operation the principle result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, in the plant or in the wider economy". For the purpose of the Waste Core Strategy this is split into <ul style="list-style-type: none"> <li>• recycling (see below) and</li> <li>• 'other recovery' (see above).</li> </ul>
<b>Recycling</b>	Article 3(17) of the revised Waste Framework Directive defines recycling as "any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations". Therefore the Waste Core Strategy includes open windrow composting, in-vessel composting and anaerobic digestion as recycling.



<b>Registered Parks and Gardens</b>	Gardens, grounds and other planned open spaces, such as town squares. The emphasis of the Register is on 'designed' landscapes, rather than on planting or botanical importance. Historic parks and gardens are a fragile and finite resource: they can easily be damaged beyond repair or lost forever.
<b>Resource demand</b>	Refers to the demand for resources from organic waste recovery (e.g. composting), recycling and energy recovery.
<b>Re-use</b>	The Waste Framework Directive Article 3(13) defines re-use as "any operation by which products or components that are not waste are used again for the same purpose for which they were conceived".
<b>Scheduled or other ancient monuments</b>	Scheduled monuments, designated by English Heritage, are not always ancient, or visible above ground. Scheduling is applied only to sites of national importance, and even then only if it is the best means of protection. Only deliberately created structures, features and remains can be scheduled.
<b>Sensitive receptor</b>	'Sensitive receptor' refers to people likely to be within 250 metres of the waste management operation for prolonged or frequent periods. This term would therefore apply to dwellings (including any associated gardens) and to workplaces where workers would frequently be present.
<b>Sites of Special Scientific Interest</b>	Areas of land or water of national importance identified by Natural England on account of their flora, fauna, geological or physiographical features.
<b>Source Protection Zone</b>	The Environment Agency defines Source Protection Zones for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area.
<b>Spatial Portrait</b>	The Spatial Portrait paints a picture of Worcestershire as it is at present. It highlights the main aspects of what makes the county distinctive and what waste management in the county is like.
<b>Special Areas of Conservation</b>	Designated areas under the European Community Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, intended to protect the habitats of threatened species.
<b>Special Protection Areas</b>	Areas classified under the European Community Directive on the Conservation of Wild Birds, intended to protect the habitats of threatened species.
<b>Special Wildlife Sites</b>	Sites considered to be the best places for wildlife in the county outside of legally protected areas such as SSSIs, National Nature Reserves and Local Nature Reserves.
<b>Strategic Flood Risk Assessment</b>	Strategic Flood Risk Assessments provide information on areas that may flood, taking into account different sources of flooding and the impacts of climate change. These form the basis for preparing appropriate policies for flood risk management for these areas.



**Sui generis**

A term used in planning law to mean uses of land which do not fit comfortably within the classes defined in the Use Classes Order 1987 and do not enjoy the privileges therein. To simplify a very complex area of law, *sui generis* uses are those which are considered to be unlike other activities and so usually, but not always, need planning permission. Scrap yards and car breakers yards and the chemical treatment or landfill of waste are *sui generis*. The courts have often, but not always, held that many other waste management facilities are also *sui generis*.

**Sustainable development**

Sustainable development is focussed on providing a better quality of life for everyone now and for generations to come. This is achieved through considering the long-term effects of social, economic and environmental impacts in an integrated and balanced manner.

**Waste arisings**

Waste produced which needs to be managed.

**Waste miles**

Reducing 'waste miles' is a conventional term used to indicate a decrease in the distance waste is transported. Reducing waste miles by road can be achieved by encouraging multi-modal transport methods, including rail and water, and encouraging development in areas which minimise the need to transport waste.



## Appendix 2: Superseded Saved Structure Plan Policies

The following policies in the Worcestershire County Structure Plan, adopted June 2001, were "saved" by the Secretary of State for Communities and Local Government on 7<sup>th</sup> September 2007 in exercise of the power confirmed by paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004 and are hereby superseded:

