

Waste Core Strategy

for Worcestershire

SUBMISSION DOCUMENT



**Worcestershire
Waste Core Strategy
Development
Plan Document**

June 2011

Find out more online:
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.

Since 2004 consultations have been undertaken on:

- **Refreshed Issues and Options,**
- **Emerging Preferred Options,**
- **First Draft Submission,** and
- **Publication Document (Regulation 27)** consultation documents and focused consultations have been held with specialist groups.

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

Alternatively paper copies are available on request from:

Nicholas Dean

Planning, Economy and Performance

Worcestershire County Council

County Hall

Spetchley Road

Worcester

WR5 2NP

Tel: 01905 766374

Email: wcs@worcestershire.gov.uk

Worcestershire Waste Core Strategy

Submission Document

June 2011



Foreword

by Councillor Simon Geraghty
Deputy Leader of the Council with responsibility
for Economy & Infrastructure

The 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, such as our economic development goals, environmental protection objectives and, of course, our waste management priorities.

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 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.



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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 waste². 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.
- 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. The Waste Core Strategy will apply until 2027³. It supersedes the previous waste planning policies for Worcestershire which were set out in the 'saved' Structure Plan policies for waste (see **Appendix 2**).

The Scope of the Waste Core Strategy

- 1.6. 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.
- 1.7. 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.

² 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.

³ This will cover a 15 year period from adoption, in line with national policy.

1.8. 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.

1.9. It provides for all the following kinds of Directive Waste⁴ produced in, or imported into, Worcestershire:

- Commercial and Industrial (C&I) Waste⁵,
- Construction and Demolition (C&D) Waste,
- Municipal Solid Waste (MSW)⁶,
- Hazardous Waste^{6a}, and
- Waste water.

All policies will apply equally to all of these waste streams. It does not address non-Directive Agricultural Waste, such as crop residues and animal dung, or mineral waste where this is dealt with within the quarry or gravel pit where it is produced.

1.10. Implementation of the Waste Core Strategy will be monitored throughout its lifetime.

The Process

1.11. 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.

1.12. 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.

1.13. Interim Sustainability Appraisals (SA) have been undertaken at Refreshed Issues and Options and Emerging Preferred Options stages and First Draft Submission Stages, a full Sustainability Appraisal has been published alongside the *Waste Core Strategy Publication Document*. The SA and Habitats Regulation Assessment⁷ (HRA) have shaped the process throughout^{8,9}, informing the formulation of policy and the development of the monitoring schedule.

⁴ 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.

⁵ Including agricultural waste.

⁶ 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.

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

⁷ Habitats Regulations Assessment of the Waste Core Strategy for Worcestershire: August 2009 and February 2011.

⁸ Initial Sustainability Appraisal of Issues and Options for Waste Core Strategy for Worcestershire: April 2009.

⁹ Sustainability Appraisal of Emerging Preferred Options for the Waste Core Strategy for Worcestershire: November 2009.



1.14. 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 Phase 2 proposed revision:

Key themes

- *Approach to Flood Risk and Flood Risk Assessments*
- *Arisings and Capacity*
- *Climate Change*
- *Identifying areas of search*
- *Industrial Estates Study*
- *Inland Waterways*
- *Links with Districts & Neighbouring Local Authorities Plans and Strategies*
- *Monitoring Baseline*
- *Spatial Portrait*
- *Spatial Strategy*
- *Towards a Vision Statement*
- *Waste Freight by Rail*
- *Waste Sites in Worcestershire*

Waste Streams

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

Waste Management Facilities

- *Landfill*
- *Metal Recycling Sites*
- *Recovering Energy from Waste: Biological and Thermal Treatment Technologies*

- *Resource Recovery from Biodegradable Waste: Composting and Anaerobic Digestion*
- *Types of Facilities*
- *Waste Transfer Stations*
- *Waste Water Treatment Infrastructure*

Links with other plans and policies

1.15. 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.

1.16. 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. Details of how these 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).



A selection of the Council's background documents

2. Spatial Portrait

2.1. The County of Worcestershire (see **Figure 1**) has a population of 556,500¹⁰ 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 landscape¹¹ 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. With 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 species found in the south and so is exceptionally rich biologically. There are 111 SSSI's and over 250 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 Conservation (SACs) in the County and five other European protected sites within 15 km of the County boundary. There are 36 geological SSSIs in Herefordshire and Worcestershire and more than 90 Local Geological Sites in the 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**.



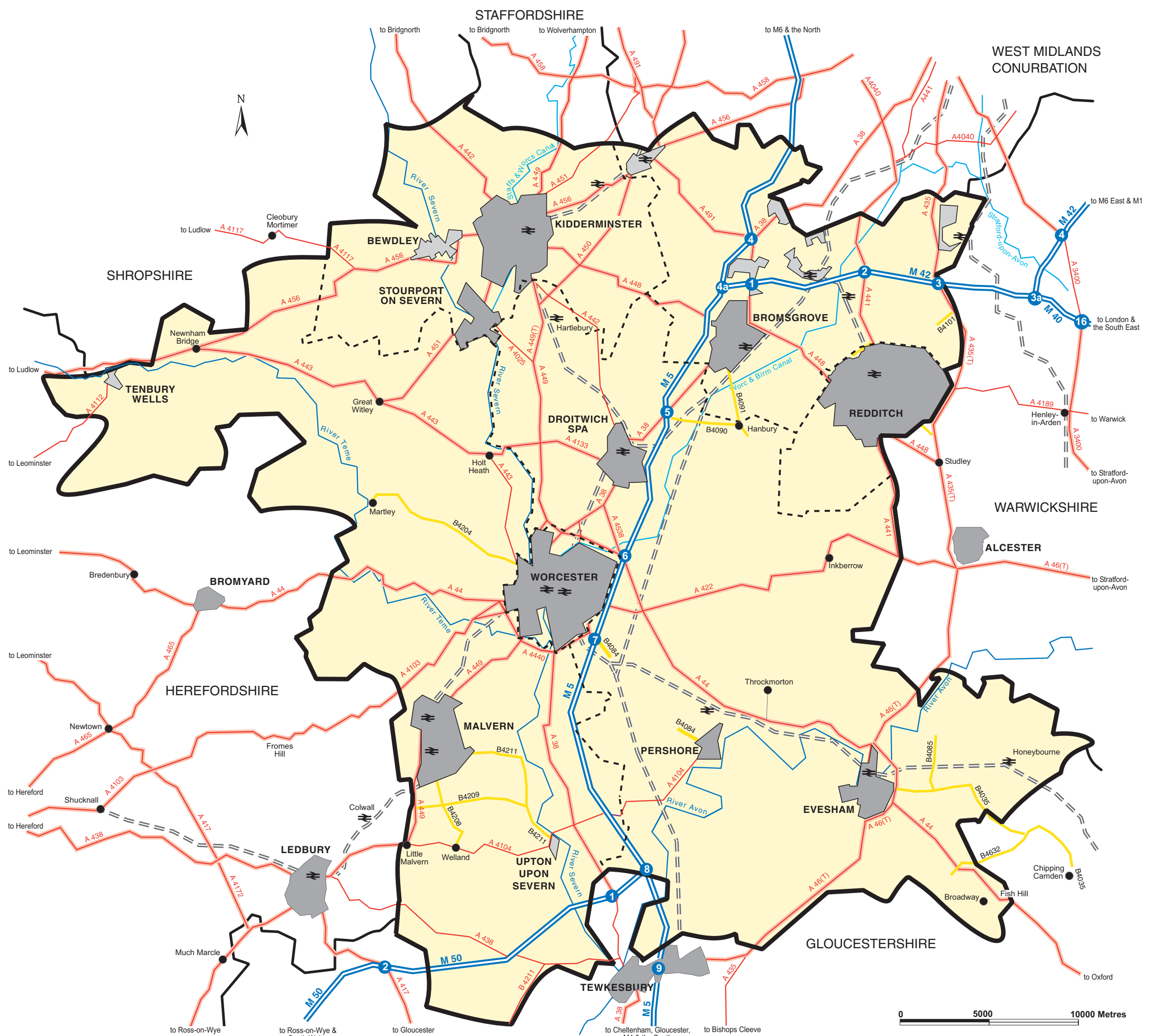
The Malvern Hills AONB is a nationally important feature. © Worcestershire County Council

¹⁰ ONS mid year estimate 2009

¹¹ <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.

Waste Core Strategy

Figure 1: Area of Coverage



- Worcestershire County Boundary
- District Boundary
- Principal Urban Areas / Urban Settlements
- Other Settlements

Strategic Transport Network

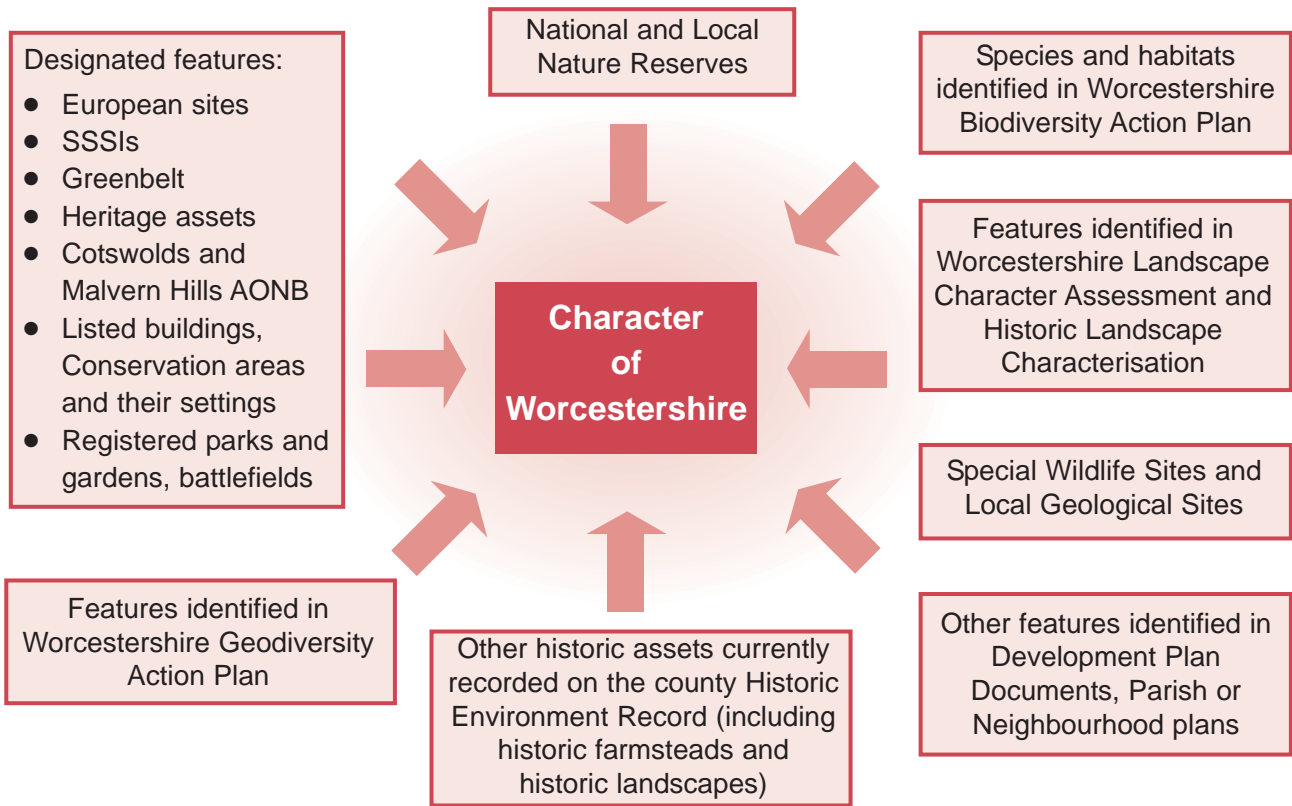
- Motorways
- Motorway Junction
- Other Principal Roads
- Lorry Routes (see note)
- B Roads used as Lorry Routes
- Railways
- Rail Stations
- Major Rivers
- Canals

Note: Lorry Routes - This information was taken from Worcestershire Advisory Lorry Route Map dated 2006

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 Ordnance Survey 100015914.
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 may be made.



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. 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.

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. 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 virtually all of this is in Worcestershire and Herefordshire¹². 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%)¹³. 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 Belt¹⁴.

2.12. Waste management is estimated to contribute £95.9 million per year to the economy of Worcestershire¹⁵. About 12,000 people work in the waste sector in the West Midlands¹⁶, with 1,250 people employed in "sewage and refuse disposal, sanitation and similar activities" in Worcestershire¹⁷. This is a modest number, but is expected to rise by 2020¹⁸, 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.



MRF sorting process.
Photo courtesy of Severn Waste Services

¹² *Agricultural Land Classification (ALC) Statistics, DEFRA, www.defra.gov.uk*

¹³ *Worcestershire County Economic Assessment 2009-2010.*

¹⁴ 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*.

¹⁵ 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.

¹⁶ *Energy and Utility Skills Labour Market Investigation 2006 and Census of Population 2001.* EU Skills AACS LMI March 2001.

¹⁷ 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.

¹⁸ 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 and there is little likelihood of increased freight traffic on the county's canals in the foreseeable future. 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. 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.



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 County¹⁹. 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 CO₂ emissions were 3.9 million tonnes. 44% of the CO₂ emissions from Worcestershire were produced by industry and commerce, 33% from the domestic sector and 23% from transport²⁰.

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. Most of these emissions come from the landfill of biodegradable waste. 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.

¹⁹ Worcestershire's *Local Transport Plan 2006-2011* <http://worcestershire.whub.org.uk/ltp-2006/wcc-transport-ltp-final-2006-2011.pdf>

²⁰ These figures exclude emissions from motorways.



2.23. 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 risk²¹. 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.

2.24. 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 Strategy²².

2.25. 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.



In Worcestershire climate change is likely to lead to more frequent extreme weather events like flooding at Bewdley. © Worcestershire County Council

²¹ 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".

²² 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.



Waste Management

Waste arisings

Amount of waste arising

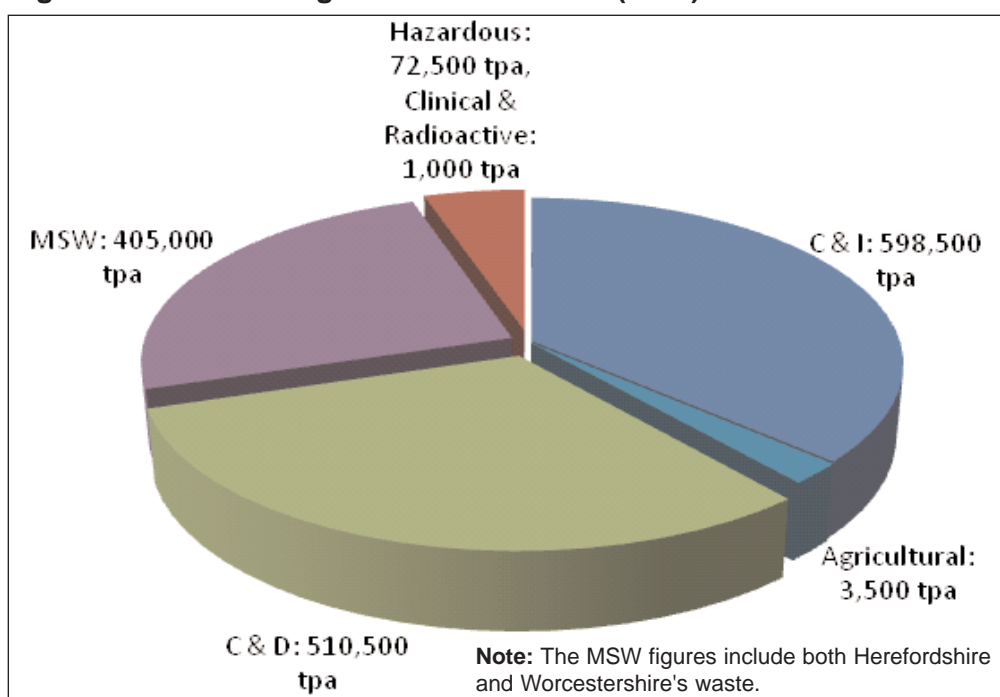
2.26. It is estimated that approximately 1,591,000 tonnes of waste are produced in Worcestershire each year²³ (waste arisings). This is categorised into:

- **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 Strategy²⁴.
- **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.
- **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.

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

Figure 3: Waste arisings in Worcestershire (2010)



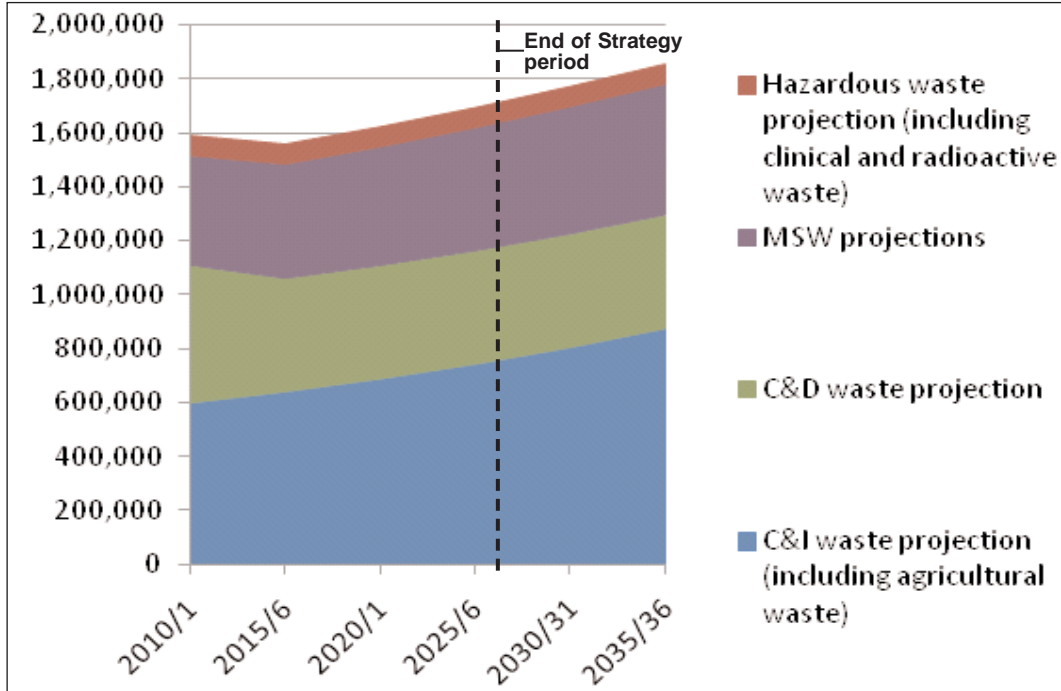
²³ Based on 2010 figure/projections. See background document "Arisings and Capacity"

²⁴ On-farm animal and plant wastes currently fall outside the legal definition of controlled waste in England and Wales.



