Sustainability Appraisal of the Worcestershire Waste Core Strategy Submission Document

Final Report

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Worcestershire County Council

Sustainability Appraisal of the Worcestershire Waste Core Strategy Submission Document

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For and on behalf of Environmental Resources Management	
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Position:	Partner
Date:	17 March 2011

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This report presents a Sustainability Appraisal (SA) of the Submission version of the Worcestershire Waste Core Strategy (WCS) of February 2011. This is the fifth stage in an iterative SA process. The key findings from the SA of the Submission WCS are as follows.

Support is given to the waste hierarchy across much of the WCS, and a strong emphasis is placed on mitigating and adapting to climate change and on energy efficiency and generation. This will reduce the emission of greenhouse gases from waste management activities. However, stronger encouragement could be given to prioritise recycling and composting over residual waste treatment, otherwise continued improvement beyond the targets may fail to happen. The adoption of a recycling target for C&I waste in addition to a recovery target would also provide a more sustainable outcome.

The spatial strategy will help to limit waste transport distances by locating facilities close to the main centres of population. However, the exact effects on waste transport are uncertain, because it is not known which of the large number of areas of search will be developed for waste management purposes, nor the number, type or capacity of facility which will be developed, all of which have an effect on the amount of waste transport required. Policies should require planning applications to demonstrate how a facility will be located to minimise waste miles.

The WCS emphasises the protection and enhancement of natural, built and historic assets although there is potential in the identified areas of search for adverse effects on biodiversity, air quality, historic assets, residential amenity, flood risk and open space, which should be a focus of assessment and mitigation at planning application stage.

The WCS is likely to give support to other sustainability objectives, particularly ensuring the efficient use of land, promotion of growth and innovation in the waste sector, and support for community responsibility for waste although not necessarily in Herefordshire. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.

The following recommendations are made for mitigating the adverse effects of the Submission WCS, or for maximising opportunities for benefits.

Table 1 Mitigation Recommendations

No.	Recommendation
1	Stronger incentives should be given to prioritise recycling and composting over residual waste treatment, for example by requiring applicants for recovery facilities to demonstrate that reuse and recycling have been "maximised" rather than "optimised" in policy WCS2 and by adopting a recycling target for C&I waste.
2	The WCS should give explicit support to the recycling of construction and demolition waste onsite in development projects in policy WCS14.
3	Policies should require planning applications to demonstrate how a facility will be located to minimise waste miles, for example in policy WCS6.
4	The supporting text to policy WCS9 should include reference to the role of waste transport in increasing energy efficiency and reducing greenhouse gas emissions.
5	Applications for waste development should clearly show how impacts on flood risk, air quality, biodiversity, historic assets, residential amenity and open space will be avoided or enhancements delivered, for those sites in areas of search with constraints.
6	The WCS should promote flood risk reduction and water quality enhancement where practicable (WCS8).
7	WCS10 should require the avoidance or minimisation of effects on landscape character and the quality of the built environment, and enhancement where practicable.

1 SUMMARY AND OUTCOMES

1.1 NON-TECHNICAL SUMMARY

1.1.1 Overview

This report sets out details of the process and outcomes of a Sustainability Appraisal (SA) of the Worcestershire County Council Waste Core Strategy (WCS) Submission Document. The WCS will provide the framework for how all the waste streams in the county will be managed between now and 2027. Earlier work on the WCS, which was undertaken between 2005 and 2007, had been halted but WCC has recommenced the process and is proceeding towards a submission of the WCS to the Secretary of State. SA is an integral part of that process.

Under the Planning and Compulsory Purchase Act 2004 Worcestershire County Council is required to undertake an SA of Local Development Documents including the WCS. The SA must also satisfy the requirements for a Strategic Environmental Assessment (SEA) arising from the authority's obligations under the European Directive on SEA and the implementing Regulations in England and Wales.

The overall purpose of the SA is to evaluate the likely implications for sustainable development in Worcestershire of the proposed WCS and reasonable alternatives to it. The aim is to inform the plan-making process to enable the WCS to take account of the ways in which waste management might affect the economy, environment and communities in Worcestershire.

In undertaking the SA, the WCS has been tested against a series of objectives that reflect relevant sustainable development policy objectives. The WCS and a number of alternatives to policy approaches contained within it were tested to determine the potential to give rise to significant effects, in order to enable the amendment and improvement of the WCS in the light of knowledge of the potential impacts on relevant sustainable development policy objectives. As part of the iterative process of development of the WCS, recommendations for amendments have been made by the SA at various stages and incorporated into the WCS as it has developed.

The findings and recommendations reached through the SA are set out in this report, and the method by which the appraisals were undertaken is described.

1.1.2 The WCS and its Context

The overall purpose of the WCS is to provide a policy framework by which Worcestershire County Council will carry out its statutory duty to provide a land use plan for the management of waste. In doing this, the following strategic objectives have been identified.

Box 1.1 Strategic Objectives of the WCS

Objectives Specified in Worcestershire County Council's WCS:	
WO1	To base decisions on the need to reduce greenhouse gas emissions and the need to mitigate 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
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
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 in accordance with the Spatial Strategy

The following issues are covered by the detailed policies in the WCS in order to achieve the objectives set out above:

Box 1.2 Scope of WCS Policies

Summary of policies:

Direction of facilities to the appropriate level of the geographic hierarchy and requirements for recovery facilities

Restriction of development of new landfill sites together with specific landfill gas management and restoration requirements

Direction of facilities to the appropriate land type

Conditions limiting the duration and impact of new developments connected to existing mineral or landfill sites or other temporary facilities

Ensuring no adverse effects on transport and other infrastructure

Ensuring proposals for development protect and enhance biodiversity, geodiversity and historic assets

Taking account of flood risk and impacts on water quality and flow

Promoting sustainable construction, resource-efficient development, land stability and landscaping

Taking account of landscapes, green belt and the character of the built environment

Ensuring no adverse effects on amenity and health

Ensuring proposals contribute to social and economic sustainability

Safeguarding waste management sites from other developments to ensure waste facilities are not compromised by neighbouring developments

Promoting recycling and recovery of waste from new developments

The WCS sits within a framework of other policy documents that together influence both the content of the plan and its implementation. The most important of these are:

- European Union legislation, most importantly the *Landfill Directive*, which sets binding targets for reduction in the amount of biodegradable municipal waste sent to landfill, and the *Waste Framework Directive* which implements the waste hierarchy and sets requirements for recycling and recovery;

- National legislation which is binding on WCC, principally the *Waste and Emissions Trading Act 2003* which implements the *Landfill Directive* in the UK and introduces a scheme of trading in landfill allowances;

- National waste policy which sets the framework of overarching policy objectives for Waste Local Development Documents (LDDs), including objectives such as promoting waste minimisation and implementing the waste hierarchy;

- National planning guidance which sets out details of the policy approaches which should be adopted by local and regional authorities;

- An updated *Joint Municipal Waste Management Strategy* for Herefordshire and Worcestershire, which sets out a 30-year plan for the management of municipal waste, which the WCS seeks to enable by providing the necessary planning framework;

- Worcestershire statutory plans, for example the Local Development Frameworks, which set the policy context for the content and implementation of the WCS particularly policies on the location and control of development; and

- The Worcestershire Sustainable Community Strategy and non-statutory strategies and plans, which guide the policy approach of the WCS on specific issues, but which are not binding.

A list of relevant policies, plans and programmes and a review and summary of their content is set out in *Annex A*.

1.1.3 The Current State of Sustainable Development in Worcestershire

The main issues for sustainable development in Worcestershire and which are relevant to the WCS are summarised in the following table.