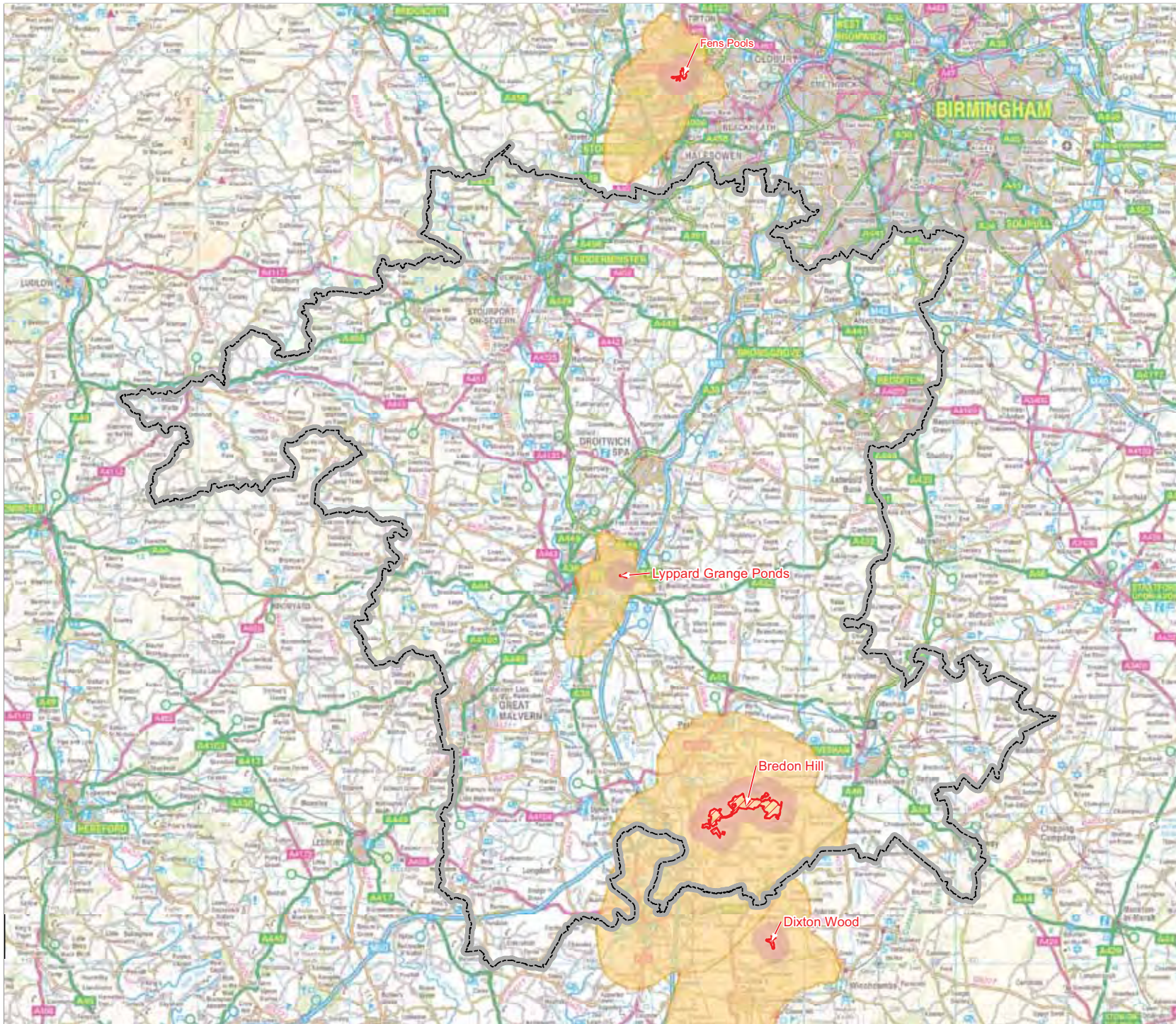
- WD1** Waste Hierarchy
- WD2** Location of Waste Handling and Treatment Facilities
- WD3** Waste Management Facilities
- WD4** Landfill
- EN3** Waste to Energy






The effect is to remove policies **WD1**, **WD2**, **WD3**, **WD4**, and **EN3** from the Worcestershire County Structure Plan and therefore the Development Plan.

## Appendix 3: Habitats Regulations Assessment Figure

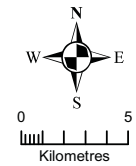
The Habitats Regulations Assessment's Figure 2.5<sup>155</sup> shows the extent of the areas in which it could not be concluded that there will be no likely significant effects from the development of waste management facilities. However, the significance of any such effects will depend upon the precise nature, scale and location of the development and must therefore be determined by a site specific assessment in line with **Policy WCS 9: Environmental Assets**.