2.28. Waste arisings are expected to grow over the period of the strategy as illustrated in **Figure 4**²⁵. This has been taken into account in developing the Waste Core Strategy objectives and policy framework.

Figure 4: Projected waste arisings



Distribution of arisings

2.29. Concentrations of waste arisings broadly reflect the distribution of population and the location of industry in the county, focusing around the main urban areas²⁶.

- **C&I:** arisings focus mainly in existing urban areas. **Figure 5** illustrates the distribution of C&I waste arisings broken down into Lower-level Super Output Areas (LSOAs²⁷).
- **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 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.

²⁵ These projections are based on the best available data. The methods are set out in Waste Core Strategy Background document "Arisings and Capacity".

²⁶ For this purpose hazardous, clinical and radioactive waste are considered as component parts of the other waste streams.

²⁷ Lower-level Super Output Areas are the smallest scale at which Census data can be used. They roughly equate to 1,500 people.



2.30. 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

2.31. Worcestershire's MSW is managed jointly with Herefordshire through a partnership between all the councils in the two counties, through an integrated PFI contract with Mercia Waste Management Ltd.

2.32. 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. Dedicated C&D facilities also exist in the County, although the processing of C&D waste increasingly takes place in-situ.

2.33. Current waste management capacity is approximately 1,274,500 tonnes²⁸ per annum as shown in **Table 1**.

Table 1: Current waste management capacity²⁹

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

2.34. 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 capacity³⁰.

2.35. 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.

2.36. 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**³¹. There are also a number of small 'bring' sites in the county which are not shown on this figure.



Photo courtesy of Severn Waste Services

²⁸ Not including waste water treatment capacity or landfill.

²⁹ See background document "Arisings and capacity" for further details.

³⁰ See background document "Waste water treatment infrastructure"

³¹ As at February 2011

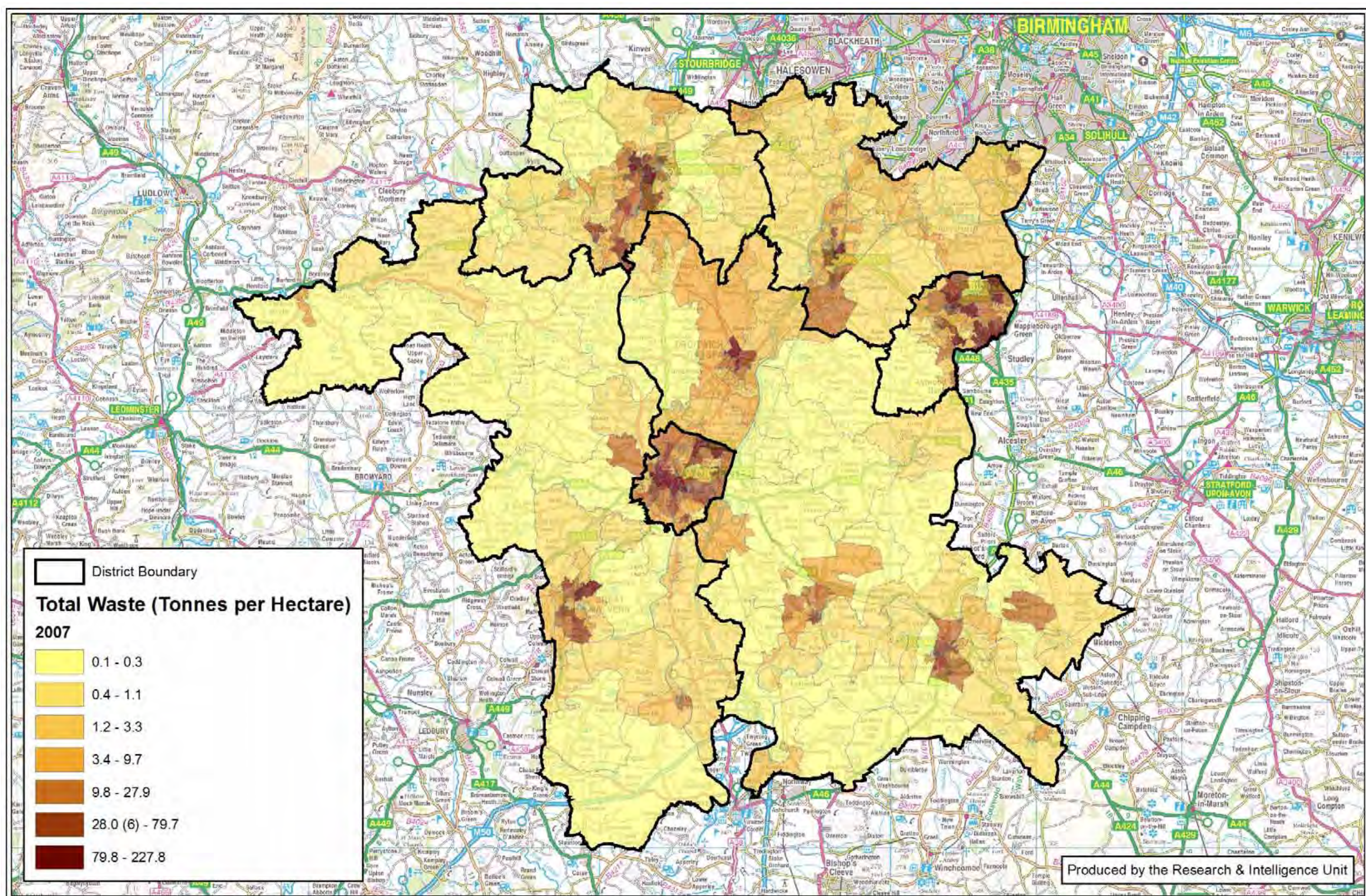
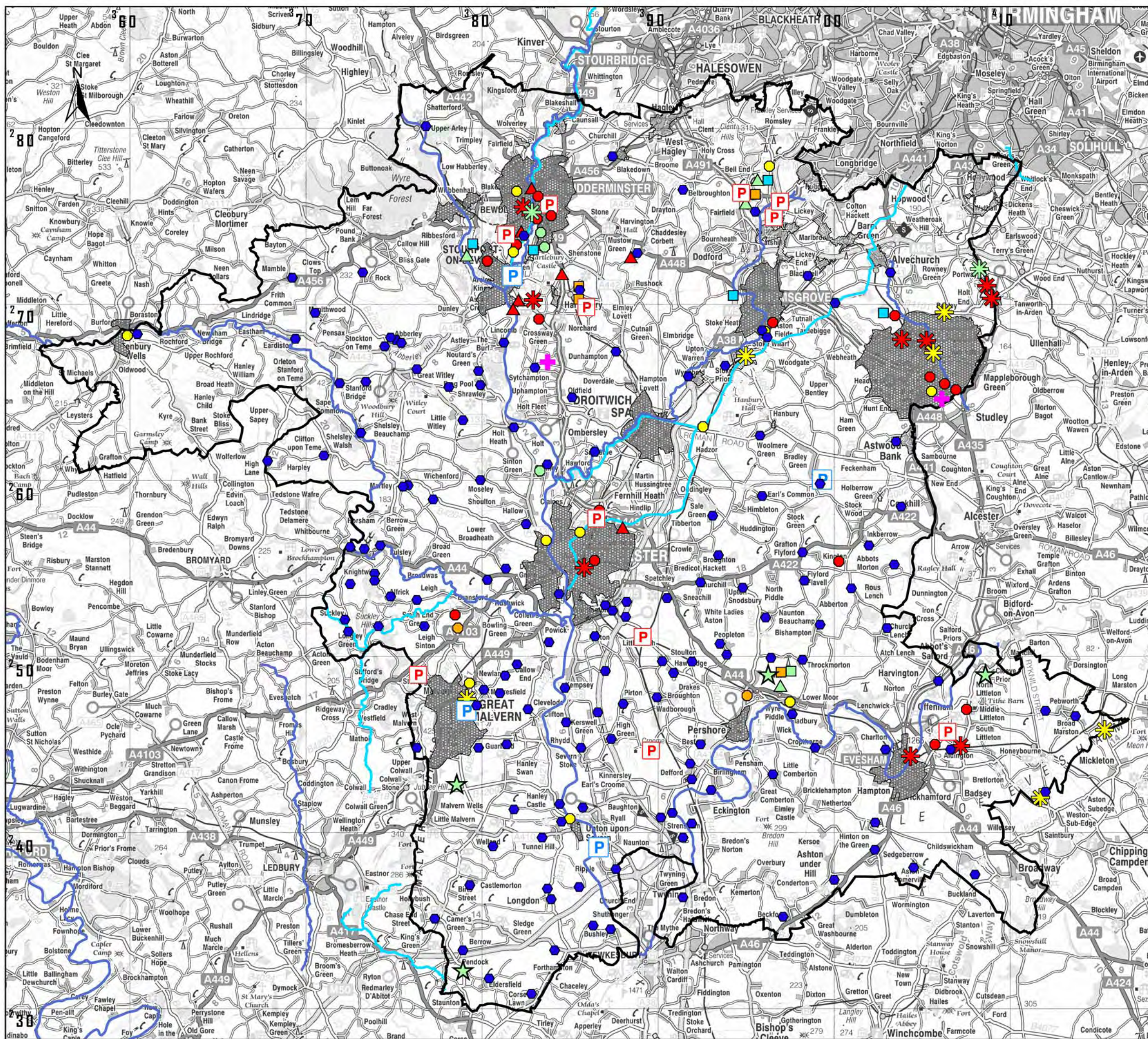


Figure 5: Patterns of C&I Waste Arisings in Worcestershire (per Hectare by LSOA)

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

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 (20)
 - A13 - Household waste amenity site (12)
 - A14 - Transfer station taking non-biodegradable waste (3)
 - 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)
 - OPP - 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.

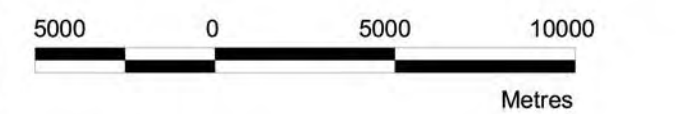
The number shown in brackets on the key; e.g. (3) indicates the number of sites in that category in Worcestershire.

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.

OPP (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.





2.37. 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.

2.38. 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

2.39. 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.

2.40. 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.

Levels of existing capacity and current requirements are shown in **Figure 7**. The capacity gap is given in **Table 2**.

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

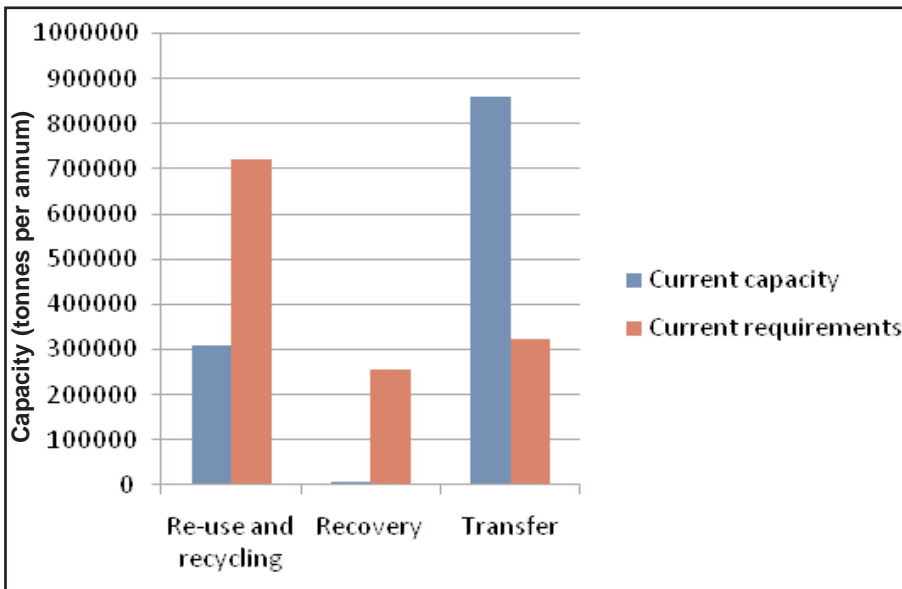




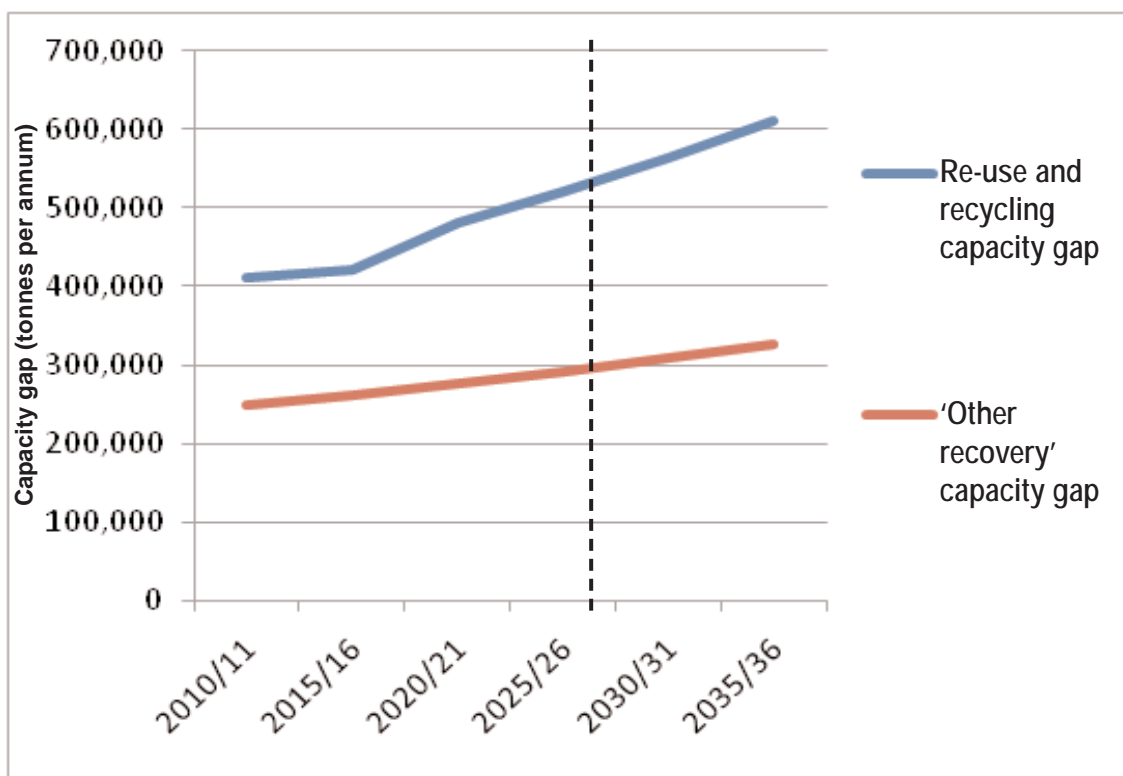
Table 2: Capacity gap (all waste streams)

Management type (all waste streams)	Current capacity gap
Re-use and recycling	411,500 tpa
Other recovery	240,500 tpa
Sorting and transfer	0 tpa
Disposal and landfill	0 tpa

Note: a more detailed breakdown of this information is available in Appendix 4.

2.41. 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.

Figure 8: Capacity gap projections





2.42. 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. It also proposes that the Household waste site in Tenbury Wells should be redeveloped.

2.43. 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 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.

Resource demand

2.44. 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 types³²) broadly reflect the distribution of waste arisings in the county, being concentrated in and around urban settlements, see **Figure 9**.

2.45. 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.

2.46. 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.

³² AWM methodology developed as part of the "Landfill Diversion Strategy" AWM 2009



Imports and Exports ³³

2.47. 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.

2.48. Overall, the evidence is that the amount of waste imported exceeds that exported from the County. There are clear trends relating to waste movements ³⁴, 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.

2.49. 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.



Bulked and sorted waste at Norton MRF.
Photo courtesy of Severn Waste Services.

³³ Data source for this section: Environment Agency Waste Data Interrogator 2008.

³⁴ 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.