Table 1.1 Key Environmental, Social and Economic Issues for Worcestershire

Issue	Key findings
Waste	It is estimated that in 2010, 1,591,000 tonnes of waste were produced in Worcestershire. Of this, 405,000 tonnes (25%) was municipal waste, 598,500 tonnes (38%) was commercial and industrial waste, and 510,500 tonnes (32%) was construction and demolition waste. 45% of municipal waste was recycled in 2009/10, compared to 40% for the whole of England. 45% of municipal waste in Worcestershire was landfilled, compared to 47% in England as a whole. In 2008, arisings of hazardous waste were approximately 46,500 tonnes per annum. Worcestershire produced 321,000 tonnes of industrial waste in 2002/03 of which 38% was recycled or re-used, and 307,000 tonnes of commercial waste of which 31% was recycled or re-used.
Climate change	In 2008, Worcestershire's CO_2 emissions were 4799Kt. These comprised: • industry and commerce, 32%; • domestic sector, 30%; • transport sector, 37%. Between 2005 and 2008, CO_2 emissions from each of these sectors declined, although their relative proportions stayed similar.
Flooding	Approximately 10% of the county is at risk of flooding, principally from the rivers Severn, Teme, Avon and Stour.
Transport	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. There are currently no major rail freight facilities located within Worcestershire.
Growth with prosperity for all	The employment rate for working age people in Worcestershire is 78%, which is ahead of the West Midlands (71%) and England (74%), although at lower tier level the rates vary considerably.
Participation by all	In 2008/09 all of the district councils collected recyclable materials from the kerbside of more than 93% of their households, with Redditch and Worcester providing 96% coverage and Malvern Hills and Wychavon 100%.
Technology, innovations and inward investment	The business base of Worcestershire is concentrated towards public administration, education and health with the sector accounting for 26.3% of the county's employment, which is closely followed by distribution, hotels and restaurants at 25.2% of the county's employment. Employment in banking, finance and insurance is also high in the county at 17.1%, with 16.7% employed in manufacturing.
Energy generation and use	In 2008, Worcestershire consumed 15,541GWh of energy from all sources. This is slightly less than in 2007 (16254GWh) and 2006 (16,516GWh). Current renewable energy in the county comes from landfill gas, wood fuel, biofuel, ground source heat, and solar systems. Potential additional sources include solar, biogas, energy crops, wind power and hydro-electricity.
Natural resources (air, water and soil)	To date, 9 Air Quality Management Areas (AQMAs) have been declared in Worcestershire, due to poor air quality, with several of these having recently been declared. The AQMAs are associated with busy arterial and main roads. 10 of the county's watercourses are rated as 'Good'; 56 as 'Moderate'; 11 as 'Poor'; and 5 as 'Bad'. The quality of Worcestershire's water courses do not compare very favourably with watercourses in the wider area. The majority of soils are Grade 3 in the agricultural land classification but significant areas of Grade 1 and 2 also occur.
Access to services	Approximately 42% of areas within Worcestershire are ranked within the top 20% most deprived areas nationally in terms of their distance from a range of key local services. 47 areas (approx. 13%) are within the top 5%, and 7 areas (approx. 2%) are within the top 1%.

Issue	Key findings
Landscape	The Worcestershire Landscape Character Assessment identifies and describes 23 different landscape types in the county. There are also numerous historic townscapes – including 147 conservation areas. The county contains parts of two areas designated as Areas of Outstanding Natural Beauty.
Biodiversity, flora and fauna	Worcestershire contains two Special Areas of Conservation, 11 National Nature Reserves, 25 Local Nature Reserves and 5,848ha of ancient semi-natural woodland. There are 111 Sites of Special Scientific Interest (SSSIs) in Worcestershire, of which 93.3 % were classed as 'favourable' or 'recovering' in April 2010. There are approximately 460 Special Wildlife Sites in Worcestershire, of which 29.3% are under appropriate management, and approximately 90 Regionally Important Geological/ Geomorphological Sites, of which 40.2% are under appropriate management.
Health	Male life expectancy in Worcestershire at birth is approximately 1 year below the West Midlands and UK averages, but female life expectancy is approximately 1 year above the regional and UK averages.
Provision of housing	13,742 households in Worcestershire do not have central heating, while 632 households in Worcestershire do not have their own bath/shower and toilet.
Population 1 (learning and skills)	Across Worcestershire, 28% of the population aged between 19 andretirement age was qualified to Level 4 or higher in 2008. This is below the average for England (31%), but higher than for the West Midlands (26%). Percentages are highest in Worcester (37%) and Malvern Hills (35%) and lowest in Wyre Forest (22%) and Redditch (23%).
Cultural heritage, built design and archaeology	There are nearly 6,000 listed buildings in the county, together with 485 scheduled ancient monuments, 147 conservation areas, and over 22,000 entries on the County Historic Environment Record. There are at least 47 heritage assets classified as being 'at risk' in Worcestershire, comprising 4 Conservation Areas; 28 Scheduled Monuments; 2 Registered Parks & Gardens; and 13 Buildings listed at Grades I and II*.
Population 2 (anti social behaviour, crime, litter and graffiti)	Between April 2009 and March 2010, 33,790 crimes were recorded in Worcestershire. Urban areas saw the highest crime rates, with Worcester City having the highest (8 offences per 1,000 people).
Material assets (including land use & local amenity)	Construction aggregates make up most of the mineral output of the county. Worcestershire provides about 1 million tonnes or 7% of the annual apportionment of aggregates for the West Midlands region. Sand, gravel, clay, moulding sand and limestone are the materials being commercially exploited in the foreseeable future. The enjoyment of the countryside is a key pull factor for many visitors to the county. About a quarter of the county's land is designated as green belt.

1.1.4 Areas Likely to be Significantly Affected by the WCS

The appraisal has considered the areas likely to be significantly affected by implementation of the WCS, in order to identify the sustainability characteristics of those areas. In reality, the effects of implementation of the plan can be considered on two levels.

First, the overall effects will be spread throughout the county; because waste arises almost everywhere, waste transport will occur throughout the county and some of the impacts of recycling, recovery and disposal activities will be

widespread and borne by all. In this case, the relevant sustainability characteristics are those set out in the baseline above and in *Annex A*.

On another level, some of the effects of the management of waste will occur in the vicinity of waste management sites. Areas of search within which development will be regarded as acceptable in principle have been identified, and the 57 areas of search are listed in the Submission WCS. An assessment has been made of the environmental and sustainability conditions in each of the areas of search. The key characteristics of those areas are summarised in *Annex F*. More detailed information on these characteristics is provided in a background document to the WCS, *Identifying Areas of Search*(1).

1.1.5 Existing Characteristics and Problems Relevant to the WCS

Worcestershire has a number of characteristics and 'problems' (2) which are relevant to the WCS. These are summarised below and described in detail in the baseline in *Annex B*.

Worcestershire recycles a higher than average amount of municipal waste and also landfills slightly less than average, although 45% of municipal solid waste was still landfilled in 2009/10. Commercial/industrial and construction/demolition wastes are each larger waste streams than the municipal solid waste stream although data on how these waste streams are managed is poor.

Although there is relatively little traffic congestion on the county's road network, there are hotspots in and around the main towns and particularly around Worcester.

Air quality is generally good throughout the county although there are some areas of poor air quality, largely due to transport emissions, and the number of AQMAs in Worcestershire has increased recently.

Construction aggregates make up most of the mineral output of the county. Worcestershire provides about 1 million tonnes or 7% of the annual apportionment of aggregates for the West Midlands region.

About 10% of the land area of the county is subject to flood risk, particularly from the rivers Severn, Teme, Avon and Stour.

The County contains parts of two areas designated as Areas of Outstanding Natural Beauty. There are also numerous historic townscapes including 147 conservation areas, and about a quarter of the county is designated as green belt. There are at least 47 heritage assets classified as being 'at risk' in Worcestershire.