155 "Worcestershire County Council HRA Addendum", September 2011 (ERM)



- KEY:
-  Worcestershire County Council Boundary
  -  Special Area of Conservation
  -  200m cannot conclude no LSE for dust
  -  1,000m cannot conclude no LSE for Anaerobic Digestion and Autoclave process
  -  Cannot conclude no LSE for thermal process

Note: Likely significant effect of Waste Management facilities are uncertain from the HRA



TITLE:  
**Figure 2.5**  
 Likely Significant Effects from Thermal Treatment Facilities

CLIENT:	Worcestershire County Council	SIZE:	A3
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DATE: 28/09/2011	CHECKED: CHM	PROJECT: 0142006
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All_LikelyEffects_Sept2011.mxd	0

ERM  
 Ethos  
 Kings Road  
 Swansea, SA1 8AS  
 Tel: 01792 306930  
 Fax: 01792 306956



SOURCE: Reproduced from Ordnance Survey digital map data. © Crown copyright. All rights reserved. 2011 License number 0100301673. English Nature, 100017954 (2011). Environment Agency  
 PROJECTION: British National Grid



## Annex A: Areas of Search

A preliminary assessment of 114 locations has been undertaken, considering the policy framework, Habitat Regulations Assessment and Strategic Flood Risk Assessments. Of these, 58 *areas of search* have been identified as being potentially suitable for most waste management facilities (see **Table 16**), subject to consideration of the details of specific proposals.

These locations were assessed against basic criteria relating to compatible land uses, infrastructure, constraints and transport links <sup>156</sup>. They could accommodate a range of scales and sizes of facilities. They have been used to assess the deliverability of the Waste Core Strategy and could be used to guide developers in searching for suitable locations. Any proposals would however need to be fully assessed against the policies in the Development Plan.

<sup>156</sup> see background document "Areas of Search"

**Table 16: Identified areas of search**

Geographic Hierarchy Level 1		
Kidderminster zone	Birchen Coppice Trading Estate	DY11 7PT
	Cursley Distribution Park	DY10 4DU
	Finepoint Business Park	DY11 7FB
	Foley Business Park	DY11 7PT
	Foley Industrial Estate	DY11 7DH
	Former British Sugar Site	DY11 7QA
	Gemini Business Park	DY11 7QL
	Greenhill Industrial Estate	DY10 2RN
	Hartlebury Trading Estate	DY10 4JB
	Hoo Farm Industrial Estate	DY11 7RA
	Ikon Trading Estate	DY10 4EU
	Oldington Trading Estate	DY11 7QP
	Vale Industrial Estate	DY11 7QU
Redditch zone	East Moons Moat	B98 0RE
	Kingfisher Enterprise Park	B98 8LG
	Lakeside Industrial Estate	B98 8YW
	Park Farm Industrial Estate	B98 7SN
	Pipers Road Park Farm	B98 0HU
	Ravensbank Business Park	B98 9EX
	Washford Industrial Estate	B98 0DH
	Weights Farm Business Park	B97 6RG

Table continued on next page



Geographic Hierarchy Level 1		
<b>Worcester zone</b>	Area 7 Industrial Park, Norton	WR5 2AU
	Ball Mill Top Business Centre	WR2 6PD
	Berkeley Business Park*	WR4 9FA
	Buckholt Business Centre*	WR4 9ND
	Diglis Industrial Estate*	WR5 3BX
	Great Western Business Park*	WR4 9PT
	Newtown Road Industrial Estate*	WR5 1HA
	Sherriff Street Industrial Estate*	WR4 9AB
	Shire Business Park*	WR4 9FA
	Shrub Hill Industrial Estate*	WR4 9EE
	Top Barn Business Centre	WR6 6NH
	Venture Business Park	WR2 4BD
	Warndon Business Park*	WR4 9NE
	Weir Lane Industrial Estate*	WR2 4BD
Geographic Hierarchy Level 2		
<b>Bromsgrove zone</b>	Bromsgrove Technology Park	B60 3AL
	Buntsford Gate Business Park	B60 4JE
	Buntsford Hill Industrial Estate	B60 3AR
	Silver Birches and Basepoint Business Parks	B60 3EU
<b>Droitwich Spa zone</b>	Berry Hill Industrial Estate	WR9 9AU
	Stonebridge Cross Business Park	WR9 0LW
	Hampton Lovett Industrial Estate	WR9 0NX
	North Street Industrial Estate	WR9 8JB
	Rushock Industrial Estate	WR9 0NR