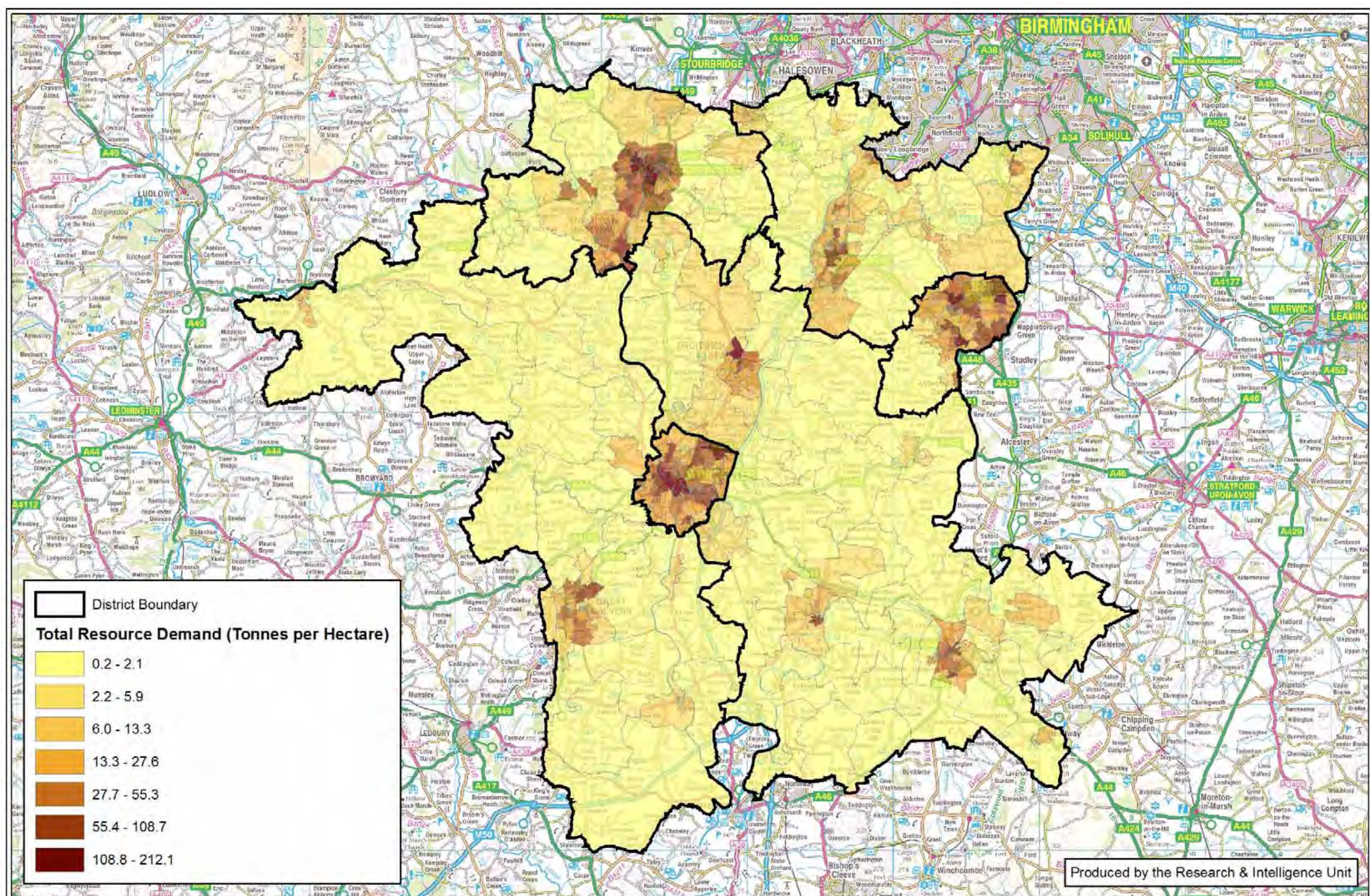


Figure 9: Patterns of resource demand for organics, energy and recyclate in Worcestershire (per Hectare by LSOA)
 Based on AWM Landfill Diversion Strategy (2009)



Figure 10. Waste imports to Worcestershire by Region

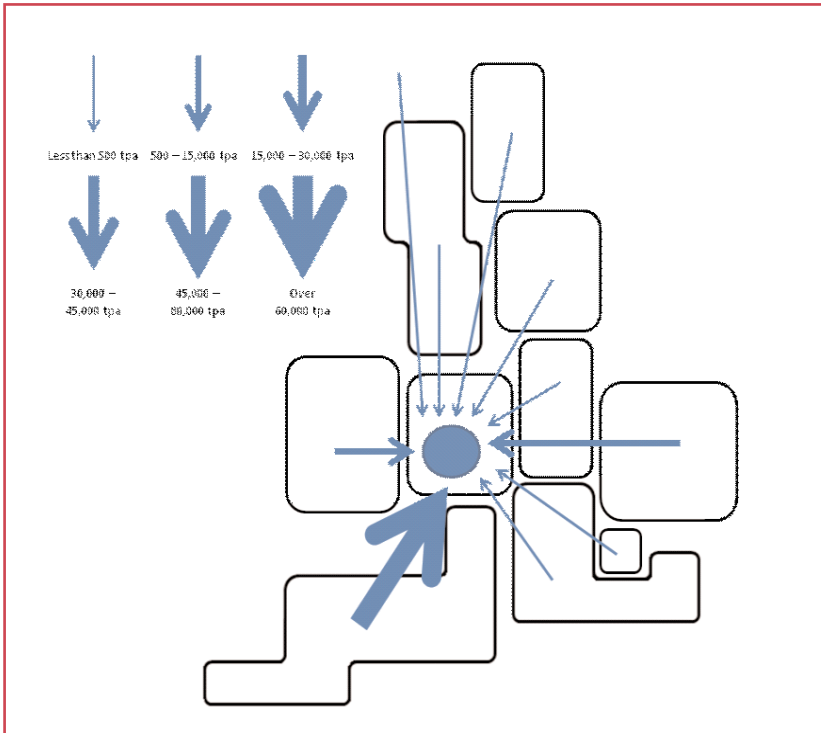
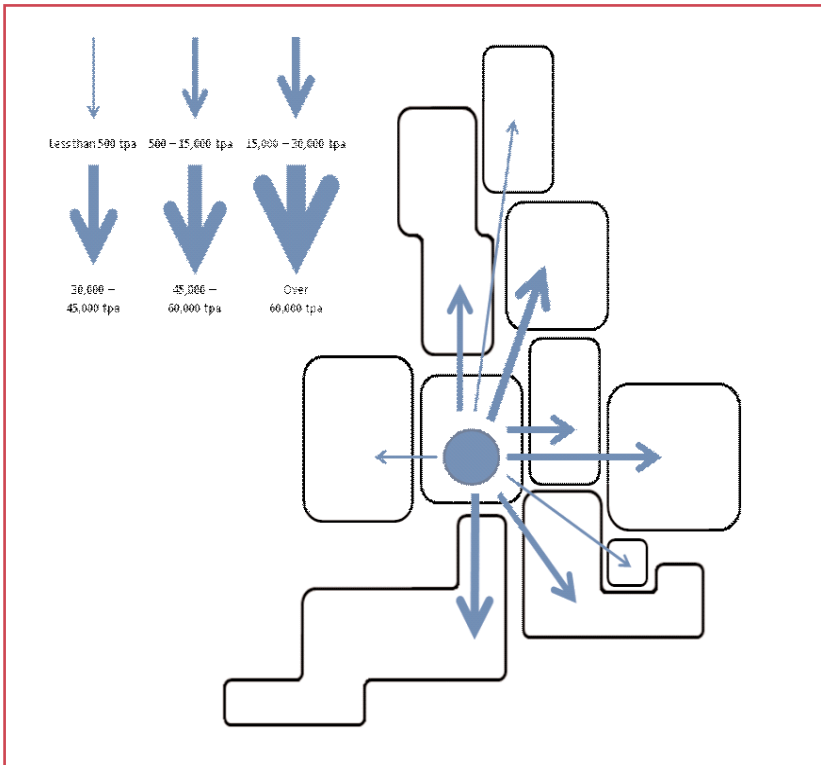


Figure 11. Waste exports from Worcestershire by Region





- 2.50.** Worcestershire is a net importer of hazardous waste^{36, 37}, for waste sorting and transfer but is a net exporter for treatment.
- 2.51.** 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).
- 2.52.** 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.

³⁶ See background paper "Hazardous Waste"

³⁷ 2009 data from Environment Agency, Hazardous Waste Interrogator



The Vision and Objectives

- 2.53.** The vision sets the direction for the strategy. Whilst the vision can be ambitious and inspiring, it needs to be realistic.
- 2.54.** 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.

What will waste management in Worcestershire be like in 2027?

- 2.54a.** By 2027 Worcestershire will have achieved equivalent self-sufficiency in waste management capacity (**see Table 3: Capacity gap and land requirements and appendix 4**).
- 2.54b.** Waste in Worcestershire will be managed 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



- 2.54c.** 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 that waste which is produced to be treated as a resource in accordance with the principles of the waste hierarchy.
- 2.54d.** 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.
- 2.54e.** 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.

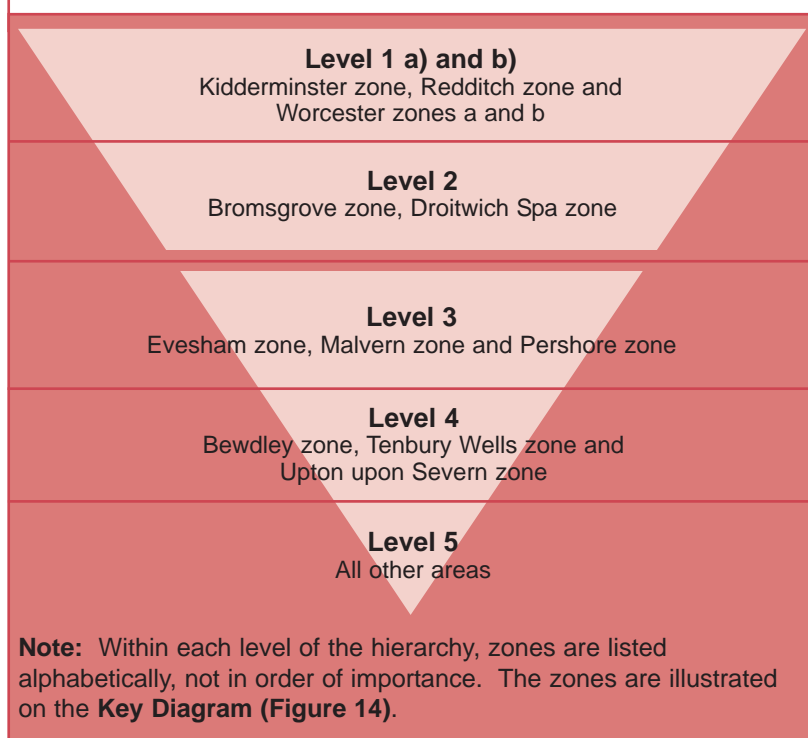


Where will new waste management infrastructure be developed?

Spatial Strategy

- 2.55.** Facilities will be directed to land that has had a previous economic use. 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.
- 2.56.** The distribution will be based on the geographic hierarchy (see **Figure 13** and **Figure 14**).
- 2.57.** This hierarchy takes account of patterns of current and predicted future waste arisings and resource demand³⁸, onward treatment facilities, connections to the strategic transport network, and potential for the future development of waste management facilities³⁹. The Habitats Regulations Assessment and Strategic Flood Risk Assessment have also been taken into account⁴⁰.

Figure 13: Geographic Hierarchy for waste management in Worcestershire



³⁸ 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).

³⁹ 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.

⁴⁰ See background document 'Spatial strategy'.

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

□ Settlements

Level 1 to 5

Level 1a - Kidderminster zone, Redditch zone and Worcester zone a

Level 1b - Worcester zone b

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

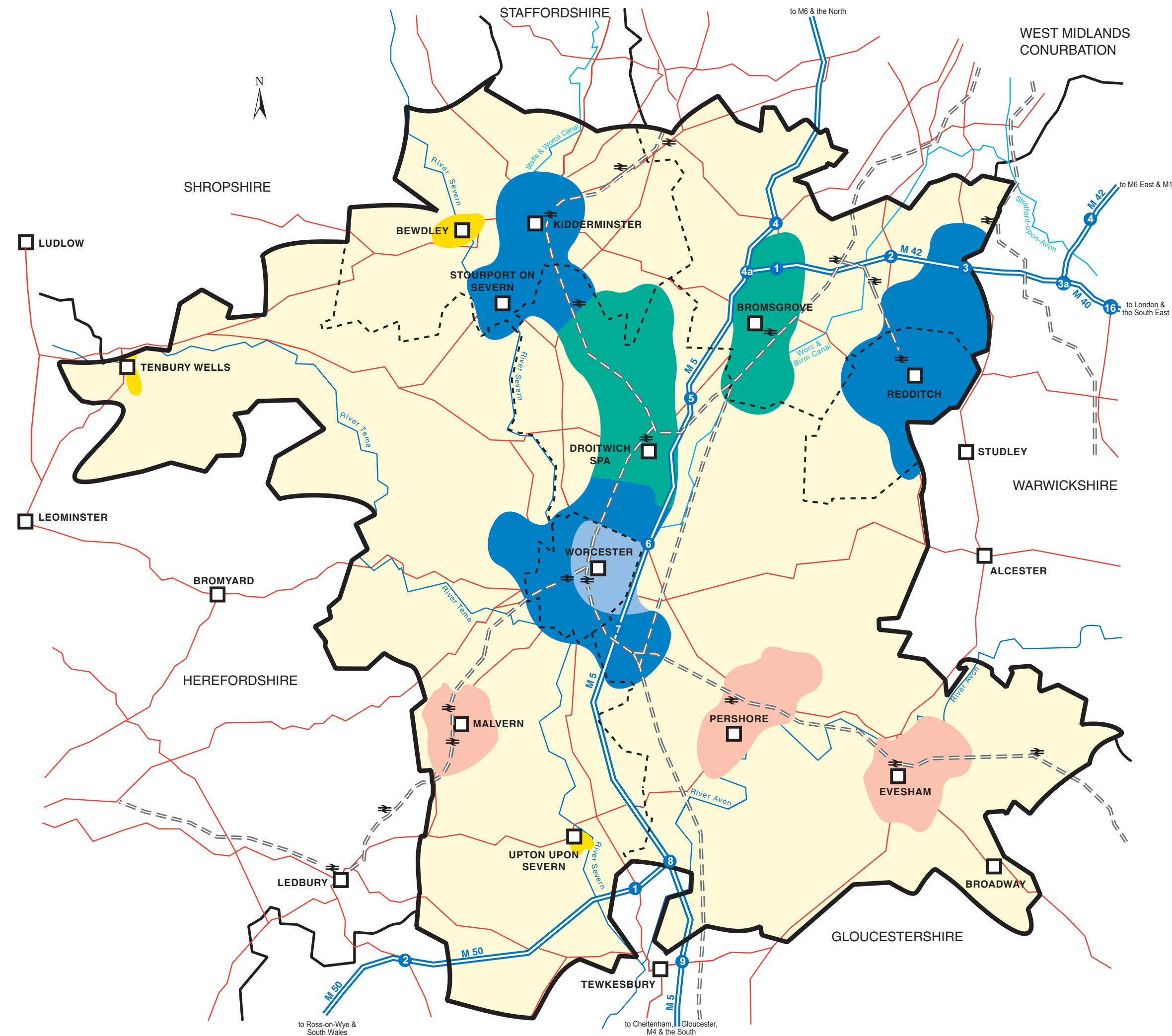
— Canals

— Worcestershire County Boundary

- - - District Boundary

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

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Facilities that enable the re-use and recycling⁴¹ of waste

2.58. 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. This means that most facilities will be located in the upper levels of the geographic hierarchy.

'Other recovery' facilities⁴²

2.59. '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.

2.60. To recognise their scale and role, 'other recovery' facilities will only be enabled in upper levels of the geographic hierarchy. To reflect the findings of the Habitats Regulations Assessment (HRA), only smaller⁴³ 'other recovery' facilities will be enabled in Worcester zone b.

Disposal and landfill

2.61. The evidence base⁴⁴ demonstrates that there is no need for new landfill 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.



Recycling facilities. Photo courtesy of Recycle Now Partners



Landfill site. Photo courtesy of Recycle Now Partners

⁴¹ Article 3(17) of the revised *Waste Framework Directive* 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.

⁴² Article 3(17) 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 recycling.

⁴³ With likely significant effects the same as or less than a thermal treatment facility with a throughput of 150,000 tonnes per annum and stack height of 80 metres.

⁴⁴ See background documents '*Landfill*' and '*Arising and capacity*'.



When will the strategy be delivered?

2.62. Existing waste management facilities will be safeguarded and new facilities will be developed to fill the capacity gap and deliver equivalent self-sufficiency in waste management in the county.

2.63. Table 3 shows the capacity gap and approximate land requirements⁴⁵ necessary to deliver the strategy at 5 year intervals. Progress will be monitored in the AMR.

Table 3: Capacity gap and land requirements

	2010/11	2015/16	2020/21	2025/26
Capacity gap (total) tpa	652,000	675,000	750,000	805,000
Re-use and recycling	411,500	421,500	482,000	521,500
'Other recovery'	240,500	253,500	268,000	283,500
Sorting and transfer	0	0	0	0
Landfill and disposal	0	0	0	0
Land requirements (total)	25.5 ha	26 ha	29 ha	31 ha
Re-use and recycling	18 ha	18 ha	20 ha	22 ha
'Other recovery'	8 ha	8 ha	9 ha	9 ha
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 Appendix 4.

How will the strategy be delivered?

The objectives will direct the policy framework.

*The Objectives*⁴⁶

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 for recycling, (including composting) and 'other recovery' have been set in relation to this objective⁴⁷:

- C&I incl Hazardous and Agricultural waste - 75%
- C&D - 75%
- MSW - 78%, with a target of 50% recycling and composting by 2020, a maximum of 22% landfill and the remainder as energy recovery.

⁴⁵ This is based on average throughputs per hectare for facilities in Worcestershire: Re-use and recycling 23,500 tpa, Recovery 32,000 tpa.

⁴⁶ The objectives are numbered for convenience of referencing, not in order of significance.

⁴⁷ Based on JMWMS for MSW and "Waste Scenarios Study" WMRA July 2005 for other waste streams, see background document 'Arising and capacity'.



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 plan period to 2027 and safeguarding existing waste management facilities from incompatible development.
Current projections of the capacity gap over the life of the strategy are identified in **Table 3. Capacity gap and land requirements**. These will be reviewed in the Annual Monitoring Report.

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.

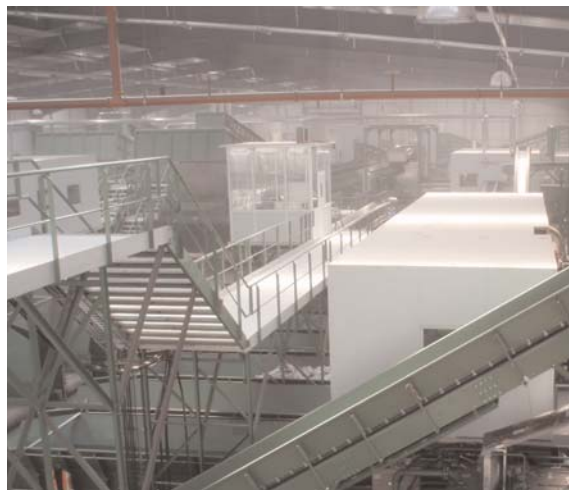
2.64. The policies contribute towards the objectives as indicated in **Table 4**.