(1) *Worcestershire Waste Core Strategy Background Document: Identifying Areas of Search*, Worcestershire County Council, January 2011
(2) The SEA Directive requires the report to identify relevant problems.

Worcestershire contains or is near to some areas which are designated as internationally important for biodiversity, including Special Protection Areas and Special Areas of Conservation designated pursuant to Directives 79/409/EEC [1] and 92/43/EEC [2]. The sites are all subject to pressures which are described in more detail later in the report.

1.1.6 Taking Account of Relevant Sustainable Development Objectives

A long list of international, national, regional and county level policy documents was considered to assess each one's relevance to sustainable development, and particularly in the context of the scope of the WCS. The list of the documents considered and those reviewed is given in *Annex A*.

The review identified the key sustainable development policy objectives contained in each document, and *Table 2.1* and *Annex A* set out the environmental, economic and social objectives which were identified. These objectives set the policy context for the WCS and with which it must conform. They were used in undertaking the SA as a framework against which to assess the likely environmental and sustainability effects of the Submission WCS. The review also identified any relevant targets which have been set.

The sustainability baseline data was also analysed to identify the key sustainability issues in the county which are relevant to the WCS. The list of sustainable development objectives was then reviewed to ensure that all key issues would be covered by the appraisal framework and therefore that the WCS would be appraised for its effect on these issues.

1.1.7 The Likely Significant Effects of the WCS

The various elements of the Submission WCS and reasonable alternatives were assessed against the appraisal framework, and their likely sustainability effects identified and described. The findings and conclusions of these individual elements were then drawn together to make an assessment of the overall effects of the WCS as a whole, in light of the appraisal of the vision and strategic objectives for the WCS (see *Section 5*), the appraisal of the policies (see *Section 6*) and the appraisal of the preferred options and reasonable alternatives (see *Section 7*). *Table 1.2* sets out the results of this synthesis, and draws conclusions about the likely significant overall effects of the WCS taken as a whole.

(1) Directive 79/409/EEC on the conservation of wild birds
(2) Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

Table 1.2 Summary of Likely Significant Effects of WCS

SA objectives	Assessment	Comments
1. Manage waste in accordance with the waste hierarchy	+	Support is given to the waste hierarchy across the vision, objectives and policies of the WCS, prioritising recovery of resources over landfill. However, stronger encouragement could be given to prioritise recycling and composting over other forms of recovery, otherwise continued improvement beyond the recycling targets may fail to happen. The adoption of a recycling target for C&I waste, in addition to a recovery target, would also provide a more sustainable outcome.
2. Reduce causes of and adapt to the impacts of climate change.	+/?	The WCS will promote the reduction of greenhouse gas emissions through the facilitation of new developments to divert waste from landfill and the recovery of resources including energy and recovery of landfill gases. Emissions from waste transport may also be reduced by locating facilities near to the main settlements thereby reducing waste transport however this depends on the number, types and capacities of sites which are unknown. Climate change adaptation is promoted by the WCS.
3. Avoid flood risk	+/?	Development management policy is likely to ensure flood risk is not increased although some of the identified areas of search have increased flood risk associated with them and a more detailed Flood Risk Assessment of developments in these areas will be required at planning application stage.
4. Reduce the need to travel and promote sustainable travel	?	By increasing recycling and recovery, the policies may increase the need for waste transport by requiring multiple handling of waste streams. However, the spatial strategy aims to locate facilities near to the larger centres of population which will help to limit waste transport distances although there will be longer transport distances for municipal waste from Herefordshire than if some facilities were located in Herefordshire. It is not possible to estimate the amount of waste transport required to implement the WCS because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. Alternative transport modes are encouraged, but the WCS should require planning applications to demonstrate how a facility will be located to minimise waste miles.
5. Develop a knowledge-driven economy	+	The WCS supports the development of waste management facilities, encouraging the growth and development of the waste sector in Worcestershire and increasing its economic contribution.
6. Encourage participation and responsibility	+/-	The facilitation of the development of new recycling and recovery facilities in Worcestershire will indirectly support increased responsibility by its communities for the waste they produce, although not necessarily for Herefordshire's communities. The WCS explicitly requires community participation in waste developments.
7. Promote new	+	By facilitating the development of sites to divert waste from landfill and through support for climate change

SA objectives	Assessment	Comments
technologies		mitigation and adaptation and efficient use of energy, water and resources, the WCS will help to support the development of new, resource-efficient technologies for managing waste.
8. Promote energy efficiency and renewable/low carbon generation	+	The WCS gives a strong emphasis on increasing energy efficiency by promoting energy recovery and renewable generation from landfill gas, and requiring waste developments to be energy efficient. The impact of the WCS on the use of energy for waste transport is unknown, although this is likely to be significantly smaller than the energy impact of the facilities themselves.
9. Protect and enhance water, soil and air.	+	Policy requires the avoidance of adverse impacts on air, water and soil. Promotion of water efficiency, restricting greenfield development and using landfill to restore derelict land will also support the objective.
10. Improve quality and access to services	+	Requiring developers to provide facilities for recycling and composting in new developments will help to improve access to recycling services.
11. Safeguard and strengthen landscape quality	+	The WCS explicitly requires the protection and enhancement of landscapes therefore significant adverse effects are unlikely.
12. Conserve and enhance biodiversity and geodiversity	+/-	The WCS explicitly requires the protection and enhancement of biodiversity and geodiversity. However, five of the identified areas of search are very close to Special Wildlife Sites and therefore adverse impacts are likely at these sites; assessment and mitigation of effects should be a particular requirement for planning applications at these sites. Effects on European nature conservation sites are still to be assessed through the Habitats Regulations Assessment.
13. Improve health and well being	0	Health impacts from the WCS are unlikely if facilities are operated in accordance with good practice standards.
14. Provide decent affordable housing for all	+/?	The zones in the geographic hierarchy are close to major settlements, and some of the identified areas of search are close to residential areas. Significant effects on the quality of local residential environments are therefore possible. However, policy requires developments to have no adverse effects on local amenity, therefore significant effects should be avoided. The significance and mitigation of possible effects on residential amenity should be taken into particular account in planning applications at these sites.
15. Raise skills levels	+	By facilitating the development of new waste management facilities and technologies, the policy may help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.
16. Conserve and enhance the historic and built environment	+/?	The WCS requires developments to contribute positively to built and historic assets, and promotes good design and resource-efficient developments. The methodology to identify areas of search takes into account designations of historical value and therefore significant effects are unlikely in the main. However, four of the areas of search are near to designated assets, including one which is within a conservation area. Therefore adverse effects are possible

SA objectives	Assessment	Comments
		at these sites and assessment and mitigation of effects should be a particular requirement for planning applications at these sites.
17. Reduce crime and antisocial behaviour	+	Educating communities about sustainable waste management may help to reduce littering and fly tipping although this will not be significant for crime levels in Worcestershire overall.
18. Ensure efficient use of land	+/-	The WCS requires developments to be in existing buildings or on previously developed sites, which will help to maximise reuse and avoid impacts on open spaces. It also protects the green belt from inappropriate development. However, some adverse effects are possible on greenfield/agricultural/green belt land although the effect for the county as a whole is unlikely to be significant. The WCS is also likely to help increase the supply of secondary aggregates and reduce demand for virgin mineral resources although there are opportunities within the WCS to strengthen this. Landfill to restore previously developed or derelict land is promoted, and to provide open space for communities.

1.1.8 Selecting Alternatives

In developing the Submission WCS, several issues have been considered where there are a number of options available for approaches to be taken. Some of the options have been appraised at earlier stages of the WCS process, while one set of options is newly introduced in the Submission WCS, in relation to the approach to hazardous waste.