*Table continued on next page*



<b>Geographic Hierarchy Level 3</b>		
<b>Evesham zone</b>	Bennetts Hill Business Park	WR11 8TB
	Four Pools Industrial Estate	WR11 1XJ
	Vale Business Park	WR11 1TD
<b>Malvern zone</b>	Blackmore Business and Technology Park	WR14 3LF
	Enigma Business Park	WR14 1GD
	Link Business Centre	WR14 1UQ
	Merebrook Industrial Estate	WR13 6NP
	Spring Lane Industrial Estate	WR14 1AL
<b>Pershore zone</b>	Keytec7 Business Park	WR10 2JN
	Pershore Trading Estate	WR10 2DD
	Racecourse Road Trading Estate	WR10 2EY
<b>Geographic Hierarchy Level 4</b>		
<b>Bewdley zone</b>	(No areas identified)	
<b>Tenbury Wells zone</b>	Tenbury Business Park	WR15 8FA
<b>Upton-upon-Severn zone</b>	Upton Business Centre, Welland Road	WR8 0SW

\* Area of Search inside area where it cannot be concluded that there will be no likely significant effect from waste management development on internationally designated sites (see Appendix 3).



## Annex B: Considering Flood Risk in Waste Management Development

Land is categorised according to the risk of fluvial flooding:

- Flood zone 1 – low probability (less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%))
- Flood zone 2 – medium probability (between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1%))
- Flood zone 3a – high probability (1 in 100 or greater annual probability of river flooding (>1%))
- Flood zone 3b – functional flood plain (annual probability of 1 in 20 (5%) or greater in any year).

Development should be located in line with the Sequential Test in *The Technical Guidance to the National Planning Policy Framework*, giving preference to Flood Zone 1, 2 and then 3. If there is no reasonably available site, in Flood Zone 1 development may be permitted outside where a sequential test and Flood Risk Assessment (FRA)<sup>157</sup> demonstrate the suitability of the location for the proposed development.

The Sequential Test is a key component of the hierarchical approach to ensure that sites are located in the most suitable areas by avoiding and managing flood risk. Table 17 shows that certain uses will not be appropriate in certain flood zones but that in some cases, where suitable land is not available in zones with lower flood risk, it may be appropriate to apply the 'exception test' in considering whether the development is justified in zones of higher risk.

157 Flood Risk Assessment must be carried out in accordance with *The National Planning Policy Framework* (2012) and the *Technical Guidance to the National Planning Policy Framework* (2012) or subsequent national policy.



**Table 17: Flood risk vulnerability and compatibility for waste uses (adapted from *The Technical Guidance to the National Planning Policy Framework*)**

Waste Proposal	Flood Risk Flood Zone Vulnerability Classification	Flood Zones			
		1	2	3a	3b
Installations requiring hazardous substances consent	Highly vulnerable	✓	ex	x	x
Landfill and sites used for waste management facilities for hazardous waste	More vulnerable	✓	✓	ex	x
Waste treatment (except landfill and hazardous waste facilities) and sewage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place)	Less vulnerable	✓	✓	✓	x
Sewage transmission infrastructure and pumping stations.	Water compatible	✓	✓	✓	✓
Water treatment works that need to remain operational in times of flood	Essential Infrastructure	✓	✓	ex	ex

**Key**

X development should not be permitted  
 ex the Exceptions Test is required

✓ development is appropriate

For waste proposals in Flood Zone 2 or 3, Flood Risk Assessments (FRA) should be undertaken, considering all types of flooding, and be informed by the relevant District, Borough or City Strategic Flood Risk Assessment (SFRA), the River Severn Catchment Flood Management Plan and by the County background document Flood Risk Assessments in Worcestershire. A FRA will also be required if the site is in Flood Zone 1 and has an area greater than 1 ha or a floor area greater than 1000 m<sup>2</sup>.

Proposals for waste management development in Flood Zones 2 or 3 or in Flood Zone 1 with an area greater than 1 ha or a floor area greater than 1000 m<sup>2</sup> must include a flood risk assessment in accordance with the requirements of *The Technical Guidance to the National Planning Policy Framework*, which are summarised in Annex B of this document.

New development should not increase flood risk on the site or elsewhere. Facilities will need a drainage system that can cope with high levels of rainfall and improved attenuation of run-off. The incorporation of sustainable drainage systems (SuDS)<sup>158</sup>, including green roofs and permeable car parks, may also present a solution. This should be considered in the FRA.

Sequential Tests must be used to ensure that the most vulnerable elements of a development are located in the lowest risk areas of the site. Consideration should be given to water courses and topography as these influence both the impact the site could have on flooding, as well as the impact of flooding on the operation of the site. All proposals must demonstrate how the development will remain safe and operational during flooding events.

158 The uptake of sustainable drainage systems is likely to increase as a result of *the Flood and Water Management Act 2010* removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SUDS for new developments and redevelopments.