Table 4: Relationship between objectives and policy framework		Objectives							
		WO1	WO2	WO3	WO4	WO5	WO6	WO7	WO8
Policies	WCS 1: Re-use and Recycling	✓	-	✓	-	✓	-	-	✓
	WCS 2: Other recovery	✓	-	✓	-	✓	-	-	✓
	WCS 3: Landfill and disposal	✓	-	✓	-	✓	-	-	-
	WCS 4: Compatible land use	-	✓	-	-	-	-	✓	-
	WCS 5: Development associated with existing temporary facilities	-	✓	-	-	-	-	-	-
	WCS 6: Site Infrastructure and access	✓	✓	-	-	-	-	-	-
	WCS 7: Environmental Assets	✓	✓	-	-	-	-	-	-
	WCS 8: Flood risk and water resources	✓	✓	-	-	-	-	-	-
	WCS 9: Sustainable design and operation of facilities	✓	✓	-	✓	-	-	✓	-
	WCS 10: Local characteristics	-	✓	-	-	-	-	-	-
	WCS 11: Amenity	-	✓	-	-	-	-	-	-
	WCS 12: Social and economic benefits	-	✓	-	-	✓	✓	✓	-
	WCS 13: new development proposed on or near to waste management facilities	-	✓	-	✓	✓	✓	✓	-
	WCS 14: Making provision for waste in new development	-	-	✓	✓	-	-	-	-



3. Managing waste as a resource

- 3.1. Implementing the waste hierarchy is the basis for delivering sustainable waste management in Worcestershire. **Policies WCS 1, 2 and 3** seek to deliver this objective, enabling sufficient capacity for the management of waste as a resource. They also direct the right development to the right places in accordance with the spatial strategy.
- 3.2. 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 1** enables all of these kinds of facilities.
- 3.3. **Policy WCS 2** 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.
- 3.4. The Waste Core Strategy aims to reduce the amount of waste being disposed of or landfilled and no new landfill capacity is expected to be required in the life of the strategy. However **Policy WCS 3** allows for any proposals for landfill to be assessed if they are brought forward.



EnviroSort Materials Recycling Facility (MRF) at Norton near Worcester. Photo Courtesy of Severn Waste Ltd

POLICY WCS 1: 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 recycling⁴⁸ of waste, including treatment, storage, sorting and transfer facilities;
 - i. will be permitted in level 1a and 1b
 - ii. will be permitted in level 2, 3, 4 and 5 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.

Objectives WO1, WO3, WO5, WO8

⁴⁸ Article 3(17) of the revised Waste Framework Directive 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.



Explanatory text

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

- 3.5. 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.
- 3.6.** 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.
- 3.7.** The geographic hierarchy and spatial strategy are based on the consideration of:
- patterns of current and predicted future waste arisings⁴⁹,
 - patterns of current and predicted future resource demand⁵⁰,
 - onward treatment facilities⁵¹,
 - connections to the strategic transport network,
 - potential for future development of waste management facilities,
 - the *Habitats Regulations Assessment*, and
 - District Councils' Strategic Flood Risk Assessments.

- 3.8.** 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, or
 - Where heat or energy is produced, proximity to end users, heat distribution networks or grid connections.

Waste water treatment facilities

- 3.9.** 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.

⁴⁹ See Figure 5. Pattern of C&I waste arisings.

⁵⁰ See Figure 9. Patterns of resource demand for organics, energy and recycle in Worcestershire, data from the evidence base for the AWM Landfill Diversion Strategy.

⁵¹ Based on the presence of sorting or recycling facilities.



- 3.10.** 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.
- 3.11.** 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) Systems⁵² and Sustainable Drainage Systems (SuDS). The Environment Agency seeks to ensure that the most environmentally effective means of disposal is used for any development.



Energy from Waste. Photo courtesy of Recycle Now Partners

POLICY WCS 2: Other recovery

In order to achieve equivalent self-sufficiency in waste management and deliver the spatial strategy, proposals for 'other recovery'⁵³ facilities will only be permitted:

- a) where they demonstrate that:
 - i. sorting of waste is carried out to optimise re-use and recycling; and
 - ii. energy recovery is optimised; and
 - iii. resource recovery from by-products is optimised and any residues can be satisfactorily managed and disposed of; and
- b) where they are located at the highest appropriate level of the geographic hierarchy and it is demonstrated that:
 - i. in level 1a and level 2:
 - the impact of emissions will be the same as or less than a thermal treatment facility with a throughput of 250,000 tpa and a stack height of 80 metres.
 - ii. in level 1b:
 - the impact of emissions will be the same as or less than a thermal treatment facility with a throughput of 150,000 tpa and a stack height of 80 metres.

'Other recovery' facilities will not be permitted in levels 3, 4 or 5 unless exceptional circumstances are clearly demonstrated.

⁵² 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.

⁵³ Article 3(17) 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 recover facilities that do not fall into the category of 'recycling'.



Explanatory text

- 3.12.** 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.
- 3.13.** 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.
- 3.14.** 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.
- 3.15.** 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 disposed of appropriately.

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

- 3.16. 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.
- 3.17.** 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 of the geographic hierarchy. 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 in the geographic hierarchy. It should address each geographic zone.
- 3.18.** Further details in relation this are set out in **paragraphs 3.7 to 3.8** above.
- 3.19.** The scale of 'other recovery' facilities that are appropriate in level 1b is limited due to the findings of the Habitats Regulations Assessment, see **Appendix 3**. Limiting the scale of 'other recovery' facilities in Worcester zone b means that there should be no likely significant effects on the Lyppard Grange Ponds SAC.

POLICY WCS 3: 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:
- i.** re-use, recycling and energy 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
 - ii.** there will be a shortfall in landfill or disposal capacity necessary to achieve the aims and purpose of the strategy; or
 - iii.** the proposal is essential for operational or safety reasons or is the most appropriate option.
- b)** 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 with details of aftercare for a minimum period of 5 years.

Explanatory text

Landfill or disposal of waste

- 3.20.** The term landfill refers to sites for the deposit of waste into or onto land⁵⁴ and as such also includes landraising⁵⁵. Other disposal activities include treatment processes that do not recover energy or resources, such as incineration without energy recovery.
- 3.21.** The Waste Core Strategy aims to reduce the amount of waste being disposed of and landfilled and anticipates that existing landfill 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 means⁵⁶.
- 3.22.** 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.
- 3.23.** 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.

⁵⁴ *The Landfill (England & Wales) Regulations 2002*

⁵⁵ 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).

⁵⁶ For more information see Waste Core Strategy background document "Landfill".



3.24. Excavation activities, a normal part of the construction process, can result in considerable arisings of subsoils. It is possible that proposals may be made for schemes which use waste materials, such as subsoil, for other purposes akin to landfill such as flood management schemes, landscaping or noise mounds. These can be used for landscaping, levelling of sites, the construction of bunds, embankments or features for noise attenuation, or other purposes. Proposals for this type of development will be considered against this policy.

3.25. 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.

3.26. 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 and any other relevant body.

Landfill gas management



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

3.27. 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 emissions⁵⁷. 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.

⁵⁷ For more information see Waste Core Strategy background document "Climate change and waste management in Worcestershire".



- 3.28** 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 restoration schemes

- 3.29.** 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 7**.
- 3.30.** 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.



4. Location of new waste management development

4.1. 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 4** 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 5** sets out requirements that where compatible uses are temporary, any permitted waste management facilities are also time-limited.
- **Policy WCS 6** ensures that site access and infrastructure are adequate.

Objectives WO2, WO7

POLICY WCS 4: 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 5**.

Compatible land uses:

Table 5. Compatible land uses	Enclosed facilities ⁵⁸		Enclosed or unenclosed	Unenclosed facilities		
	Re-use and recycling ⁵⁹	'Other recovery' or disposal ⁶⁰	Waste water treatment facilities	Open window composting	Other unenclosed facilities	Landfill
Industrial land	✓	✓	✓	✗	◆	✗
Contaminated or derelict employment land ⁶¹	✓	✓	✓	◆	◆	✗
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 or end users	■	■	■	■	■	✗
Greenfield land	✗	✗	◆	◆	✗	◆

KEY ✓ A compatible land use ✗ Not a compatible land use
 ◆ Where strongly justified ■ Where a clear operational relationship is demonstrated

⁵⁸ 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.

⁵⁹ Re-use and recycling includes treatment, storage, sorting and transfer facilities.

⁶⁰ 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".

Disposal includes, but is not limited to, thermal treatment without recovery.

⁶¹ This includes former airfields.



Explanatory text

4.2. 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 6** gives some examples of operational relationships which may apply.



Recycled fridges.
Photo courtesy of Recycle now partners

Table 6. 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	<p>Proposals to increase the capacity or support the operation of the treatment works.</p>
Co-location with producers or end users	<p>Proposals for facilities that are co-located with:</p> <ul style="list-style-type: none"> ● the producers of the specific waste to be managed; or ● other waste management facilities in the same treatment chain; or ● the end-users of recyclate produced by the facility; or ● the end-users of heat or energy produced by the facility, including heat distribution net works or grid connections where relevant.

4.3. 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.



Objectives WO2

POLICY WCS 5: 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

4.4. 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.
Photo courtesy of Recycle now partners

POLICY WCS 6: 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

4.5. 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.

Objectives WO1, WO2



- 4.6. 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.
- 4.7. 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.
- 4.8. 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

- 4.9. All developments must take into account local movement and transportation policies in the adopted Local Transport Plan, Local Plans and Local Development Frameworks and should aim to minimise the impact of the development by reducing the need for visitors and the workforce to travel.
- 4.10. 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:
 - o The waterways network;
 - o The rail network⁶²; and
 - o The strategic highway network.
- Assess the quality of the connections, including:
 - o Capacity of the local and strategic transport network;
 - o Suitability for vehicles/vessels; and
 - o 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.

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

4.12. The impact of the development and its associated traffic movements on the safety, integrity and amenity of the road network must be considered. Where there is likely to be any impact on the safe and efficient functioning of the transport network the county Highways Authority 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.

⁶² Rail generally handles trainloads conveying up to 1000 tonnes payload and even on weekly train basis a terminal/waste transfer station would need to have throughput of 52,000 tonnes a year.



5. Ensuring Sustainable Waste management development

5.1. Sustainable development is a core principle underpinning planning⁶³. 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.

5.2. 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'⁶⁴. They are dealt with in **Policy WCS 7** and the protection and enhancement of local characteristics is addressed in **Policy WCS 10**.

5.3. Climate change mitigation and resilience and resource efficiency are also identified as a priority in the Sustainable Community Strategies and in the objectives of the Waste Core Strategy. Design and operation features and practices to promote these are set out in **Policy WCS 9**, with flood risk and water quality addressed in **Policy WCS 8**.

5.4. **Policy WCS 11** protects social and economic concerns by ensuring that there are no unacceptable adverse impacts on amenity. **Policy WCS 12** ensures that social or economic benefits are delivered from all waste management proposals.

POLICY WCS 7: Environmental assets

Proposals for waste management facilities:

- a) will be permitted where the location, design, operation, landscaping and restoration, protect and where possible enhance, International, National and Local designated sites, habitats, species and heritage assets.
- b) will be permitted where they are necessary for the management of an Internationally designated site.
- c) will not be permitted where they will have a likely significant effect on Internationally designated sites, or an unacceptable adverse impact on International, National and Local designated sites, habitats, species and heritage assets. An assessment of likely impacts on these features must take into account:
 - i. impacts both within and beyond the proposed site boundary; and
 - ii. impacts on the integrity of the site; and

Objectives WO1, WO2

continued on next page

⁶³ *Planning Policy Statement 1: Delivering Sustainable Development.*

⁶⁴ 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.



- iii. broader impacts that the proposal is likely to have on wider networks or populations; and
- iv. any substantial harm to or loss of the significance of a heritage asset or its setting; and
- v. any cumulative impacts; and
- vi. any mitigation proposals.

Where it cannot be demonstrated that there are no likely significant effects on internationally designated sites, or no likely unacceptable adverse impacts on other environmental assets, proposals affecting:

- international designations will only be permitted where justified by imperative reasons of overriding public interest

- national and local designations and assets 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.

Explanatory text

5.5. International, National and Local designated sites, habitats, species and heritage assets are listed in **Table 7.**

Table 7: Environmental Assets

	Designated sites	Habitats	Species	Heritage assets
International	<ul style="list-style-type: none"> • Ramsar • Natura 2000 (SAC and SPA) 	<ul style="list-style-type: none"> • Any internationally designated habitats 	<ul style="list-style-type: none"> • Any internationally protected species • European Protected Species 	<ul style="list-style-type: none"> • World Heritage Sites • Any internationally designated heritage assets
National	<ul style="list-style-type: none"> • National Nature Reserves • Sites of Special Scientific Interest (SSSI)⁶⁵ 	<ul style="list-style-type: none"> • National BAP habitats 	<ul style="list-style-type: none"> • National BAP species • Section 41 species list⁶⁶ 	<ul style="list-style-type: none"> • Registered Battlefields • Registered Historic Parks and Gardens • Scheduled Ancient Monuments • Listed Buildings
Local	<ul style="list-style-type: none"> • Local Nature Reserves • Local sites: <ul style="list-style-type: none"> • Geological Sites⁶⁷ • Special Wildlife Sites⁶⁸ 	<ul style="list-style-type: none"> • Local BAP habitats 	<ul style="list-style-type: none"> • Local BAP species 	<ul style="list-style-type: none"> • Conservation Areas • Historic environment and heritage assets recorded on county historic environment record and local lists, including archaeological features, and landscapes and their settings • Historic farmsteads

⁶⁵ SSSIs are designated for either biological or geological interest.

⁶⁶ *Natural Environment and Rural Communities Act, 2006.*

⁶⁷ Information on sites of geodiversity importance is available from Herefordshire and Worcestershire Earth Heritage Trust - www.earthheritagetrust.org

⁶⁸ Information on Special Wildlife Sites, including Roadside Verge Nature Reserves, is available from Worcestershire Wildlife Trust - www.worcswildlifetrust.co.uk



Designated sites, habitats and species

- 5.6. 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. Assessment should be made of the likely impacts within and beyond the proposed development site.
- 5.7. The following international sites have the potential to be affected by waste management development in Worcestershire⁶⁹:
- 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).

Developments affecting international sites must preserve their integrity and have no likely significant effects on the internationally important features of the site.

⁶⁹ As identified by the Habitats Regulations Assessment (February 2011).

⁷⁰ In Worcestershire locally important sites include Local Nature Reserves, Special Wildlife Sites and Roadside Verge Nature Reserves, and Local Geological Sites .

⁷¹ See the Institute of Ecology and Environmental Management for a list of qualified ecologists - <http://www.ieem.net/ieemdirectory.asp>

- 5.8. Internationally and nationally designated and locally important sites⁷⁰ 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 and where possible enhanced. *Worcestershire's Green Infrastructure Study, local Biodiversity Action Plan and Geodiversity Action Plan* should inform the assessment.



Hartlebury Common. © Worcestershire County Council

- 5.9. Landscaping or restoration proposals should incorporate beneficial biodiversity features as part of the design of the development and where relevant contribute to repairing the fragmentation of networks of biodiversity sites.
- 5.10. Where proposals are likely to have a significant effect on species or habitats identified in **Table 7**, appropriate surveys should be carried out by a suitably qualified ecologist⁷¹ 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.



Heritage assets

5.11. The historic environment encompasses the assets listed in **Table 7** and their settings. Proposals likely to affect the significance of a heritage asset or its setting should be accompanied by an appropriate evaluation. This should be informed by the county's *Historic Environment Assessment*. For proposals likely to affect historic farm buildings, the products of the *West Midlands Farmsteads and Landscape Project* should be used including the *County's Farmsteads Character Statements*⁷².



Broadway tower. © Worcestershire County Council

POLICY WCS 8: 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;⁷³ 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

- 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.

Objectives WO1, WO2

⁷² See <http://www.english-heritage.org.uk/wmidlandsfarmsteads>

⁷³ In accordance with **Annex B: Considering Flood Risk in Waste Management Development**.



Explanatory text

Flood risk

- 5.12. 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.
- 5.13. In accordance with national policy⁷⁴, flooding issues must be considered for all development. The requirements are summarised in **Annex B** of this document. The consideration of these issues should be set out in a flood risk assessment (FRA).
- 5.14. New development can avoid increasing flood risk on the site and elsewhere by incorporating sustainable drainage systems (SuDS)⁷⁵, such as green roofs and permeable car parks, that can cope with high levels of rainfall and improve attenuation of run-off.
- 5.15. To ensure that the most vulnerable elements of a development are located in the lowest risk areas of the site, the 'sequential test'⁷⁶ 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.

- 5.16. 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.



Bewdley, November 2000 floods.
© Worcestershire County Council

⁷⁴ Currently *Planning Policy Statement 25: Development and Flood Risk*

⁷⁵ 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.

⁷⁶ The 'sequential test' as set out in PPS25 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."

⁷⁷ 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.

Water systems

- 5.17. Waste management activities can potentially have a serious impact on surface and ground water quality unless properly controlled and suitably located. The pollution control regime⁷⁷ 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.
- 5.18. 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.
- 5.19. The potential impacts on water systems depend on the nature of the facility. Leachate is an important consideration at sites which manage biodegradable wastes.
- 5.20. 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.
- 5.21. 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.
- 5.22. 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.
- 5.23. 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.
- 5.24. 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.

⁷⁷ 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.



POLICY WCS 9: 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
- 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%⁷⁸ of energy supply annually from on-site renewable sources; 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

5.25. 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.

Re-using buildings and minimising construction materials

5.26. Re-using existing buildings reduces the consumption of building materials, energy and the generation of waste from the construction of replacement buildings.

5.27. 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.

⁷⁸ Or more if local targets are higher in the District, City or Borough Councils' Development Plan Documents.

- 5.28.** Site Waste Management Plans are currently a legal requirement for all construction projects with an estimated construction cost of over £300,000⁷⁹. 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

- 5.29.** 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

- 5.30.** A reduction in energy demand 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 guidance⁸⁰.