The SA has appraised the preferred option for hazardous waste and reasonable alternatives to it:

- One option represents the previous approach of the WCS to hazardous waste (ie not to identify any capacity gap or a need for facilities to be developed);
- A second option represents the approach of the Submission WCS to hazardous waste (ie to identify a capacity gap for recycling and recovery and promote the development of facilities to fill the gap);
- The third option is to reflect views made in representations on the First Draft Submission WCS (ie to provide for landfill of hazardous waste).

For other issues, the preferred option and reasonable alternatives have been appraised and reported on in earlier published iterations of the SA Report. Sections 7.2 to **Error! Reference source not found.** explain in detail the evolution of options/alternatives, how the SA has appraised them and where the published results of that appraisal can be found.

The preferred option of allowing for facilities to meet the capacity gap for recycling and recovery provides the most sustainability benefits of the three options considered. Additionally providing for hazardous landfill may undermine the waste hierarchy while providing limited waste transport benefits.

1.1.9 Mitigation of Effects

The following recommendations are made for amendments to the WCS in order to mitigate the predicted adverse effects or to maximise opportunities to capture benefits.

Table 1.3 Mitigation Recommendations

No.	Recommendation
1	Stronger incentives should be given to prioritise recycling and composting over residual waste treatment, for example by requiring applicants for recovery facilities to demonstrate that reuse and recycling have been "maximised" rather than "optimised" in policy WCS2 and by adopting a recycling target for C&I waste.
2	The WCS should give explicit support to the recycling of construction and demolition waste onsite in development projects in policy WCS14.
3	Policies should require planning applications to demonstrate how a facility will be located to minimise the distance that waste is transported, for example in policy WCS6.
4	The supporting text to policy WCS9 should include reference to the role of waste transport in increasing energy efficiency and reducing greenhouse gas emissions.
5	Applications for waste development should clearly show how impacts on flood risk, air quality, biodiversity, historic assets, residential amenity and open space will be avoided or enhancements delivered, for those sites in areas of search with constraints.
6	The WCS should promote flood risk reduction and water quality enhancement where practicable (WCS8)
7	WCS10 should require the avoidance or minimisation of effects on landscape character and the quality of the built environment, and enhancement where practicable.

1.1.10 Monitoring Recommendations

The SA makes recommendations for monitoring, with suggested indicators to enable WCC to monitor the likely significant impacts of the WCS. This also includes a number of indicators to allow WCC to identify unforeseen adverse effects in order to be able to take appropriate remedial action.

1.2 STATEMENT ON THE DIFFERENCE THE PROCESS HAS MADE TO DATE

As an iterative process, the SA has made recommendations for improvements to the WCS at several stages during its development. These have influenced the emerging WCS as summarised below.

1.2.1 *Influence at Refreshed Issues and Options Stage*

An appraisal of the Refreshed Issues and Options document(1) was undertaken previously. A number of recommendations were made in an Initial SA Report(2) produced in April 2009 which indicated how the sustainability of the WCS could be increased in carrying forward its development from the Refreshed Issues and Options stage. A number of these recommendations have been followed by WCC, and the subsequent Emerging Preferred Options document incorporated the following as a result:

- The Spatial Portrait included references to climate change mitigation and adaptation, quality of landscape, habitats and species of nature conservation importance and historic assets.

- The Vision emphasised that most waste will be recycled and that waste management activities will be resource-efficient.

- The Emerging Preferred Option document referred to the following strategies as being relevant to waste development:
  - Catchment Management Plans,
  - the Local Transport Plan,
  - the Air Quality Strategy for Herefordshire and Worcestershire,
  - AONB Management Plans and
  - the Worcestershire Biodiversity Action Plans.

- Draft policy in the Emerging Preferred Options promotes energy efficiency.

1.2.2 *Influence at Emerging Preferred Options Stage*

The SA of the Emerging Preferred Options document(3) made another series of recommendations, and the following were reflected in the First Draft Submission WCS as a result:

- The WCS vision emphasises the importance of reuse of waste materials.

- The WCS vision promotes climate change adaptation.

- The WCS vision promotes good design.

(1) Waste Core Strategy for Worcestershire Refreshed Issues and Options Consultation – 'How Should We Proceed'?, Worcestershire County Council, September 2008

(2) Initial Sustainability Appraisal of Issues and Options for Waste Core Strategy for Worcestershire, ERM, April 2009

(3) *Sustainability Appraisal of Emerging Preferred Options for the Waste Core Strategy for Worcestershire*, ERM, November 2009

- The requirement for waste developments to demonstrate water efficiency has been inserted into policy WCS2.

- Avoidance of light pollution and impacts on congestion have been added to policy WCS4.

- Generation of combined heat and power (CHP) wherever practicable is required in supporting text to policy WCS5.

- The WCS now commits to high recycling levels of C&D waste

- The supporting text to policy WCS6 promotes restoration which takes account of recreational value.

1.2.3 Influence at First Draft Submission Stage

Some of the recommendations from the SA of the First Draft Submission WCS(1) have been incorporated into the Submission WCS, as follows:

- Higher targets for the recycling of municipal waste have been incorporated into the WCS.

- The WCS now indicates the amount of capacity sought at different levels of the waste hierarchy for different waste streams.

- Policies require developments to use alternatives to road transport where practicable.

- The WCS now includes a mechanism whereby certain types of development are directed to upper levels of the geographic hierarchy.

1.2.4 Influence at Submission Stage

In response to the informal findings of the SA of a draft Submission WCS, the final Submission WCS has incorporated some recommendations for mitigation:

- Policy in the WCS now requires avoidance of adverse impacts on health.

- The WCS includes Listed Buildings and Conservation Areas in the list of historic assets to be protected.

(1) *Sustainability Appraisal of First Draft Submission of the Waste Core Strategy for Worcestershire*, ERM, November 2010

2 INTRODUCTION

2.1 BACKGROUND

Worcestershire County Council (WCC) has re-started the process of producing the Waste Core Strategy (WCS) for Worcestershire. The WCS will provide the framework for how all the waste streams in the County will be managed between now and 2027. Earlier work on the WCS which was undertaken between 2005 and 2007 had been halted, but WCC has recommenced the process and is proceeding towards a submission of the WCS to the Secretary of State.

The first stage in the process was to redraft an Issues and Options document and to publish it for consultation. The consultation on the Issues and Options document took place between September and December 2008. Responses to the consultation were considered by WCC in developing an Emerging Preferred Options Report for the WCS, which was drafted during the summer and autumn of 2009 and issued for public consultation in late 2009. WCC then produced a subsequent document in the process, termed the 'First Draft Submission', taking account of views expressed in the consultation on the Emerging Preferred Options Report. The First Draft Submission was issued for public consultation between 28 September and 9 November 2010. WCC is now in the process of producing the final document, the WCS Submission Document.

The *Planning and Compulsory Purchase Act 2004* requires a sustainability appraisal (SA) of local Development Plan Documents (DPD) to be carried out, including Waste DPDs such as the WCS. Under the *Environmental Assessment of Plans and Programmes Regulations 2004,* the WCS must also be subject to a Strategic Environmental Assessment (SEA) before it is adopted. Government guidance indicates that an SA can and should be undertaken which also meets the requirements of SEA. Therefore, as part of the process of developing the WCS, it will be subject to an SA incorporating SEA.

SA is to be used as a tool for integrating environmental and sustainability considerations into the preparation of the WCS, by considering the effects of implementing the WCS during its preparation and before its adoption. The SA is required systematically to assess the WCS against a framework of environmental, economic and social objectives. It should identify, describe and evaluate the likely significant effects of implementing the plan or strategy, and reasonable alternatives taking into account the objectives and the geographical scope. These issues must be taken into account in the preparation of the WCS.