⁷⁹ Further information is available on www.netregs-swmp.co.uk

⁸⁰ Including *Planning Policy Statement 1: Delivering Sustainable Development* and the supplement *Planning and Climate Change*, Defra/CABE guidance "*Designing Waste Facilities: a guide to modern design in waste*" and standards identified in Local Plans or adopted Local Development Frameworks.

⁸¹ Including biological processes, thermal treatment activities or landfill gas collection and management systems.

- 5.31.** Energy efficiency can also be achieved through operations which make more efficient use of equipment, machinery or other processes.

Renewable energy

- 5.32.** 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 processes⁸¹.
- 5.33.** The suitability 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

- 5.34.** 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.
- 5.35.** 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

- 5.36** 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.
- 5.37.** Landscaping should, where possible, incorporate elements of the existing landscape character⁸², 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*.
- 5.38.** 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.

POLICY WCS 10: 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) take account of 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, and
- c) do not constitute inappropriate development in areas designated as Green Belt⁸³

Objectives WO2

⁸² See Worcestershire Landscape Character Assessment at www.worcestershire.gov.uk/lca

⁸³ Inappropriate development is defined in national policy (currently *Planning Policy Guidance 2: Green Belts*).



Character of the built environment



Evesham Town Centre. © Worcestershire County Council

5.39. 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.

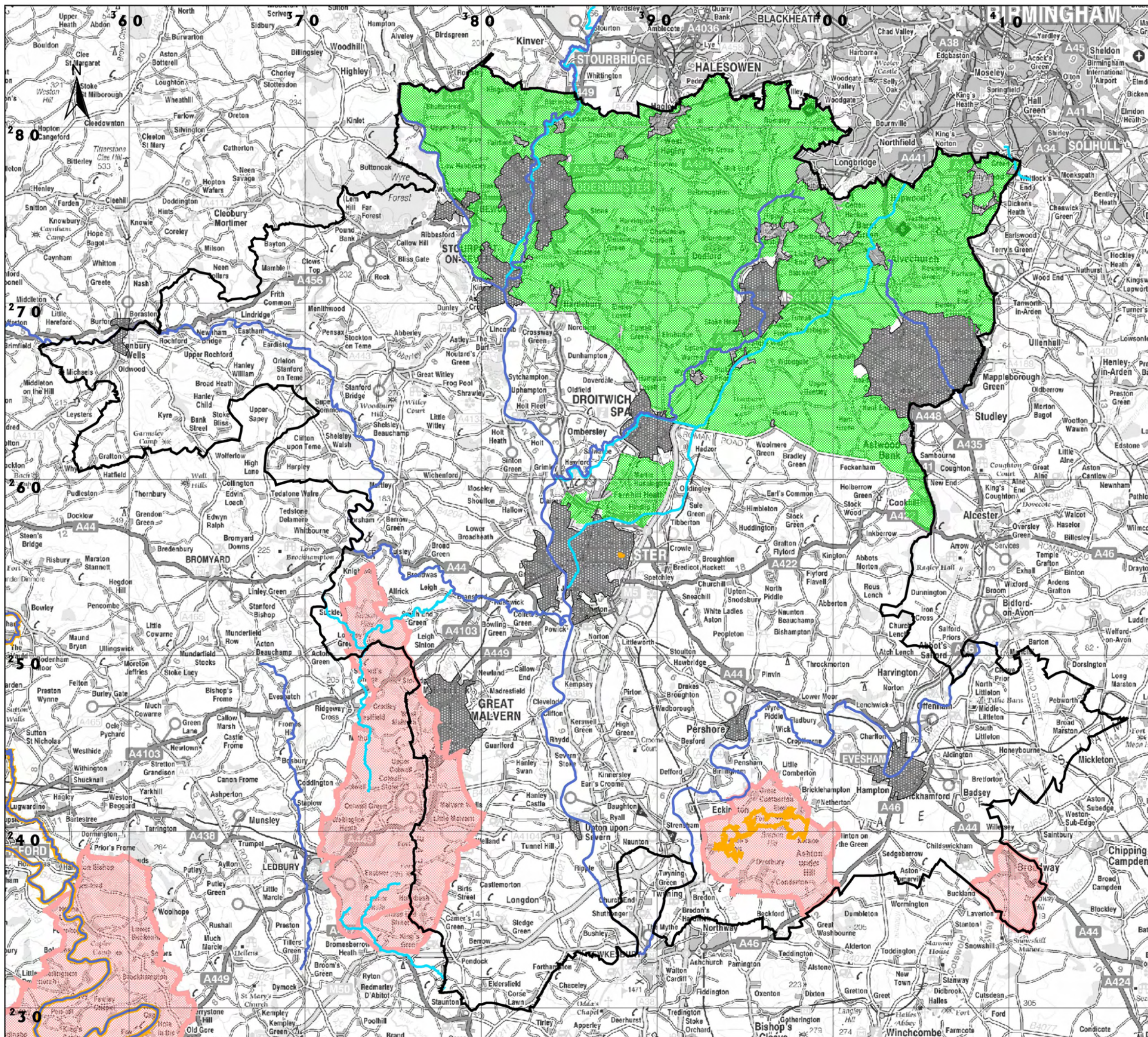
5.40. Good design will use an assessment of these local characteristics to inform the form, mass, scale, detailing and materials of the proposed development and will incorporate access to green spaces in the development

wherever possible. Design should also be guided by the principles of national and local policies and guidance including Playing Pitch assessments and Green Infrastructure Strategies⁸⁴.









Landscape character

5.41. 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.

⁸⁴ *Planning Policy Statement 1: Delivering Sustainable Development* and the supplement *Planning and Climate Change*, 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 15:
**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





Areas of Outstanding Natural Beauty

5.42. The Malvern Hills Area of Outstanding Natural Beauty (AONB) and the Cotswolds AONB are partially within Worcestershire, see **Figure 15**. 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.

5.43. 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.

Green Belt

5.44. Large areas to the north of the County are designated as Green Belt (see **Figure 15**). There is a presumption against inappropriate development in the Green Belt in national policy⁸⁵ and in such cases applicants must clearly justify the very special circumstances why permission should be granted.

5.45. Development will not be permitted unless the purposes of including land in Green Belt would not be compromised. In order for very special circumstances to justify inappropriate development, proposals will need to demonstrate that other considerations clearly outweigh any harm caused in relation to the purposes for which the Green Belt was designated.



View from the Malvern Hills AONB. © Worcestershire County Council

⁸⁵ Currently Planning Policy Guidance 2: Green Belts



Objectives WO2

POLICY WCS 11: 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 local 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. noise and vibrations; and
- iii. flies, vermin and birds; and
- iv. litter; and
- v. visual intrusion and light pollution.
- vi. 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 these are not demonstrated, exceptional circumstances must be clearly justified by the applicant.

Explanatory text

Amenity

5.46. Relevant assessments should be undertaken to demonstrate that the proposals will not have unacceptable adverse impacts on amenity or health⁸⁶. 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.

5.47. 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.

5.48. 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.

⁸⁶ 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.



- 5.49. 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.
- 5.50. 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.

POLICY WCS 12: 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.

Objectives WO2, WO5, WO6, WO7

Explanatory text

Equivalent self-sufficiency

- 5.51. Worcestershire's capacity gap is indicated in **Appendix 4**. This will be reviewed and updated in the *Annual Monitoring Report*.⁸⁷

⁸⁷ The Annual Monitoring report will be published in December each year and will be available at www.worcestershire.gov.uk/wcs



Local green economy

5.52. 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

- 5.53.** 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 England⁸⁸. This does not include textiles re-used or recycled through charity shops.
- 5.54.** 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.



Furniture recycling. Photo courtesy of Recycle Now Partners

Educating communities

- 5.55.** 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.
- 5.56.** 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

- 5.57.** 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*.⁸⁹
- 5.58.** Where waste management development could sterilise a safeguarded mineral deposit it may be appropriate to carry out extraction ahead of the development.

⁸⁸ Figures for England, set out in *Review of the Voluntary and Community Waste Sector in England Final Report* (Defra 2005)

⁸⁹ Available at <http://www.worcestershire.gov.uk> minerals and waste planning pages.



Community involvement

- 5.59.** Community involvement has 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*.
- 5.60.** 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. 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.



Community Involvement.

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6. Safeguarding existing waste management facilities

- 6.1. 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 13** sets out to do this.
- 6.2. 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 13: New development proposed on or near to existing waste management facilities

Existing waste management facilities will be safeguarded from non waste-related uses.

- a) Development on or adjacent to a site with planning permission or existing use rights for waste management development will be permitted:
- where the proposed development does not prevent, hinder or unreasonably restrict the operation of the waste development; or
 - 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; or
 - Suitable alternative provision is made for the waste operation at the same or higher level of the geographic hierarchy
 - The impacts can be satisfactorily mitigated.

continued on next page



- 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 proposal⁹⁰.

Explanatory text

- 6.3. 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 with 250 metres of such a site.
- 6.4. Facilities with planning permission or existing use rights for waste management⁹¹ 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.

- 6.5. Part b of **Policy WCS 13** 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 a waste management facilities

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

New sensitive receptors

- 6.7. 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.

⁹⁰ Provided that the operator is operating within the terms of the planning permission(s) and licensing permits for the site.

⁹¹ At February 2011.



- 6.8.** 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.
- 6.9.** 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.
- 6.10.** 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.



7. Considering waste from all new development

7.1. In order to drive waste up the waste hierarchy, the waste implications of all new development must be considered. **Policy WCS 14** relates to all types of development proposals, including but not limited to residential, commercial, industrial and waste management development.

Objectives WO3, WO43

POLICY WCS 14: 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) where the existing provision is adequate.

Explanatory text

7.2. The level of onsite 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.

7.3. 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.

7.4. The ADEPT report "*Making Space for Waste*" (June 2010)⁹² 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.

7.5. 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.

⁹² 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



8. Implementation and Monitoring Framework

Implementation

- 8.1. 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.
- 8.2. 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.
- 8.3. 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.

Deliverability

- 8.4. 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.

- 8.5. The reduction of greenhouse gas emissions will be contributed to by **Policies WCS 1, WCS 2 and WCS 3** 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.
- 8.6. 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 3** 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.



- 8.7.** Greenhouse gas emission can also be reduced by the design and operation of facilities. **Policy WCS 9** 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.
- 8.8.** In addition **Policy WCS 3** 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.
- 8.9.** 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 6**; however the most realistic approach to reducing waste miles is through the delivery of the spatial strategy (as set out in **Policy WCS 1** and **WCS 2**), which directs development to areas where arisings, onward treatment opportunities and end-users are concentrated and where strategic transport links are strong.
- 8.10.** Climate change resilience is a key consideration in **Policy WCS 9** which aims to ensure that facilities are designed to adapt to potential

climate change impacts, **Policy WCS 7** protects networks of habitats and therefore the capacity of biodiversity to adapt to climate change, and **Policy WCS 8** which considers increased flood risk.

- 8.11.** 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 strategy⁹³. The Council has not permitted any waste management facilities against EA advice on flood risk.

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.

- 8.12.** **Policy WCS 7** directs new waste management development away from identified biodiversity, geodiversity, heritage assets, the greenbelt and greenfield land and requires the conservation and where possible the enhancement or restoration of identified species, habitats, geodiversity and historic environment. **Policy WCS 8** ensures that waste management facilities will not adversely impact upon water quality or increase flood risk; whilst **Policy WCS 10** 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.

⁹³ All of the areas of search in Annex A have been assessed and are not in Flood Zone 3.



- 8.13.** 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.
- 8.14.** 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.
- 8.15.** Amenity and health are addressed through **Policy WCS 11**, with **Policy WCS 6** also considering amenity impacts along transport routes and **Policy WCS 13** 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.

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

C&I (including hazardous and agricultural waste)	75%
C&D	75%
MSW	78%

(with a target of 50% recycling and composting by 2020, a maximum of 22% landfill and the remainder as energy recovery).

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.



C&I targets

- 8.17.** The C&I target is based on "Waste Scenarios Study" (WMRA/Enviros) (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 Appraisal* which assessed the sustainability of the Scenarios and concluded that two of the scenarios, one based on 75% recycling and recovery rate⁹⁴ and the other on 65% recycling and recovery rate⁹⁴, were reasonable, sustainable and the most likely to be achievable within the life of the RSS.
- 8.18.** 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,⁹⁶ giving it a secure foundation. The assumptions behind the 65% recycling and recovery rate scenario are less clear.
- 8.19.** 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 8**).
- 8.20.** 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.

Table 8: Household, Commercial, Industrial (HCI) waste disposed of to landfill in Worcestershire

	Percentage of HCI disposed of to landfill	Percentage of HCI treated
2007	78%	22%
2008	68%	32%
2009	64%	36%

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

C&D targets

- 8.21.** At present there is no robust information about C&D arisings or treatment. The 75% target has however been included to indicate a direction of travel. It will be monitored if information becomes available.

MSW targets

- 8.22.** The *reviewed Joint Municipal Waste Management Strategy (JMWMS)* is committed to achieving this target for MSW and as such the likelihood of delivery is expected to be high. The revised *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.

⁹⁴ Scenario 1

⁹⁵ Scenario 5

⁹⁶ set out in detail in the Phase 2 report



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

8.23. Policy WCS 13 ensures that new development will not sterilise existing waste management facilities without providing adequate alternative provision and **Policy WCS 14** requires the provision of facilities which allow waste to be stored for recycling in all new development.

8.24 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"*⁹⁷. 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.

8.25. 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 13** and **WCS 14** 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 plan period to 2027 and safeguarding existing waste management facilities from incompatible development.

8.26. 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.

8.27. The capacity gap and therefore the land requirements identified in **Table 3** and **Appendix 4** are based on the following assumptions:

- **Estimates of projections based on the assumptions in Table 9:**

In practice however 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 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 both will remain lower for some years to come.

⁹⁷ Available at <http://www.cssnet.org.uk/>



Table 9: Assumptions for Waste Arisings Projections

Waste Stream	Assumption
C&I	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).
Hazardous	Scott Wilson West Midlands Landfill Capacity Study 2009 update plus 8,000 tpa potential production from an EfW plant.
Clinical & Radioactive element of Hazardous	Correspondence with Primary Care Trust, projected to increase at same rate as MSW.
C&D	WMRA Phase 2 Future Capacity Study.
MSW	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 capacity⁹⁸ 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.

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 county⁹⁹ 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.

- **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.

⁹⁸ Except Hill and Moor composting facility, see background document "Arisings and capacity" for details.

⁹⁹ Gathered during site visits to all facilities in the County 2008-9



These factors mean that the capacity gap and land-requirements are likely to be an over-estimate (see **Table 10**)

8.28. 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.

8.29. Worcestershire's specific circumstances have been used to give some indication of what the capacity gap may mean in terms of:

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

Table 10: Capacity gap, land requirements and facility numbers

	2010/11	2015/16	2020/21	2025/26
Capacity gap (total) tpa	652,000	675,000	750,000	805,000
Re-use and recycling	411,500	421,500	482,000	521,500
'Other recovery'	240,500	253,500	268,000	283,500
Sorting and transfer	0	0	0	0
Landfill and disposal	0	0	0	0
a) Land requirements (total)	25.5 ha	26 ha	29 ha	31 ha
Re-use and recycling	18 ha	18 ha	20 ha	22 ha
'Other recovery'	8 ha	8 ha	9 ha	9 ha
Sorting and transfer	0	0	0	0
Landfill and disposal	0	0	0	0



Table 10 continued

b) number of facilities (total)	23-31	24-32	27-37	29-39
Re-use and recycling	21-29	22-30	25-35	27-37
'Other recovery'	2	2	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 Appendix 4.

- a) land requirements are based on average throughputs per hectare per annum for facilities in Worcestershire: Reuse and recycling - 23,500 tpa; Recovery - 32,000 tpa; 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); Transfer 17,000 (urban facilities) - 25,000 (all facilities).

8.30. 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 2025/26¹⁰⁰. This is roughly half the current estimate for Waste sites required in Worcestershire (see **Table 10**).

Identifying whether adequate land is available

8.31. 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 4**, including redundant agricultural or forestry buildings or co-location opportunities.

8.32. Existing landfill capacity in Worcestershire is sufficient to meet need during the lifetime of the strategy¹⁰¹. Therefore, landfill has not been considered in assessing the areas of search.

8.33. 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/sale¹⁰² totalling 42 hectares of suitable land (see Table 11).

¹⁰⁰ West Midland Regional Assembly (2004) West Midlands Waste Capacity Study. Phase 2: Future Capacity requirements.

¹⁰¹ For more information see Waste Core Strategy background document "*Landfill*" or "*Arising and capacity*" background document.

¹⁰² Based on areas of search only.



8.34. The County Council has commissioned research¹⁰³ 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.

8.35. The 42 hectares currently available is little above the 31 hectares required by the end of the strategy (see **Table 10**), however the capacity gap and land requirement figures are likely to be a worst-case scenario. In addition the land available does not include new industrial estates currently being developed or new industrial land that will be brought forward through the City, District and Borough Development Frameworks. The County Council will engage with City, Borough and District councils to ensure that waste management is considered when allocating future employment land.

8.36. As already noted the areas of search do not including 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 500,00tpa 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.

8.37. 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 **WCS4**.

Industrial Estates:

8.38. The Industrial Estates Study¹⁰⁴ commissioned by the County Council, looked at industrial sites and spoke to property management companies in Worcestershire¹⁰⁵. 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.

¹⁰³ See background document "Industrial estates study" by ERM

¹⁰⁴ See background document "Industrial estates study" by ERM

¹⁰⁵ GVA Grimley, Harris Lamb, Halls Commercial, John Trustlove, Jonathan Chilton and King Sturge



- 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.

8.39. In Worcestershire many existing waste management operations currently take place on industrial estates.

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

- 8.40.** 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.
- 8.41.** It is believed that these kinds of locations are likely to be brought forward to contribute towards this objective.

Co-location opportunities:

8.42. 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

8.43. Policy WCS 13 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 250 m 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 encourage communities in Worcestershire take responsibility for their own waste and involve all those affected as openly and effectively as possible.

8.44. It is expected that all proposals will undertake public consultation prior to submission. Between 2008 and 2009 the number of applications submitted to the County Council with consultation statements rose from 18% to 22%¹⁰⁶ and it is believed that other proposals that did not include a consultation statement had also undertaken pre-application consultation with local communities.

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

8.45. 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.

¹⁰⁶ Worcestershire County Council "Minerals and Waste Local Development Scheme: The Fifth Annual Monitoring Report 2008-2009" December 2009.

¹⁰⁷ 2007 figures: EA Waste Data Interrogator total HIC arising in Worcestershire minus municipal waste in Worcestershire 2006/07.

8.46. Policy **WCS 12** addresses the issue of economic benefit. This 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.

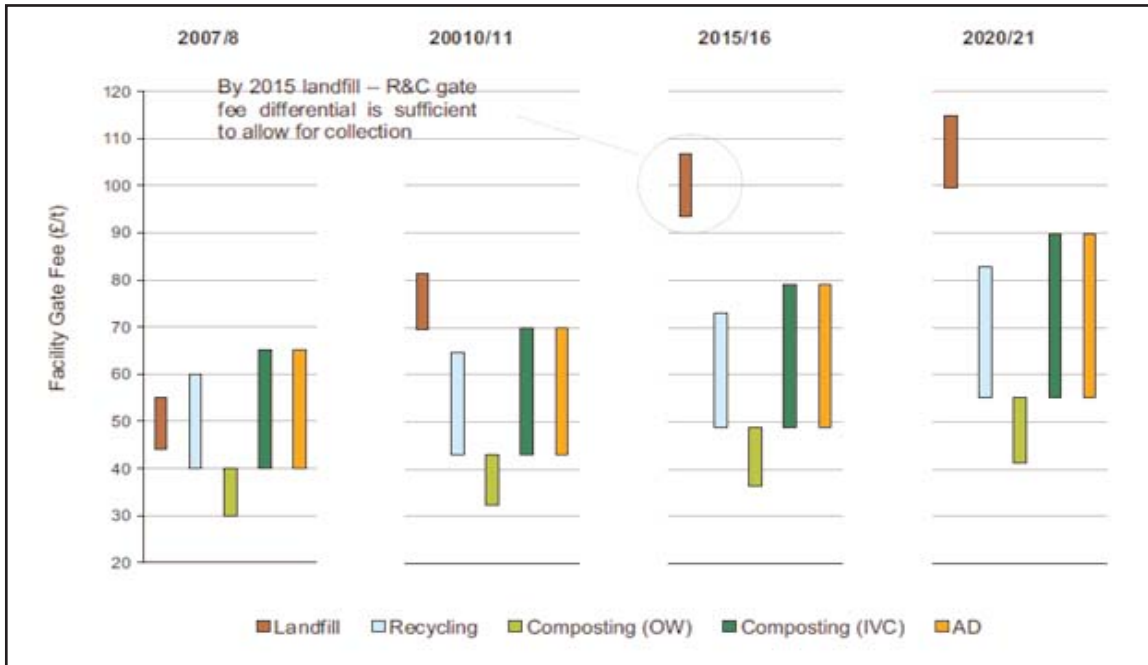
8.47. The majority of commercial and industrial activities produce some form of waste, and in Worcestershire over 730,000 tonnes per annum is currently managed¹⁰⁷. Businesses must pay for the management and disposal of this waste and over the coming years the cost of waste management are expected to increase. Costs of landfill will increase significantly due to increases in landfill tax and other factors, whereas the costs of other treatment methods is expected to increase at a much lower rate, as illustrated in **Figure 16**. The 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.



The Waste Management industry contributes positively to the local economy. Photo courtesy of Recycle Now Partners



Figure 16. Comparative gate fees for landfill, recycling and composting facilities 2007/8 - 2020/21



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

WO8: To direct development to the most appropriate locations in accordance with the spatial strategy.

8.48. 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:
- the Habitats Regulations Assessment, and
- District Councils' Strategic Flood Risk Assessments.

See background document for details of alternative considerations.

8.49. The policies drive waste to the highest appropriate level of the spatial hierarchy. The land availability in the areas of search, as discussed above, is also concentrated at the higher level of the hierarchy (see **Table 11**). This approach is therefore felt to be deliverable.

Table 11: Land availability by level of the Spatial Hierarchy¹⁰⁸

Level	Available land	Available units
Level 1	25.72 ha	150
Level 2	9.06 ha	101
Level 3	7.74 ha	21
Level 4	-	-
Level 5	-	-

¹⁰⁸ Source: Worcestershire County Council "Worcestershire Property Search" website 11th February 2011.



Conclusion

- 8.50.** 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

- 8.51.** The Council is committed to monitoring the Waste Core Strategy in order to achieve the vision and strategic objectives it sets out.
- 8.52.** 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.

- 8.53.** 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.

- 8.54.** If monitoring indicates that targets have been missed, the process outlined in **Figure 17** 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 17: Policy review process



Monitoring schedule

8.55. The Monitoring Schedule considers how each of the objectives they will be implemented and how their achievement will be monitored. The approach taken has also been informed by the Sustainability Appraisal.

Figure 18. Monitoring Schedule

<p><i>What do we want to achieve?</i></p> <p>Objective WO1: To base decisions on the need to reduce greenhouse gas emissions and the need to mitigate climate change. SA objectives - SA1, SA2, SA4, SA7, SA8, SA12</p>	
<p><i>How will this be achieved?</i></p>	
<p>Policy framework</p>	<p>WCS 1: Reuse and recycling; WCS 2: Other recovery; WCS 3: Landfill and disposal; WCS 7: Environmental Assets; WCS 8: Flood risk and water resources; and WCS 9: Sustainable design and operation of facilities</p>
<p>Responsible bodies</p>	<ul style="list-style-type: none"> Worcestershire County Council as Planning Authority, Waste Disposal Authority and landowner District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission. Environment Agency or other appropriate body for technical advice. Waste Planning Applications (Public and private sector)
<p>Delivery mechanism</p>	<ul style="list-style-type: none"> Potential for additional costs to make developments less viable. <i>Impact: Medium</i> <i>Likelihood: Medium</i> Possible gap in applicant's knowledge relating to delivering energy hierarchy 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> 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>





<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 ¹⁰⁹ 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 for three years in any five. ¹¹⁰
	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.
Other issues that will be monitored	Changes in national policies or targets relating to climate change, flood risk, energy efficiency and water efficiency. Review trigger: conflict with national policy.		

¹⁰⁹ This is less than 100% as it may not be possible for some small applications to include provision for this. These will be identified in the AMR.

¹¹⁰ This is less than 100% as it may not be possible for some small applications to include provision for this.

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<p><i>What do we want to achieve?</i></p> <p>Objective WO2: To base decisions on the principles of sustainable development by protecting and enhancing the County's natural resources, environmental, cultural assets, the character and amenity of the local area and the health and wellbeing of the local people</p> <p>SA objectives - SA3, SA9, SA11, SA12, SA13, SA16, SA18</p>	
<p><i>How will this be achieved?</i></p>	
<p>Policy framework</p>	<p>WCS 4: Compatible land use; WCS 5: Development associated with existing temporary facilities; WCS 6: Site infrastructure and access; WCS 7: Environmental Assets; WCS 8: Flood risk and water resources; WCS 9: Sustainable design and operation of facilities; WCS 10: Local characteristics; WCS 11: Amenity; WCS 12: Social and economic benefits; and WCS 13: New development proposed on or near to existing waste management facilities.</p>
<p>Responsible bodies</p>	<ul style="list-style-type: none"> ● Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner. ● Environment Agency, Natural England, English Heritage, Worcestershire Wildlife Trust and appropriate health authority for technical advice. ● Environment Agency and Defra for data collection.
<p>Delivery mechanism</p>	<ul style="list-style-type: none"> ● Waste Planning Applications (Public and private sector)
<p>Risk assessment</p>	<ul style="list-style-type: none"> ● Indicators depend on availability of data and advice from outside bodies. <i>Impact: Medium</i> <i>Likelihood: Medium</i> ● Presence and significance of features outside of the application site may not be recognised. <i>Impact: High</i> <i>Likelihood: Low</i>





<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.

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Indicators and targets	Indicator	Target	Review trigger
	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 inappropriate development.	One permission. Proposals will be considered to be inappropriate where very special circumstances have not been clearly justified. This will be identified by a statutory body or in the committee or delegated report prepared
	14 Permissions granted in accordance with highways advice.	100%	Less than 90% over three years in any five.
Other issues that will be monitored	Facilities permitted on each of the land types identified in policy WCS 3. Changes in national policy or targets. Review trigger: conflict with national policy.		





<p><i>What do we want to achieve?</i></p> <p>Objective WO3: To make driving waste up the waste hierarchy the basis for waste management in Worcestershire SA objectives - SA1, SA2, SA5, SA7, SA8, SA9, SA10, SA18</p>	
<p><i>How will this be achieved?</i></p>	
<p>Policy framework</p> <p>WCS 1: Reuse and recycling; WCS 2: Other recovery; WCS 3: Landfill and Disposal and WCS 14: Making provision for waste in new development.</p>	
<p>Responsible bodies</p>	<ul style="list-style-type: none"> ● Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner. ● District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission. ● Environment Agency and Defra for data collection.
<p>Delivery mechanism</p>	<ul style="list-style-type: none"> ● Waste Planning Applications (Public and private sector)
<p>Risk assessment</p>	<ul style="list-style-type: none"> ● No appropriate land available at the higher levels of the geographic hierarchy: <i>Impact: High</i> <i>Likelihood: Medium</i> <p>In order to address this WCC will engage with 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"> ● 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> ● Indicators depend on availability of data and advice from outside bodies. <i>Impact: Medium</i> <i>Likelihood: Medium</i>

8. IMPLEMENTATION AND MONITORING FRAMEWORK • Worcestershire Waste Core Strategy

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<i>How will we know it is being achieved?</i>			
Indicators and targets	Indicator	Target	Review trigger
	15. Progress towards equivalent self-sufficiency in re-use and recycling based on figures in Appendix 4 or as updated in the AMR.	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	MSW 78% (with a minimum of 50% recycling by 2020) All other waste: 75%	Milestone targets not met.
	18. Adoption of appropriate policies regarding managing waste arisings 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.
Other issues that will be monitored	<ul style="list-style-type: none"> 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 used to update Appendix 4. (See WO5 for more details). Availability of land at each level of the geographic hierarchy. Review trigger: Inadequate land availability at higher levels of the geographic hierarchy (See WO8). Changes in national policy or targets. Review trigger: conflict with national policy. 		





What do we want to achieve?

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

SA objectives: SA1, SA2, SA14, SA16

How will this be achieved?

Policy framework
WCS 9: Sustainable design and operation of facilities; WCS 13: New development proposed on or near to existing waste management facilities and WCS 14: Making provision for waste in new development.

- Responsible bodies**
- Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner.
 - District Councils as Local Planning Authorities addressing waste implications of general applications for planning permission.

- Delivery mechanism**
- District Council LDFs
 - Waste planning applications (Public and private sector)
 - Other planning applications

- Risk assessment**
- WCS 13 and WCS 14 will be applied by several different planning authorities. Consistency of implementation may be an issue.
Impact: Medium
Likelihood: Low

How will we know it is being achieved?

Indicators and targets	Indicator	Target	Review trigger
	19. Development permitted with 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 arisings 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.
Other issues that will be monitored	<ul style="list-style-type: none"> ● Changes in national policy or targets. Review trigger: conflict with national policy. 		

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<p><i>What do we want to achieve?</i></p> <p>Objective WO5: To enable equivalent self-sufficiency in waste management in the County by addressing the "Capacity Gap" over the plan period to 2027 and safeguarding existing waste management facilities from incompatible development.</p> <p>SA objectives - SA1; SA2; SA5; SA7; SA18</p>	
<p><i>How will this be achieved?</i></p>	
<p>Policy framework</p>	<p>WCS 1: Reuse and recycling; WCS 2: Other recovery; WCS 3: Landfill; WCS 12: Social and economic benefits and WCS 13: New development proposed on or near to existing waste management facilities.</p>
<p>Responsible bodies</p>	<ul style="list-style-type: none"> • Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner. • District Councils as Local Planning Authorities addressing implications of general applications for planning permission on existing waste management facilities. • Environment Agency and Defra for data collection. • Waste Planning Applications (Public and private sector)
<p>Delivery mechanism</p>	<ul style="list-style-type: none"> • 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. <p><i>Impact: High</i> <i>Likelihood: Low</i></p> <ul style="list-style-type: none"> • WCS 13 will be applied by several different planning authorities. Consistency of implementation may be an issue. <p><i>Impact: Medium</i> <i>Likelihood: Low</i></p> <ul style="list-style-type: none"> • Indicators depend on availability of data and advice from outside bodies. <p><i>Impact: Medium</i> <i>Likelihood: Medium</i></p>
<p>Risk assessment</p>	





<i>How will we know it is being achieved?</i>			
Indicators and targets	Indicator	Target	Review trigger
	(15) Progress towards equivalent self-sufficiency in re-use and recycling based in figures in Appendix 4 or as updated in the AMR.	No capacity gap for re-use and recycling by 2027	Decrease in % waste being re-used or recycled for two years in a five year period.
	20. Progress towards equivalent self-sufficiency in 'other recovery', based on figures in Appendix 4 or as updated in the AMR.	No capacity gap for 'other recovery'	No review trigger set. Capacity gap will be monitored and a review trigger set if necessary.
	21. Progress towards equivalent self-sufficiency in sorting and transfer based in figures in Appendix 4 or as updated in the AMR.	No capacity gap for sorting or transfer	Capacity gap identified for sorting or transfer
	22. Maintain equivalent self-sufficiency in disposal and landfill based on figures in Appendix 4 or as updated in the AMR	No capacity gap for disposal or landfill	Capacity gap identified for disposal or landfill
	(19) Development permitted with 250m of waste management facilities against County Council advice.	None	One permission granted against County Council advice.
Other issues that will be monitored	<ul style="list-style-type: none"> • Best available data on 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 used to update Appendix 4. • Changes in national policy or targets. Review trigger: conflict with national policy. 		

8. IMPLEMENTATION AND MONITORING FRAMEWORK • Worcestershire Waste Core Strategy

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What do we want to achieve?		
<p>WO6: To involve all those affected as openly and effectively as possible SA objectives - SA 6</p>		
How will this be achieved?		
Policy framework	<p>WCS 12: Social and economic benefits; WCS 13: New development proposed on or near to existing waste management facilities and <i>The Statement of Community Involvement (SCI)</i>.</p>	
Responsible bodies	<ul style="list-style-type: none"> Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner. District Council as Local Planning Authority addressing implications of general applications for planning permission. 	
Delivery mechanism	<ul style="list-style-type: none"> Waste Planning Applications (Public and private sector) 	
Risk assessment	<ul style="list-style-type: none"> It is possible that consultation may lead to a more lengthily design process, and that additional costs may make developments less viable. <i>Impact: High</i> <i>Likelihood: Low</i> 	
How will we know it is being achieved?		
Indicators and targets	Indicator	Review trigger
	<p>23. Permitted applications for waste management which include a consultation statement.</p> <ul style="list-style-type: none"> Changes in national or local policy or targets. Review trigger: conflict with national policy 	<p>100%</p> <p>Less than 90% for two years in any five.</p>
Other issues that will be monitored		





What do we want to achieve?										
WO7: To develop a waste management industry that contributes positively to the local economy SA objectives - SA5; SA7										
How will this be achieved?										
Policy framework	WCS 4: Compatible land use; WCS 9: Sustainable design and operation of facilities; WCS 12: Social and economic benefits and WCS 13: New development proposed on or near to existing waste management facilities <ul style="list-style-type: none"> Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority, landowner and in its Economic Development role. Waste Planning Applications (Public and private sector) Damage to the existing economy Impact: High Likelihood: Low 									
Responsible bodies										
Delivery mechanism										
Risk assessment										
How will we know it is being achieved?										
Indicators and targets	<table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> <th>Review trigger</th> </tr> </thead> <tbody> <tr> <td>(15, 20, 21, 22) Progress towards equivalent self-sufficiency based in figures in appendix 4 or as updated in the AMR. (See indicators 15, 20, 22)</td> <td>See indicators 15, 20, 21, 22</td> <td>See indicators 15, 20, 21, 22</td> </tr> <tr> <td>24. 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) Progress towards equivalent self-sufficiency based in figures in appendix 4 or as updated in the AMR. (See indicators 15, 20, 22)	See indicators 15, 20, 21, 22	See indicators 15, 20, 21, 22	24. 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) Progress towards equivalent self-sufficiency based in figures in appendix 4 or as updated in the AMR. (See indicators 15, 20, 22)	See indicators 15, 20, 21, 22	See indicators 15, 20, 21, 22								
24. Increase in GVA in Worcestershire from Waste Management.	Increase	Decrease in GVA in Worcestershire from Waste Management over three years in any five.								
Other issues that will be monitored	<ul style="list-style-type: none"> Changes in national or local policy or targets. Review trigger: conflict with national policy 									

8. IMPLEMENTATION AND MONITORING FRAMEWORK • Worcestershire Waste Core Strategy

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What do we want to achieve?							
<p>WO8: To direct development in accordance with the Spatial Strategy. SA objectives - SA2; SA4; SA6</p>							
How will this be achieved?							
<p>Policy framework WCS 1: Reuse and recycling and WCS 2: Other recovery</p> <ul style="list-style-type: none"> Worcestershire County Council as Waste Planning Authority, Waste Disposal Authority and landowner. Waste Planning Applications (Public and private sector) No suitable sites available at the most appropriate level of the geographic hierarchy. <i>Impact: High</i> <i>Likelihood: Medium</i> <p>In order to address this WCC will engage with 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>							
How will we know it is being achieved?							
Indicators and targets	<table border="1"> <thead> <tr> <th>Indicator</th> <th>Target</th> <th>Review trigger</th> </tr> </thead> <tbody> <tr> <td>25. Permitted waste management development at each level of the geographic hierarchy.</td> <td>100% of Recovery capacity at level 1 and 2 and Over 50% other capacity at levels 1 -2</td> <td>Less than 100% or 50% respectively over a five year period.</td> </tr> </tbody> </table>	Indicator	Target	Review trigger	25. Permitted waste management development at each level of the geographic hierarchy.	100% of Recovery capacity at level 1 and 2 and Over 50% other capacity at levels 1 -2	Less than 100% or 50% respectively over a five year period.
Indicator	Target	Review trigger					
25. Permitted waste management development at each level of the geographic hierarchy.	100% of Recovery capacity at level 1 and 2 and Over 50% other capacity at levels 1 -2	Less than 100% or 50% respectively over a five year period.					
Other issues that will be monitored	<ul style="list-style-type: none"> Changes in national or local policy or targets. Review trigger: conflict with national policy 						