WCC has commissioned Environmental Resources Management (ERM) to support it in the process of developing the WCS by undertaking an SA of the

WCS as it emerges and develops. An initial appraisal of the Issues and Options Report was undertaken during March and April 2009, and the findings and recommendations were taken into account by WCC in developing the Emerging Preferred Options Report. Subsequently, an SA was carried out on the Emerging Preferred Options Report, the findings of which were considered by WCC in developing the First Draft Submission WCS. Then a formal SA was carried out of the First Draft Submission WCS in November 2010, on the version that was issued for public consultation. The conclusions and recommendations of the SA of the First Draft Submission WCS were taken into account by WCC in developing the Submission version of the WCS.

A formal SA has now been carried out on the Submission WCS during February 2011. The SA has identified the key sustainability implications of the Submission WCS, with the aim of informing WCC about the likely effects and enabling it to understand the implications. This document sets out the results of the SA and highlights the main implications of the Submission WCS.

2.2 PROCESS

2.2.1 Scoping

The first step in the SA work was a scoping stage to identify the sustainability context for waste management and planning in Worcestershire. This stage of the SA was undertaken by WCC in-house.

The scoping stage involved the collection of a wide range of baseline data covering economic, social and environmental issues in order to provide a picture of the current sustainability conditions in Worcestershire and to identify emerging trends where possible. The baseline data was analysed to identify the key sustainability issues for the county, within the particular context of waste management and planning.

In tandem with the baseline data collection and analysis, all relevant policies, plans and programmes were identified with a view to helping to establish the key sustainability issues for Worcestershire that could be affected by the WCS. The policy documents identified were reviewed to extract information to inform the issues, and to identify sustainable development policy objectives with which waste management and planning in the county must or should conform.

A framework of policy objectives was then developed for the appraisal. The objectives are supported by decision-making criteria in the form of questions under each objective. The emerging WCS has been appraised against this framework to assess the extent to which it supports sustainable development policy objectives for Worcestershire, taking into account the specific questions

which are posed. The framework was based on the existing Worcestershire Joint SA Framework, and also informed by:

- Review of the issues of relevance to Worcestershire as described within key policy documents, with particular regard being given to the Community Strategy and Regional Sustainable Development Framework;
- Review of the sustainability characteristics and issues; and
- Analysis of the opportunities arising from the baseline data.

The results of the scoping stage were set out in a Scoping Report which was issued to the three statutory agencies for consultation from 29 September to 7 November 2008.

Responses were received from the Environment Agency, English Heritage and Natural England. The main comments related principally to additional data to be included in the baseline, and additional documents for the policy review. These particularly covered issues of flood risk, water quality, biodiversity, heritage and landscape. However, there was also a request to note water as a significant issue for waste management in Worcestershire, and requests to amend the wording of the objectives on historic environment and biodiversity to expand their scope. The Environment Agency also identified a need to undertake a Strategic Flood Risk Assessment (SFRA) for Worcestershire as a whole in the particular context of the WCS. Consultation comments were taken on board and further scoping work was undertaken to ensure that the relevant key issues and policies are reflected in the framework. Further work on flood risk assessment was progressed through District-level SFRAs.

The objectives and decision-making criteria, as amended following the Scoping Report consultation, are set out in *Table 2.1*. This is the appraisal framework which has been used to appraise the Refreshed Issues and Options, the Emerging Preferred Options, the First Draft Submission WCS and the Submission WCS.

Table 2.1 SA Objectives and Decision-Making Criteria

Theme	Objective	Decision-Making Criteria
1. Waste	Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	1a. Are opportunities to increase recycling encouraged in your plan? 1b. Will your plan reduce the production of waste and manage waste in accordance with the waste hierarchy?
2. Climate Change	Reduce causes of and adapt to the impacts of climate change.	2a. Will your plan reduce emissions of greenhouse gases? 2b. Does your plan promote patterns of spatial development that are adaptable to and suitable for predicted changes in climate? 2c. Does your plan promote measures to mitigate causes of climate change?
3. Flooding	Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	3a. Does your plan protect the floodplain from inappropriate development? 3b. Does your plan reduce the risk of flooding in existing developed areas? 3c. Does your plan promote Sustainable Drainage Systems (SUDs)? 3d. Does your plan promote patterns of spatial development that are adaptable to and suitable for predicted changes in climate?
4. Traffic and transport	Reduce the need to travel and move towards more sustainable travel patterns.	4a. Will your plan reduce the need to travel? 4b. Will your plan provide opportunities to increase sustainable modes of travel? 4c. Does your plan focus development in existing centres, and make use of existing infrastructure to reduce the need to travel?
5. Growth with prosperity for all	Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	5a. Will your plan contribute towards urban and rural regeneration? 5b. Will your plan provide opportunities for businesses to develop and enhance their competitiveness? 5c. Will your plan support the shopping hierarchy? 5d. Will it help to improve skills levels in the workforce?
6. Participation by all	Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	6a. Do your plan proposals incorporate consultation with the local communities? 6b. Does your plan promote wider community engagement and civic responsibility?
7. Technology, innovation and inward investment	Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	7a. Does your plan encourage innovative and environmentally-friendly technologies? 7b. Does your plan promote and support the development of new technologies, of high value and low impact?
8. Energy generation and use	Promote energy efficiency and energy generated from renewable energy and low carbon sources.	8a. Will your plan encourage opportunities for the production of renewable and low-carbon energy?

		8b. Will your plan promote greater energy efficiency?
9. Natural resources	Protect and enhance the quality of water, soil and air.	9a. Will your plan improve or maintain air quality? 9b. Will your plan provide opportunities to improve or maintain water quality? 9c. Will your plan encourage measures to improve water efficiency in new development, refurbishment and redevelopment? 9d. Will your plan provide opportunities to improve or maintain soil quality?
10. Access to services	Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	10a. Will your plan enhance the provision of local services and facilities? 10b. Will your plan contribute to rural service provision across the County? 10c. Will your plan enhance accessibility to services by public transport?
11. Landscape	Safeguard and strengthen landscape character and quality.	11a. Will your plan safeguard and strengthen landscape character and quality?
12. Biodiversity, geodiversity, flora and fauna	Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	12a. Will your plan help to safeguard the County's biodiversity and geodiversity? 12b. Will your plan provide opportunities to enhance local biodiversity/ geodiversity in both urban and rural areas? 12c. Will your plan protect sites and habitats designated for nature conservation? 12d. Will your plan help to achieve targets set out in the Biodiversity and Geodiversity Action Plans?
13. Health	Improve the health and well being of the population and reduce inequalities in health.	13a. Will your plan improve access to health facilities across the County? 13b. Will your plan help to improve quality of life for local residents? 13c. Will your plan promote healthier lifestyles? 13d. Does your plan mitigate against noise pollution? 13e. Does your plan mitigate against light pollution?
14. Provision of housing	Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	14a. Will your plan provide opportunities to increase affordable housing levels within urban and rural areas of the County? 14b. Will your plan provide affordable access to a range of housing tenures and sizes? 14c. Does your plan seek to provide high quality, well-designed residential environments? 14d. Does your plan provide opportunities for the construction of sustainable homes?
15. Population (learning and skills)	Raise the skills level and qualifications of the workforce.	15a. Will your plan provide opportunities to further develop educational and attainment facilities within the County?
16. Cultural heritage, built design and archaeology	Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	16a. Does your plan provide opportunities for sustainable construction? 16b. Will your plan preserve, protect and enhance conservation areas, listed buildings, archaeological remains, historic parks and gardens and their settings, and other features and areas of historic and cultural value? 16c. Will your plan help to safeguard the County's listed, locally-listed and other historic

		buildings? 16d. Does your plan improve the quality of the built environment?
17. Population (antisocial behaviour, crime, litter and graffiti)	Reduce crime, fear of crime and antisocial behaviour.	17a. Does your plan seek to provide high quality well-designed environments? 17b. Does your plan promote wider community engagement and civic responsibility? 17c. Does your plan promote mixed development that encourages natural surveillance?
18. Material assets	Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	18a. Will your plan safeguard the County's mineral resources? 18b. Will your plan help to protect the County's agricultural land from adverse developments? 18c. Will your plan preserve the openness of the green belt? 18d. Will your plan protect and enhance the County's open spaces of recreational and amenity value? 18e. Does your plan provide opportunities for sustainable construction? 18f. Will your plan maximise the use of previously developed land?