Appendix 1: Acronyms, abbreviations and glossary of terms

Acronyms and abbreviations

AD	Anaerobic Digestion
AMR	Annual Monitoring Report
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Areas
AWM	Advantage West Midlands
BAP	Biodiversity Action Plan
BPEO	Best Practicable Environmental Option
C&D	Construction and Demolition Waste
C&I	Commercial and Industrial Waste
CHP	Combined Heat and Power
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
FRA	Flood Risk Assessment
ha	Hectare(s)
JMWMS	Joint Municipal Waste Management Strategy
LBAP	Local Biodiversity Action Plan
LDF	Local Development Framework
LSOA	Lower-level Super Output Areas are the smallest scale at which Census data can be used. They roughly equate to 1,500 people.
MBT	Mechanical Biological Treatment
MHT	Mechanical Heat Treatment
MRF	Materials Recycling/Reclamation Facility
MSW	Municipal Solid Waste
mt	Million tonnes
NNI LLW	Non-Nuclear Industry Low Level Radioactive Waste
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
RSS	Regional Spatial Strategy (for the West Midlands unless otherwise stated)
SAC	Special Areas of Conservation (EU designation)
SCI	Statement of Community Involvement
SuDS	Sustainable Drainage Systems
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Areas (for Birds) (EU designation)
SSSI	Site of Special Scientific Interest
SPZ	Source Protection Zone



STW	Sewage Treatment Works (which may include small facilities such as pumping stations as well as full treatment works)
SWS	Special Wildlife Sites
t	Tonnes
tpa	Tonnes per annum
UK BAP	UK Biodiversity Action Plan
WCS	Waste Core Strategy
WET	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.
WMRSS	West Midlands Regional Spatial Strategy
WPA	Waste Planning Authority



Glossary

Adaptation (climate change)	How development can be designed to cope with the changes in our climate and severe weather events caused by increasing levels of greenhouse gases.
Agricultural waste	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.
Air Quality Management Areas	Declared where air quality objectives are not likely to be achieved.
Ancient semi-natural woodland	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.
Annual Monitoring Report	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.
Areas of Outstanding Natural Beauty	Areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes.
Battlefields	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.
Best Practicable Environmental Option	The BPEO was a method of establishing for a given set of objectives, the option that provides the most benefits, or the least damage to the environment as a whole, at acceptable cost, in the long term as well as the short term. It was used to inform the development of the Joint Municipal Waste Management Strategy, but is no longer part of government policy.
Biodiversity	"The variability among living organisms from all sources including, inter alia, 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.



Biodiversity Action Plan	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.
Broad 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.
Brownfield land Capacity gap	Previously developed land. The difference between how much waste management capacity we have and what we need over the plan period to 2027.
Carbon sinks	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.
Climate change Clinical waste	See Adaptation and Mitigation 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.
Coal resource	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.



Connectivity	How well a location is connected to the strategic transport network, including navigable waterways, rail links and the primary road network.
Combined heat and power	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.
Commercial and industrial waste	Includes Commercial waste arising from wholesalers, catering establishments, retail premises and offices, Industrial waste arising from factories and industrial plants and packaging waste.
Constraints	Features or designations which restrict the use of land. Primary constraints are matters of international and national importance. Secondary constraints are locally important sites that contribute to the distinctive character of Worcestershire.
Conservation areas	Conservation areas are places which are desirable to preserve as a result of special architectural or historic interest.
Construction and demolition waste	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.
Disposal	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".
End users	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.
Equivalent self-sufficiency	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 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.



Green infrastructure	Green Infrastructure is a network of high quality green spaces and other environmental 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 and private gardens. 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.
Greenfield land	Land that has not previously been developed. This is not the same as land designated as green belt.
Hazardous waste	<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>
Inert landfill	Waste which will not biodegrade or decompose (or will only do so at a very slow rate). Inert waste does not contain contaminants (e.g. such as combustible, putrescible, degradable, leachable, hazardous, or liquid wastes, etc). Types of materials include uncontaminated topsoil, subsoil, clay, sand, brickwork, stone, silica, and glass. Aggregates or inert materials are often used in construction or land reclamation works to create new levels.
Landfill	Disposal of material by burying into the ground, includes landraising, the disposal of material by burial above ground.
Listed buildings and their settings	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.
Local Development Framework	A folder of local development documents that outline the spatial planning strategy for the local area.



Local Geological Sites	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).
Local Nature Reserves	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.
Lower-level Super Output Areas	The smallest scale at which Census data can be used. They roughly equate to 1,500 people.
Material consideration	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.
Mineral resources	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.
Mitigation (climate change)	Reducing the extent of potential climate change by reducing carbon emissions resulting from human activities.
Municipal Solid Waste	All waste collected or disposed of by local authorities or agents acting on their behalf, principally domestic "dustbin" waste.
National Nature Reserves	Sites designated by Natural England to protect the most important areas of habitat and geological formations and to promote scientific research
Natura 2000 sites	Natura 2000 sites are a network of European designated sites for wildlife, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
Non-inert landfill	Waste that breaks down in landfill to create landfill gas or leachate, this includes biodegradable waste.
Onward treatment	Facilities which use the products from waste management activities, such as recycle from materials reclamation facilities.
Other recovery	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".
Overview of Waste Management in Worcestershire	The Overview 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.



Proximity	How near a location is to waste arisings, onward treatment facilities or end users.
Ramsar sites	Wetlands of international importance, designated under the Ramsar Convention.
Recovery Recycling	See Other recovery 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.
Registered Parks and Gardens	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.
Resource demand	Refers to the demand for resources from organic waste recovery (e.g. composting), recycling and energy recovery.
Re-use	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".
Scheduled or other ancient monuments	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.
Sensitive receptor	'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.
Sites of Special Scientific Interest	Areas of land or water of national importance identified by Natural England on account of their flora, fauna, geological or physiographical features.
Source Protection Zone	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.



Special Areas of Conservation	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.
Special Protection Areas	Areas classified under the European Community Directive on the Conservation of Wild Birds, intended to protect the habitats of threatened species.
Special Wildlife Sites	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.
Strategic Flood Risk Assessment	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.
Validation document	Once adopted, the Validation document will provide applicants and their agents with guidance on the information required when submitting a planning application. If an applicant fails to submit an application in accordance with the requirements set out in the Validation document the application will be declared invalid.
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 7th 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

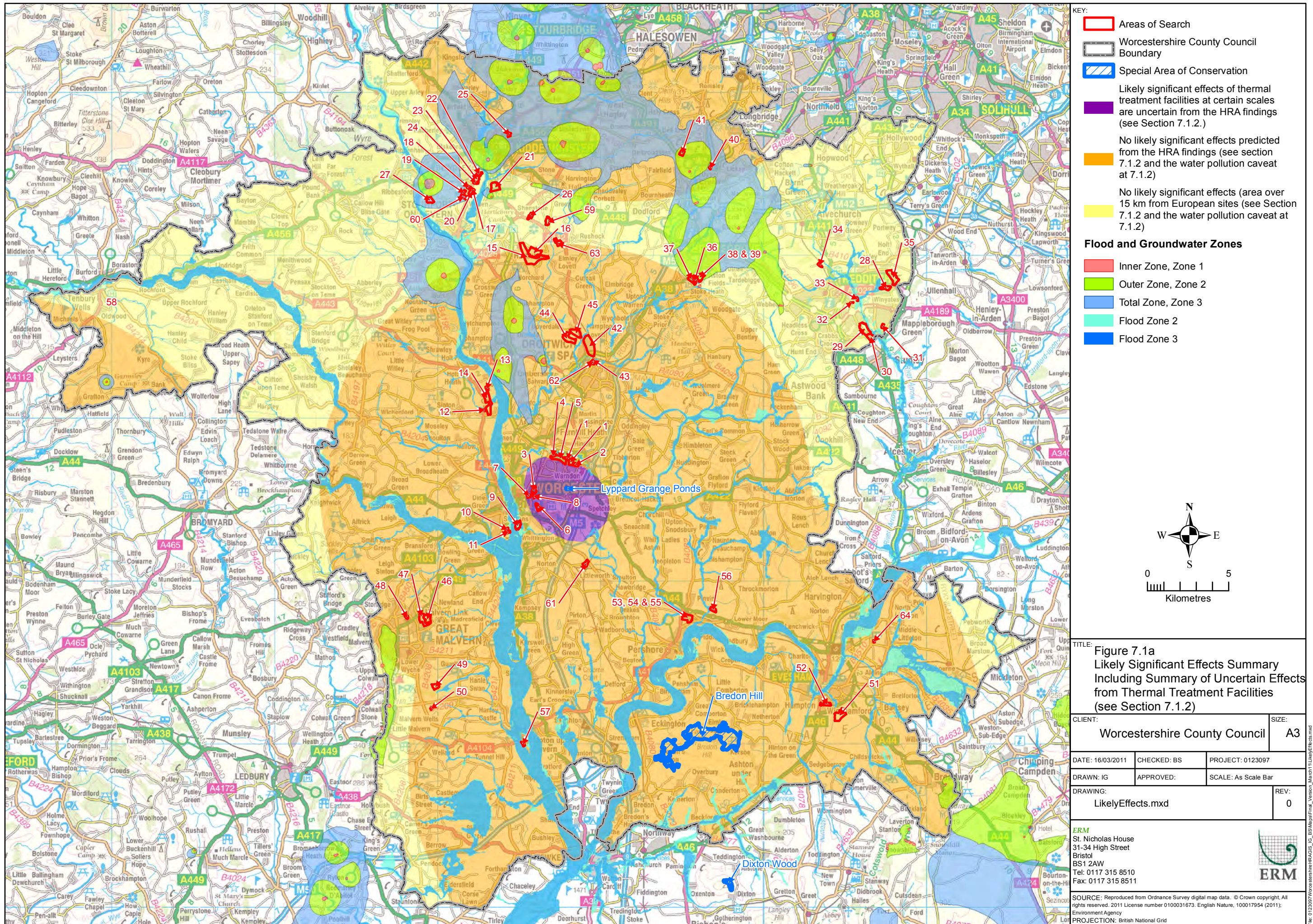
The effect is to remove policies **WD1**, **WD2**, **WD3** and **WD4** from the Worcestershire County Structure Plan and therefore the Development Plan.



Appendix 3: Habitats Regulations Assessment Figures

The Habitats Regulations Assessment concluded from the findings of the air pollution assessment that the effects on the Lyppard Grange ponds SAC from thermal treatment facilities at certain parameters are uncertain.

The following figures informed the designation of Worcester zone B in the geographic hierarchy. The locations of the numbered Areas of Search are set out in Annex A.



KEY:

- Areas of Search
- Worcestershire County Council Boundary
- Special Area of Conservation

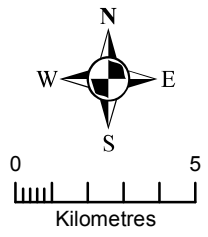
Likely significant effects of thermal treatment facilities at certain scales are uncertain from the HRA findings (see Section 7.1.2.)

No likely significant effects predicted from the HRA findings (see section 7.1.2 and the water pollution caveat at 7.1.2)

No likely significant effects (area over 15 km from European sites (see Section 7.1.2 and the water pollution caveat at 7.1.2)

Flood and Groundwater Zones

- Inner Zone, Zone 1
- Outer Zone, Zone 2
- Total Zone, Zone 3
- Flood Zone 2
- Flood Zone 3



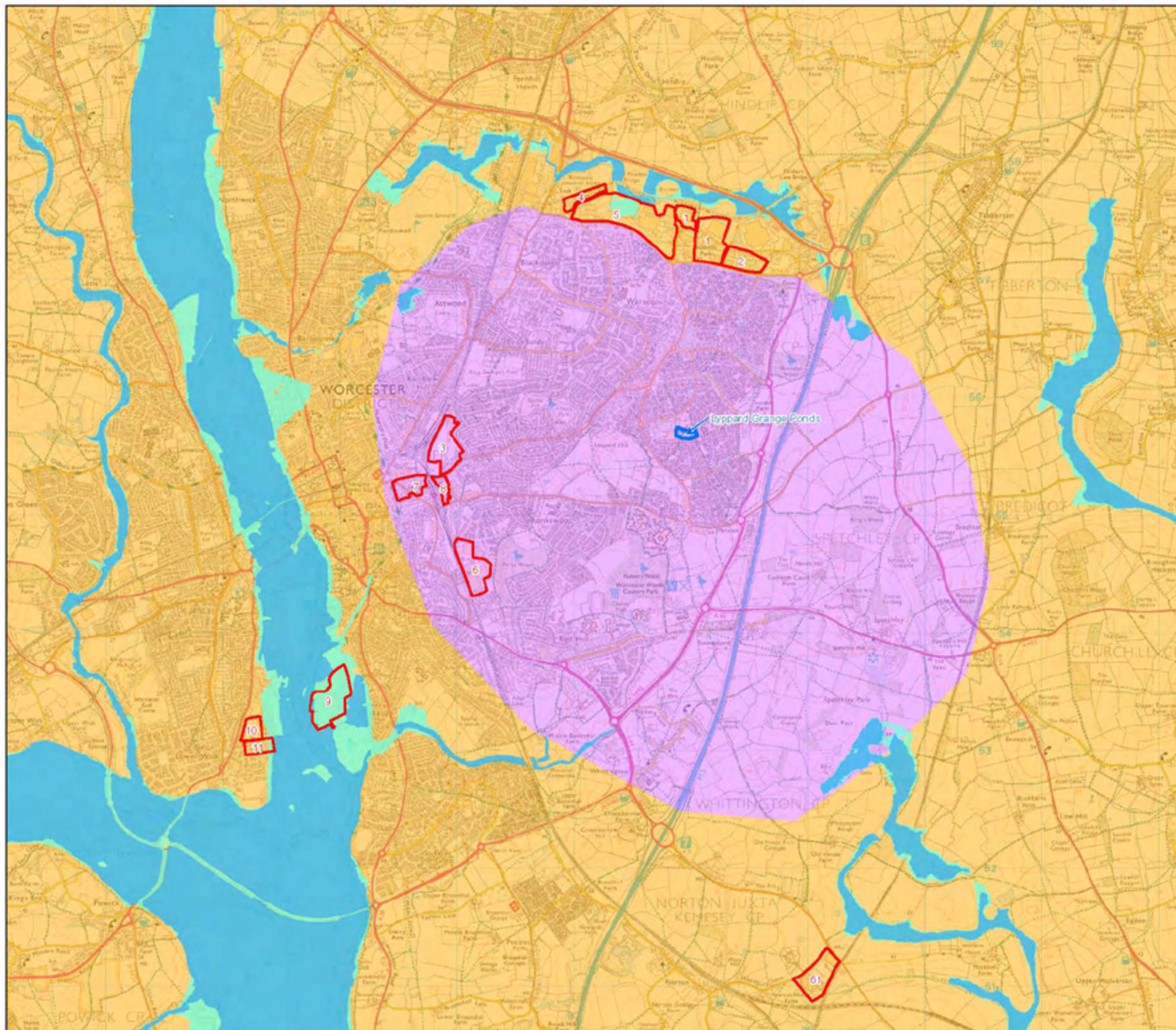
TITLE: Figure 7.1a
Likely Significant Effects Summary
Including Summary of Uncertain Effects
from Thermal Treatment Facilities
(see Section 7.1.2)

CLIENT: Worcestershire County Council		SIZE: A3
DATE: 16/03/2011	CHECKED: BS	PROJECT: 0123097
DRAWN: IG	APPROVED:	SCALE: As Scale Bar
DRAWING: LikelyEffects.mxd		REV: 0

ERM
St. Nicholas House
31-34 High Street
Bristol
BS1 2AW
Tel: 0117 315 8510
Fax: 0117 315 8511



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PROJECTION: British National Grid



KEY:

- Areas of Search
- Worcestershire County Council Boundary
- Special Area of Conservation

Likely significant effects of thermal treatment facilities at a scale of 250 ktpa and a stack of 80 m are uncertain from the HRA findings (see Column 1 of Table 7.1)

No likely significant effects predicted from the HRA findings (see Column 1 of Table 7.1 and the water pollution caveat at 7.1.2)

No likely significant effects (area over 15 km from European sites) (see section 7.1.2 of the HRA Report and the caveat at section 7.1.2 of the report)

Flood and Groundwater Zones

- Inner Zone, Zone 1
- Outer Zone, Zone 2
- Total Zone, Zone 3
- Flood Zone 2
- Flood Zone 3

0 1
Kilometres

TITLE:
Figure 7.1b
Location of Uncertain Likely Significant Effects from Thermal Treatment Facilities (see Column 1 of Table 7.1)