2.2.2 *Issues and Options*

The Issues and Options document was developed by WCC and issued for public consultation from September to December 2008. Following this, WCC commissioned ERM to undertake the SA of the emerging WCS, which began with an Initial Appraisal of the Issues and Options document between March and April 2009.

The following issues and options were assessed in the Initial Appraisal:

- Geographic or locational issues to be considered in the spatial portrait for Worcestershire;
- The draft Vision statement;
- Guiding principles for the WCS;
- Draft local objectives for the WCS;
- Monitoring implementation of the WCS;
- Whether and how to allocate C&I and C&D capacity requirements to the individual lower tier authorities;
- Factors to consider in protecting the environment, health, employment and amenity;
- Future plans and strategies of spatial relevance in Worcestershire;
- Options for the approach to green belt;
- Options for focusing development in urban or rural locations;
- Options for the approach to commissioning small or large facilities;
- Options for whether to prioritise centralised or dispersed facilities;
- Options for quantities of waste to be managed at different levels of the waste hierarchy; and
- Whether to specify waste management technologies, or to identify broad locations or sites and broad types of suitable uses.

The findings and recommendations from the Initial Appraisal were set out in an Initial SA Report(1) that was submitted to WCC in April 2009. The conclusions of this report were taken into account by WCC in developing the Emerging Preferred Options.

2.2.3 *Emerging Preferred Options*

The Emerging Preferred Options document was developed during the summer and autumn of 2009. A first draft was produced in September 2009, which was subject to SA. The document proposed a vision and objectives for the WCS and set out a number of draft policies. It also posed a series of questions asking for comments on a range of issues, and in some cases identified preferred options in response to the issues. However, for some issues the options were still to be developed and a preferred option yet to emerge.

(1) *Initial Sustainability Appraisal of Issues and Options for Waste Core Strategy for Worcestershire*, ERM, April 2009

For some of the issues and options that were raised in the Emerging Preferred Options document, it was not considered useful to appraise them for sustainability implications, as there were no clear sustainability issues involved. This particularly applied to the issue of how much of the different types of waste is likely to arise over the plan period.

However, for other aspects of the emerging preferred options, it was clear that there were sustainability implications around the choice of preferred option, and therefore the SA assessed each of the relevant elements to identify the likely sustainability effects arising.

The following aspects of the Emerging Preferred Options document were subject to SA:

- vision;
- objectives;
- draft policies;
- whether to locate facilities in urban or rural areas ;
- whether to promote centralised or dispersed facilities;
- whether to require large or small facilities;
- approach to permitting development in the green belt;
- locational strategy for MSW, C&I, C&D;
- how to allocate facilities to the locational hierarchy;
- capacity needs for MSW;
- capacity needs for C&I waste;
- capacity needs for C&D waste; and
- capacity needs for hazardous waste.

The detailed results of the appraisal and key findings and recommendations were set out in an SA Report(1) to WCC.

2.2.4 First Draft Submission

The First Draft Submission WCS was developed during early and mid 2010, During its development the First Draft Submission was subject to an 'Interim SA' which was not intended to be a full SA but sought to update the findings of the SA of the Emerging Preferred Options in order to inform the development of the First Draft Submission. The Interim SA was undertaken in-house by WCC staff. An Interim SA Report(2) was issued for public consultation alongside the First Draft Submission WCS from 28 September to 9 November 2010.

Following publication of the First Draft Submission and Interim SA, WCC commissioned ERM to undertake a full SA of the First Draft Submission WCS, with the aim of informing the development of the Submission WCS. The full

(1) *Sustainability Appraisal of Emerging Preferred Options for the Waste Core Strategy for Worcestershire*, ERM, November 2009

(2) *Waste Core Strategy First Draft Submission Report Interim Sustainability Appraisal*, Worcestershire County Council, September 2010

SA of the First Draft Submission WCS appraised the following elements of the First Draft Submission:

- vision;
- objectives; and
- draft policies.

A number of further alternatives or options were considered in addition to those considered at the Issues and Options stage and Emerging Preferred Options stage, specifically the following in relation to the locational strategy:

- approach to directing development;
- approach to scale of locations;
- approach to allocating land;
- approach to proximity and connectivity; and
- allocating capacity to settlement hierarchy.

The detailed results of the appraisal and key findings and recommendations were set out in an SA Report(1) to WCC.

2.2.5 Submission WCS

The Submission WCS was developed between November 2010 and February 2011. A first draft was produced in January 2011, which was subject to SA. The document proposed a vision and objectives for the WCS and set out a number of draft policies embodying the approach to development management and the locational strategy. Informal findings of this SA of the January draft were submitted to WCC in February 2011.

Following the January draft, a final version of the Submission WCS was produced in late February 2011. The full formal SA of the Submission WCS was carried out in early March 2011. The Submission WCS contains a vision, objectives and policies for the WCS. It also adopts the preferred options on a number of issues previously considered in earlier drafts of the WCS, in most cases largely as per the approach taken in the First Draft Submission WCS. However, for some issues relating to the spatial strategy, different preferred options have been adopted, although these were also options previously considered. In addition, the approach to hazardous waste has been amended, for which options have now been appraised in this SA Report.

The full detailed results of the SA of the Submission WCS are set out in *Annexes C* and *D* and a summary of the main findings is given in the main text of this report in *Sections 5* to *8*.

(2) *Sustainability Appraisal of the First Draft Submission of the Waste Core Strategy for Worcestershire*, ERM, November 2010

2.2.6 *Methodology*

The appraisal determined the likely effects arising from the Submission WCS. This applied largely to the vision, objectives and policies, to some additional options not previously considered and to areas of search. This was done by assessing each element of the Submission WCS against the appraisal objectives in turn, using the decision-making criteria identified, and making a largely qualitative assessment, with reference also to the baseline data from the Scoping Report.

In reporting the results of these assessments, the following symbols have been used to indicate the broad nature of the predicted effect:

+	effect likely to be positive
-	effect likely to be negative
0	no significant effect
?	effect unknown
Ø	not relevant

Multiple symbols have been used (e.g. ++) to indicate a different scale of impact relative to other options, in other words where the impacts of an option are *substantially* better or worse than others.

The effects were also rated for their significance in terms of the importance for achieving each appraisal objective. Effects were rated as high, medium or low, taking account of a number of factors. The factors were:

- the expected scale of the effects or the degree to which the effects are likely to contribute to the achievement of the SA objective in the county overall;
- the certainty or probability that the effect is likely to occur as a consequence of the WCS;
- whether the effects would be permanent or reversible;
- whether the effect will occur as a direct result of the WCS or not, in other words whether the WCS is key for achieving or controlling effects;
- whether the effect is more strongly dependent on other interventions or other factors; and
- how important the objective is to the scope of the WCS.

The assessment of significance is indicated in the tables by colour:

	Not relevant
	No significance
	Medium significance
	High significance

In some instances, the methodology has relied for the assessment of effects on other documents which have been produced for the development of the WCS, in particular for assessing the likely impact of areas of search, the SA has drawn on information provided in:

- the Habitats Regulations Assessment (February 2011); and
- the Background Document: Identifying Areas of Search (January 2011).

3 BACKGROUND

3.1 PURPOSE OF THE SA AND THE SA REPORT

The overall purpose of this SA is to evaluate the likely implications of the Worcestershire WCS and reasonable alternatives for the sustainable development of waste management arrangements in the county, and to inform the plan-making process. The aim is to enable the WCS to take account of the ways in which waste management as proposed in the Submission WCS might affect the economy, environment and communities of Worcestershire.

The SA has tested the Submission WCS against a series of objectives that reflect relevant sustainable development policy objectives. The WCS and alternatives were tested to determine their potential to give rise to significant effects, in order to enable the identification of the most sustainable strategy in the light of knowledge of the potential significant impacts of the WCS on relevant sustainable development policy objectives.

The findings and recommendations reached through the SA are set out in this report, and the method by which the appraisals were undertaken is described and explained.

3.2 PLAN OBJECTIVES AND OUTLINE OF CONTENTS

The overall purpose of the WCS is to provide a strategic policy framework by which the authorities in Worcestershire will carry out their statutory duty to manage and dispose of waste.

Reflecting the planning framework introduced by the Planning and Compulsory Purchase Act 2004, the WCS not only covers the normal issues relating to land use planning and development management, but also deals with other aspects of waste disposal which have spatial implications.

To reduce the county's current reliance on landfill, the development of waste management infrastructure to divert waste from landfill is critical to delivery of the WCS. As such, areas of search for locations to deliver this capacity across the county have been identified, focusing on a hierarchy of towns where waste development would be permitted. Policies have been drafted which set out how such capacity will be delivered.

The WCS sets out a number of strategic objectives:

Objectives specified in Worcestershire County Council's Submission WCS:	
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
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
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

The following issues are covered by draft policies in the WCS in order to achieve the objectives set out above:

Summary of policies:
Direction of facilities to the appropriate level of the geographic hierarchy and requirements for recovery facilities
Restriction of development of new landfill sites together with specific landfill gas management and restoration requirements
Direction of facilities to the appropriate land type
Conditions limiting the duration and impact of new developments connected to existing mineral or landfill sites or other temporary facilities
Ensuring no adverse effects on transport and other infrastructure
Ensuring proposals for development protect and enhance biodiversity, geodiversity and historic assets
Taking account of flood risk and impacts on water quality and flow
Promoting sustainable construction, resource-efficient development, land stability and landscaping
Taking account of landscapes, green belt and the character of the built environment
Ensuring no adverse effects on amenity and health
Ensuring proposals contribute to social and economic sustainability
Safeguarding waste sites from other developments to ensure waste facilities are not compromised by neighbouring developments
Promoting recycling and recovery of waste from new developments

3.3 RELATIONSHIP OF WASTE CORE STRATEGY WITH OTHER POLICY DOCUMENTS

The WCS sits within a framework of other policy documents which together influence both the content of the plan and its implementation. The most important of these are described below:

- European Union legislation, most importantly the *Landfill Directive* which sets targets for reduction in the amount of biodegradable municipal waste sent to landfill, and the *Waste Framework Directive* which implements the waste hierarchy and sets requirements for recycling and recovery. WCC must meet the requirements imposed by the Directives.

- National legislation which is also binding on WCC, principally the *Waste and Emissions Trading Act 2003* which implements the *Landfill Directive* in the UK and introduces a scheme of trading in landfill allowances in order to reduce disposal of biodegradable municipal waste to landfill.

- National waste policy, in particular that set out in *Waste Strategy 2007* (1), sets the framework of overarching policy objectives for waste Local Development Documents (LDDs). The WCS must be aligned with these broad policy objectives such as promoting waste minimisation and implementing the waste hierarchy.

- National planning guidance which sets out details of the policy approaches which should be adopted by local and regional authorities, and which WCC should follow unless there are special circumstances and strong reasons to the contrary. The most significant of these is Planning Policy Statement 10 on *Planning for Sustainable Waste Management*, but a range of other Planning Policy Statements and Guidance notes are relevant.

- Herefordshire and Worcestershire local authorities have produced a reviewed *Joint Municipal Waste Management Strategy* (2). This constitutes a 30-year plan for the management of municipal waste which seeks to deliver targets for minimising, recycling and treating municipal waste while meeting environmental objectives. The WCS seeks to enable implementation of the Joint Municipal Waste Management Strategy by providing the planning framework by which the facilities to do so will be delivered.

- Worcestershire statutory plans, for example Local Development Frameworks, set the local policy context for the content and implementation of the WCS, particularly policies on the location and control of development, and by which development under the WCS will be bound.

(1) Waste Strategy for England 2007, Department for Environment, Food and Rural Affairs, May 2007
(2) The Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004-2034 First Review November 2009 Headline Strategy, Joint Waste Resource Management Forum

- The Worcestershire Sustainable Community Strategy, and other non-statutory strategies and plans such as the Economic Development Strategy, guide the policy approach of the WCS on specific issues but are not binding.

A list of relevant policies, plans and programmes and a review and summary of their content is set out in *Annex A*. The key points emerging from the review that the SA needs to address are outlined below.

Social

- Access to services, particularly for people living in rural areas.
- Promotion and improvement of access to education.
- Enabling communities to participate in and contribute to the issues that affect them.
- Pockets of deprivation exist in the County.
- Provision of decent affordable housing for all.
- Promotion of communities that are healthy and support vulnerable people.
- Addressing health inequalities.
- Tackling crime, fear of crime and anti-social behaviour.

Environmental

- Encouraging and enabling waste minimisation, reuse, recycling and recovery, in order to meet national, regional and local targets.
- Prevention or reduction of the negative effects of waste management on the environment.
- Target of 60% reduction in carbon dioxide emissions by 2050.
- Improving energy efficiency; increasing the use of renewable energy: 10% of the UK electricity should be coming from renewable energy sources by 2010 and 20% by 2020 (Energy White Paper).
- Development should be focused in, or next to, existing towns and villages with previously-developed land used in preference to greenfield.
- Encouraging and promoting land use activities which will lead to an improvement in the quality of natural resources.
- Development should be informed by, and sympathetic to, the landscape character of the locality.
- Protection of the County's natural and cultural heritage.
- The County is subject to potential flooding from, in particular, the Rivers Severn, Teme, Avon and Stour.
- There is an emphasis on reducing the need to travel and addressing hotspots of road congestion.

Economic

- Ensuring prudent and efficient use of natural resources.
- Ensuring the efficient transportation of freight within the County, so as to support a strong long economy, but ensuring the environmental impacts are minimised.
- On a workplace basis, average earnings well below national comparators combined with a relatively low level of skilled workforce in the County.
- Significant proportion of workforce employed in declining industries.

3.4 COMPLIANCE WITH THE SEA DIRECTIVE/REGULATIONS

The Worcestershire WCS is subject to the requirements of the European Union's Directive on the Environmental Assessment of Certain Plans & Programmes (Directive 2001/42/EC) and the domestic legislation through which the Directive has been transposed into law in England and Wales (the Environmental Assessment of Plans & Programmes Regulations 2004 – Statutory Instrument 2004 No. 1633).

The SA of the Submission WCS was designed and undertaken so as to meet the legal requirements for the environmental assessment of plans. Throughout the report the term 'sustainability appraisal' should be interpreted as encompassing the sustainability appraisal process as required under the Planning & Compulsory Purchase Act 2004 and the strategic environmental assessment process as required under the European Directive and domestic Regulations on the environmental assessment of plans and programmes.