CLIENT: **Worcestershire County Council** SIZE: **A3**

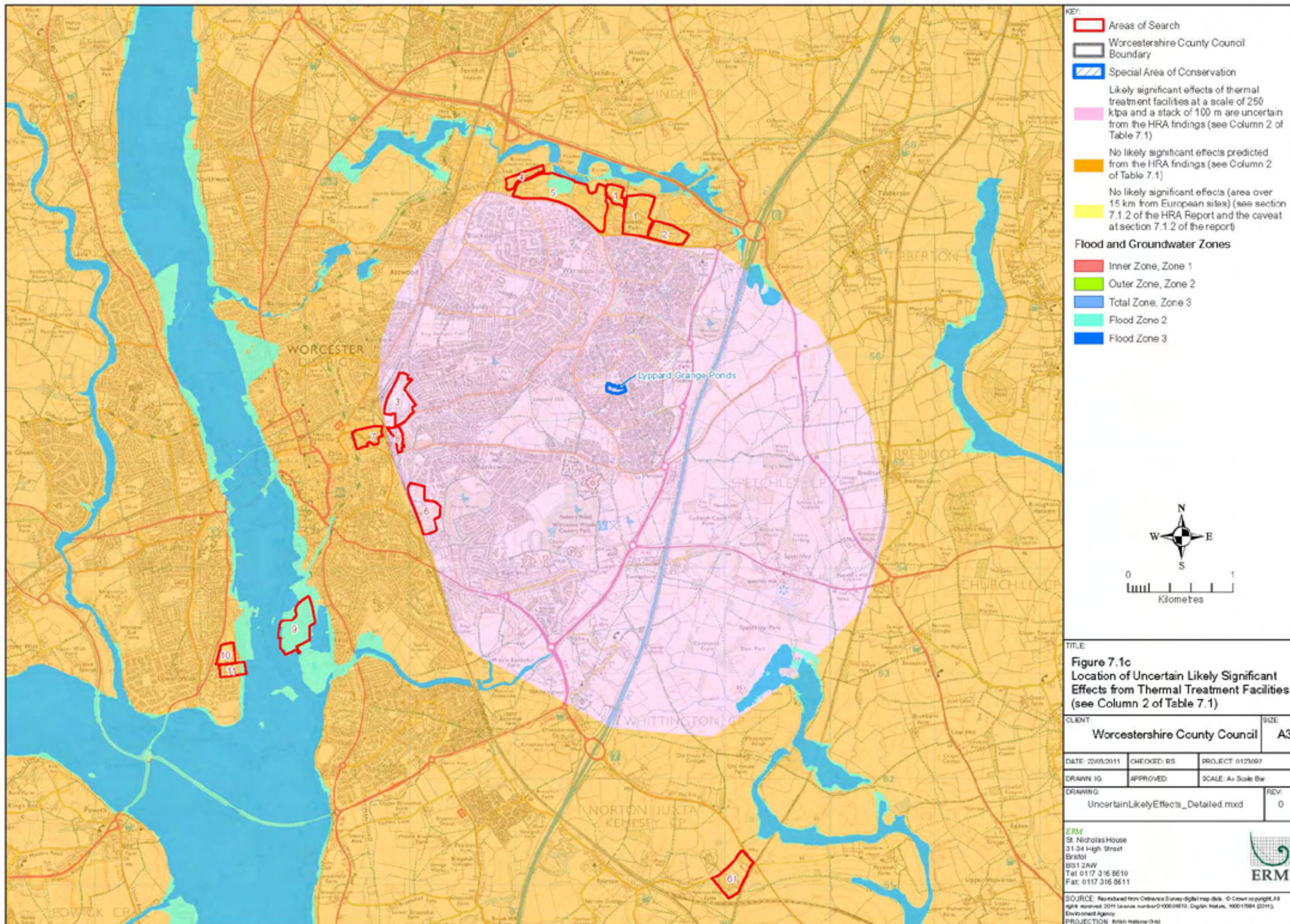
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DRAWN: IG APPROVED: SCALE: A3 Scale Bar

DRAWING: **LikelyEffects_Detailed.mxd** REV: **0**

ERM
St. Nicholas House
31-34 High Street
Bristol
BS1 2AW
Tel: 0117 316 6610
Fax: 0117 316 6611

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PROJECTION: British National Grid

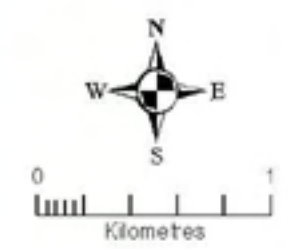


KEY:

- Areas of Search
- Worcestershire County Council Boundary
- Special Area of Conservation
- Likely significant effects of thermal treatment facilities at a scale of 250 ktpa and a stack of 100 m are uncertain from the HRA findings (see Column 2 of Table 7.1)
- No likely significant effects predicted from the HRA findings (see Column 2 of Table 7.1)
- No likely significant effects (area over 15 km from European sites) (see section 7.1.2 of the HRA Report and the caveat at section 7.1.2 of the report)

Flood and Groundwater Zones

- Inner Zone, Zone 1
- Outer Zone, Zone 2
- Total Zone, Zone 3
- Flood Zone 2
- Flood Zone 3



TITLE:
Figure 7.1c
Location of Uncertain Likely Significant Effects from Thermal Treatment Facilities
 (see Column 2 of Table 7.1)

CLIENT: Worcestershire County Council **SIZE:** A3

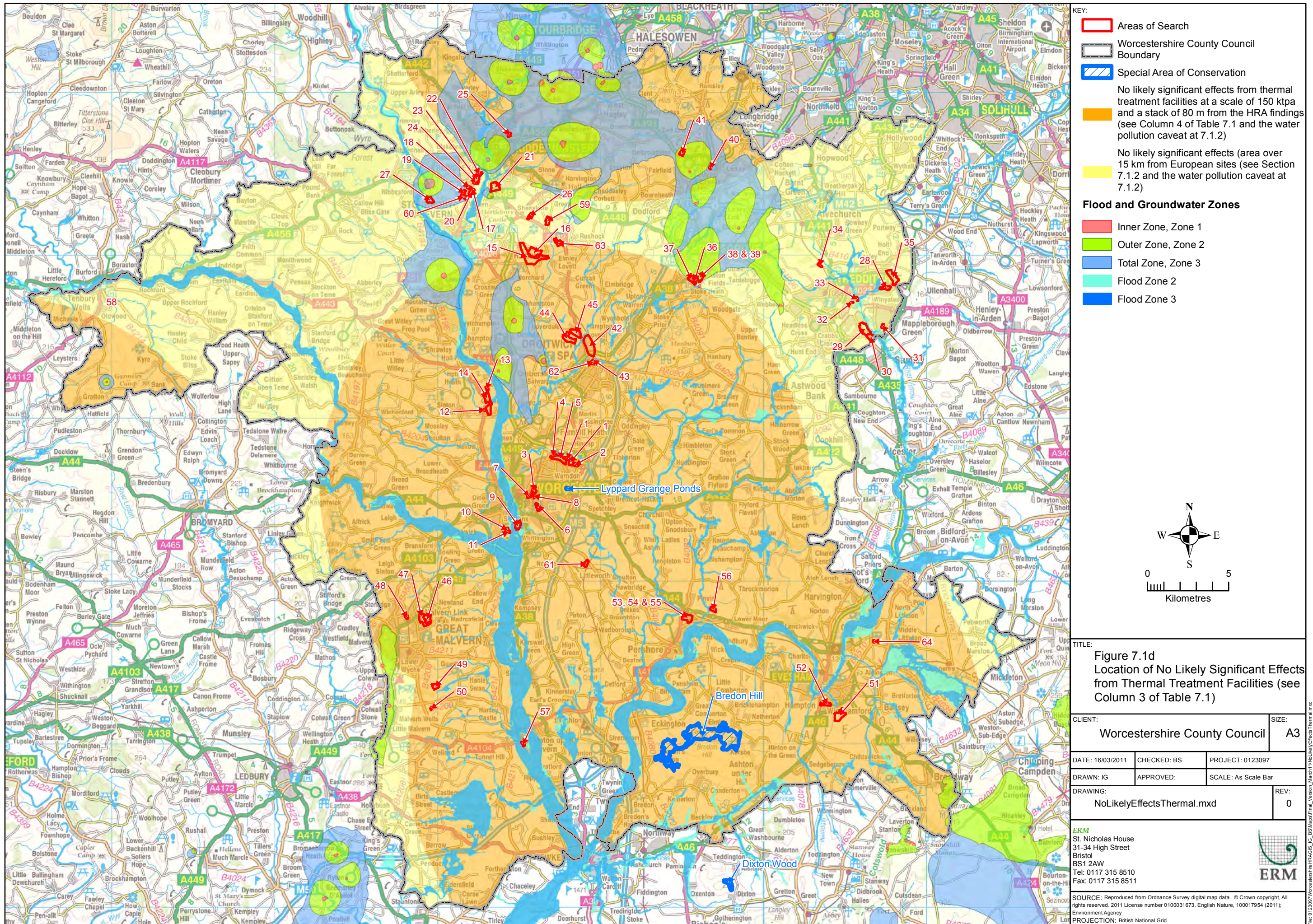
DATE: 22/03/2011 **CHECKED:** BS **PROJECT:** 0125097
DRAWN: IG **APPROVED:** **SCALE:** A3 Scale Bar

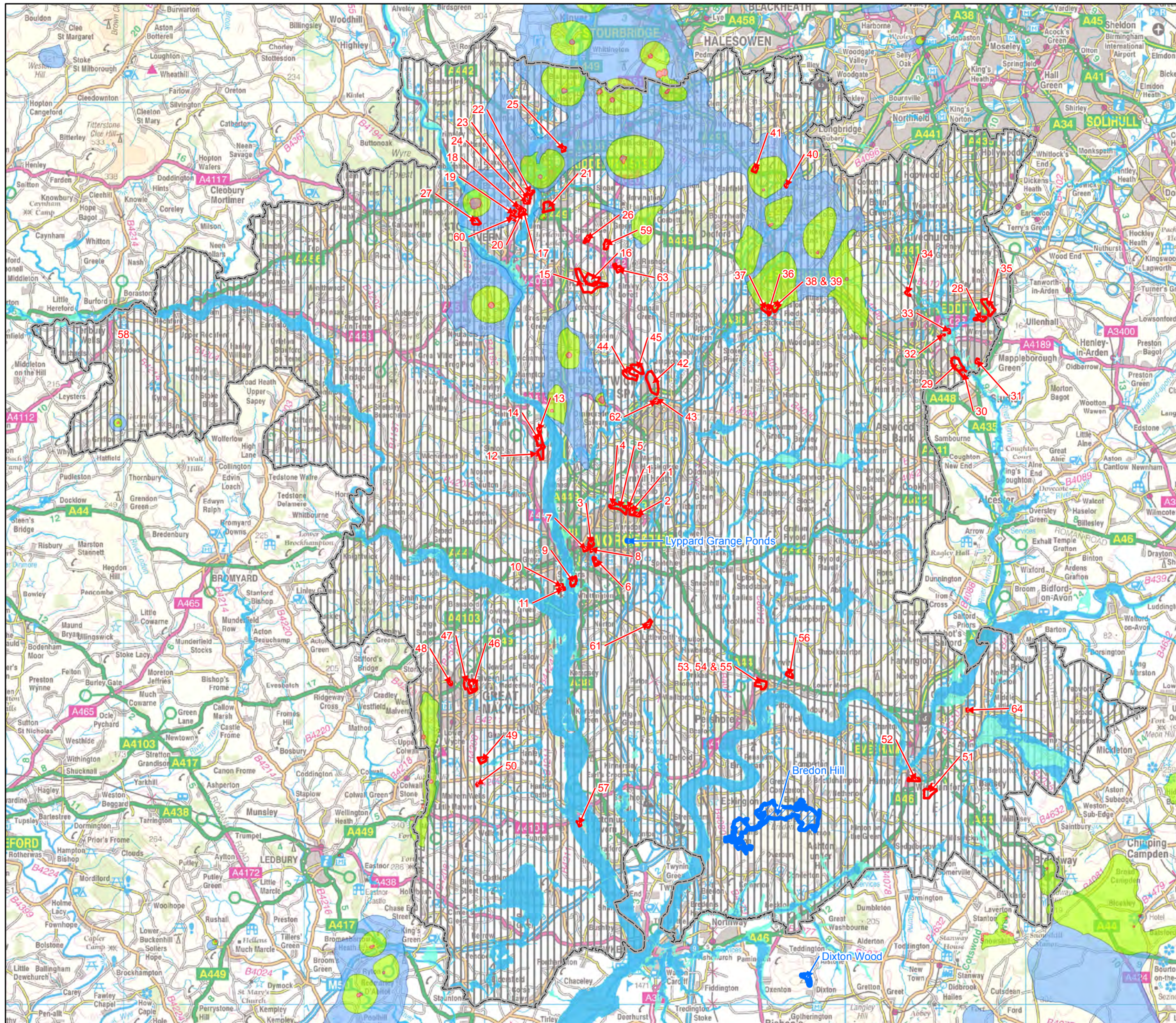
DRAWING: UncertainLikelyEffects_Detailed.mxd **REV:** 0

ERM
 St. Nicholas House
 31-34 High Street
 Bristol
 BS1 2AW
 Tel: 0117 316 6610
 Fax: 0117 316 9511



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PROJECTION: British National Grid





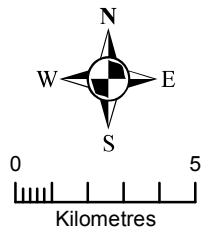
KEY:

- Areas of Search
- Worcestershire County Council Boundary
- Special Area of Conservation

Flood and Groundwater Zones

- Inner Zone, Zone 1
- Outer Zone, Zone 2
- Total Zone, Zone 3
- Flood Zone 2
- Flood Zone 3

No likely significant effects from any other waste facility types, excluding thermal treatment facilities (see Column 4 of Table 7.1 and the water pollution caveat at 7.1.2)



TITLE:
 Figure 7.1e
 Location of No Likely Significant Effects
 from Waste Facilities Excluding Thermal
 Treatment (see Column 4 of Table 7.1)

CLIENT: Worcestershire County Council		SIZE: A3
DATE: 16/03/2011	CHECKED: BS	PROJECT: 0123097
DRAWN: IG	APPROVED:	SCALE: As Scale Bar
DRAWING: NoLikelyEffects.mxd		REV: 0

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 St. Nicholas House
 31-34 High Street
 Bristol
 BS1 2AW
 Tel: 0117 315 8510
 Fax: 0117 315 8511

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 PROJECTION: British National Grid



Appendix 4: Capacity Gap

Treatment (tpa)

	2010/11	2015/16	2020/21	2025/6	2030/31	2035/36
Re-use and recycling capacity gap	411,500	421,500	482,000	521,500	577,000	623,000
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	186,000	195,000	229,000	238,500	259,500	267,000
Hazardous (inc Clinical and radioactive)	40,000	40,500	40,500	40,500	40,500	40,500
'Other recovery' capacity gap	240,500	253,500	268,000	283,500	300,500	318,500
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
Sorting and transfer capacity gap	0	0	0	0	0	0
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
Land requirements	25.5 ha	26 ha	29 ha	31 ha	34 ha	36 ha
Re-use and recycling	18 ha	18 ha	20 ha	22 ha	24 ha	26 ha
'Other recovery'	8 ha	8 ha	9 ha	9 ha	9.5 ha	10 ha
Sorting and transfer	0	0	0	0	0	0

Landfill and disposal (tpa)

Disposal and landfill capacity gap	0	0	0	0	713,500	2,985,500
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 0.5ha.



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 **Figure 19**), 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 links¹¹¹. 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.

¹¹¹ see background document "Areas of Search"

Figure 19. Identified areas of search

Geographic Hierarchy Level 1	
Kidderminster zone	19. Birchen Coppice Trading Estate
	59. Cursley Distribution Park
	60. Finepoint Business Park
	20. Foley Business Park
	22. Foley Industrial Estate
	23. Former British Sugar Site
	17. Gemini Business Park
	25. Greenhill Industrial Estate
	15. Hartlebury Trading Estate
	21. Hoo Farm Industrial Estate
	26. Ikon Trading Estate
	18. Oldington Trading Estate
	24. Vale Industrial Estate
Redditch zone	28. East Moons Moat
	32. Kingfisher Enterprise Park
	33. Lakeside Industrial Estate
	29. Park Farm Industrial Estate
	30. Pipers Road Park Farm
	35. Ravensbank Business Park
	31. Washford Industrial Estate
34. Weights Farm Business Park	
Worcester zone A	61. Area 7 Industrial Park, Norton
	12. Ball Mill Top Business Centre
	2. Berkeley Business Park
	4. Buckholt Business Centre
	9. Diglis Industrial Estate
	1. Shire Business Park
	13. Top Barn Business Centre
	10. Venture Business Park
5. Warndon Business Park	
Worcester zone B	11. Weir Lane Industrial Estate
	3. Great Western Business Park
	6. Newtown Road Industrial Estate
	8. Sherriff Street Industrial Estate
	7. Shrubhill Industrial Estate

Table continued on next page



Geographic Hierarchy Level 2	
Bromsgrove zone	39. Bromsgrove Technology Park
	37. Buntsford Gate Business Park
	36. Buntsford Hill Industrial Estate
	38. Silver Birches and Basepoint Business Parks
Droitwich Spa zone	42. Berry Hill Industrial Estate
	44. Stonebridge Cross Business Park
	45. Hampton Lovett Industrial Estate
	62. North Street Industrial Estate
	63. Rushock Industrial Estate
Geographic Hierarchy Level 3	
Evesham zone	64. Bennetts Hill Business Park
	52. Four Pools Industrial Estate
	51. Vale Business Park
Malvern zone	49. Blackmore Business and Technology Park
	46. Enigma Business Park
	48. Link Business Centre
	50. Merebrook Industrial Estate
	47. Spring Lane Industrial Estate
Pershore zone	53. Keytec7 Business Park
	55. Pershore Trading Estate
	54. Racecourse Road Trading Estate
Geographic Hierarchy Level 4	
Bewdley zone	• (No areas identified)
Tenbury Wells zone	58. Tenbury Business Park
Upton upon Severn zone	65. Upton Business Centre, Welland Road



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 PPS25, 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)¹¹² 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. Figure 20 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.

¹¹² Flood Risk Assessment must be carried out in accordance with Planning Policy Statement 25 "Development and Flood Risk" and its practice guide, or subsequent national policy.

Figure 20: Flood risk vulnerability and compatibility for waste uses (adapted from PPS25 table D2 and D3)

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 ✓ development is appropriate
 ex the Exceptions test is required



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 m².

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 m² must include a flood risk assessment in accordance with the requirements of PPS25, 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)¹¹³, 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.

¹¹³ 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.

If you require this document in alternative formats
please contact: Nicholas Dean; Tel: 01905 766374.

Planning, Economy & Performance Directorate
Worcestershire County Council
County Hall
Spetchley Road
Worcester WR5 2NP

www.worcestershire.gov.uk