The following table indicates the components of the Sustainability Appraisal Report that make up the Environmental Report, as required by domestic and European law on the environmental assessment of plans.

Table 3.1 Summary Requirements of SEA Directive and Compliance of SA Report

Requirements for Environmental Report	**Component of SA Report**
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	*Sections 3.2* and *3.3*
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	*Section 4.2* and *Annex B*
c) The environmental characteristics of areas likely to be significantly affected;	*Section 4.2.1, Annex B* and *Annex F*
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	*Section 4.2.2*
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	*Section 3.3, Table 2.1* and *Annex A*
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	*Sections 5.2* to *0*, *6.3, 7.6. 8.2* and *8.3, Annexes C, D* and *F*.
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	*Sections 6.3* and *8.4*

Requirements for Environmental Report	Component of SA Report
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	*Sections 7.2-7.5* *Section 2.2.6* *Section 8.5*
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	*Section 9.2*
j) a non-technical summary of the information provided under the above headings	*Section 1.1*

4 SUSTAINABILITY BASELINE

4.1 INTRODUCTION

This section describes the significant features and conditions within Worcestershire relevant to sustainable development policy and objectives. It provides an overview of the state of the environment, society and the economy in the county in the period preceding the development and publication of the Submission WCS. The full baseline information which was used to compile this summary is given in *Annex B*.

The aim of this section of the report is to highlight any significant issues or problems that are affecting Worcestershire's economy, its people, or its environment and to outline the way in which the state of the environment, society and the economy might change in the future. The purpose is to set the context within which waste management activities arising out of the WCS will take place, so that the significant sustainability issues and the way that waste management activities might interact with those issues can be better understood. It also enables the SA and the process of developing the WCS to identify and focus on those issues which are significant.

This section of the report incorporates the environmental baseline information requirements that are specified in Schedule 2(6) of the Environmental Assessment of Plans & Programmes Regulations 2004.

4.1.1 *Difficulties in Collecting Data*

There are substantial amounts of data available to populate a sustainability baseline for Worcestershire. However, in some instances specific data relating to Worcestershire was not available. In such cases, where possible, data for the West Midlands region or the country as a whole have been used to indicate the likely situation in Worcestershire. In some cases, no data could be found to describe the baseline situation. In particular, there is little data on likely future trends for many issues.

4.2 SUMMARY OF SIGNIFICANT ISSUES AND PROBLEMS IDENTIFIED

The significant issues which have been identified from a review of the baseline are summarised in the following table.

Table 4.1 Key Sustainability Issues in Worcestershire

Issue	Key findings
Waste	It is estimated that in 2010, 1,591,000 tonnes of waste were produced in Worcestershire. Of this, 405,000 tonnes (25%) was municipal waste, 598,500 tonnes (38%) was commercial and industrial waste, and 510,500 tonnes (32%) was construction and demolition waste. 45% of municipal waste was recycled in 2009/10, compared to 40% for England as a whole. 45% of municipal waste in Worcestershire was landfilled, compared to 47% in England as a whole. In 2008, arisings of hazardous waste were approximately 46,500 tonnes per annum. Worcestershire produced 321,000 tonnes of industrial waste in 2002/03 of which 38% was recycled or re-used, and 307,000 tonnes of commercial waste of which 31% was recycled or re-used.
Climate change	In 2008, Worcestershire's CO_2 emissions were 4799kt. Sources of these emissions were: industry and commerce, 32%; domestic sector, 30%; transport sector, 37%. Between 2005 and 2008, CO_2 emissions from each of these sectors declined, although their relative proportions stayed similar.
Flooding	Approximately 10% of the county is at risk of flooding, principally from the rivers Severn, Teme, Avon and Stour.
Transport	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. There are currently no major rail freight facilities located within Worcestershire.
Growth with prosperity for all	The employment rate for working age people in Worcestershire is 78%, which is ahead of the West Midlands (71%) and England (74%), although at lower tier level the rates vary considerably.
Participation by all	In 2008/09 all of the districts collected recyclable materials from the kerbside of more than 93% of their households, with Redditch and Worcester providing 96% coverage and Malvern Hills and Wychavon 100%.
Technology, innovations and inward investment	The business base of Worcestershire is concentrated towards public administration, education and health with the sector accounting for 26.3% of the county's employment, which is closely followed by distribution, hotels and restaurants at 25.2% of the county's employment. Employment in banking, finance and insurance is also high in Worcestershire at 17.1%, with 16.7% employed in manufacturing.
Energy generation and use	In 2008, Worcestershire consumed 15,541GWh of energy from all sources. This is slightly less than in 2007 (16254.2GWh) and 2006 (16,516GWh). Current renewable energy in the county comes from landfill gas, wood fuel, biofuel, ground source heat, and solar systems. Potential additional sources include solar, biogas, energy crops, wind power and hydro-electricity.
Natural resources (air, water and soil)	To date 9 Air Quality Management Areas (AQMAs) have been declared in Worcestershire, due to poor air quality, with several of these having recently been declared. The AQMAs are associated with busy arterial and main roads. 10 of the county's watercourses are rated as 'Good'; 56 as 'Moderate'; 11 as 'Poor'; and 5 as 'Bad'. The quality of Worcestershire's water courses do not compare very favourably with watercourses in the wider area. The majority of soils are Grade 3 in the agricultural land classification but significant areas of Grade 1 and 2 also occur.
Access to services	Approximately 42% of areas within Worcestershire are ranked within the top 20% most deprived areas nationally in terms of their distance from a range of key local services. 47 areas (approx. 13%) are within the top 5%, and 7 areas (approx. 2%) are within the top 1%.

Issue	Key findings
Landscape	The Worcestershire Landscape Character Assessment identifies and describes 23 different landscape types in the county. There are also numerous historic townscapes – including 147 conservation areas. The County contains parts of two areas designated as Areas of Outstanding Natural Beauty.
Biodiversity, flora and fauna	Worcestershire contains two Special Areas of Conservation, 11 National Nature Reserves, 25 Local Nature Reserves and 5,848ha of ancient semi-natural woodland. There are 111 Sites of Special Scientific Interest (SSSIs) in Worcestershire, of which 93.3 % were classed as 'favourable' or 'recovering' in April 2010. There are approximately 460 Special Wildlife Sites in Worcestershire, of which 29.3% are under appropriate management, and approximately 90 Regionally Important Geological/ Geomorphological Sites, of which 40.2% are under appropriate management.
Health	Male life expectancy in Worcestershire at birth is approximately 1 year below the West Midlands and UK averages, but female life expectancy is approximately 1 year above the regional and UK averages.
Provision of housing	13,742 households in Worcestershire do not have central heating, while 632 households in Worcestershire do not have their own bath/shower and toilet.
Population 1 (learning and skills)	Across Worcestershire, 28% of the population aged 19-retirement age was qualified to Level 4 or higher in 2008. This is below the average for England (31%), but higher than for the West Midlands (26%). Percentages are highest in Worcester (37%) and Malvern Hills (35%) and lowest in Wyre Forest (22%) and Redditch (23%).
Cultural heritage, built design and archaeology	There are nearly 6,000 listed buildings in the county, together with 485 scheduled ancient monuments, 147 conservation areas, and over 22,000 entries on the County Historic Environment Record. There are at least 47 heritage assets classified as being 'at risk' in Worcestershire, comprising 4 Conservation Areas; 28 Scheduled Monuments; 2 Registered Parks & Gardens; and 13 Buildings listed at Grades I and II*.
Population 2 (anti social behaviour, crime, litter and graffiti)	Between April 2009 and March 2010, 33,790 crimes were recorded in Worcestershire. Urban areas saw the highest crime rates, with Worcester City having the highest (8 offences per 1,000 people).
Material assets (including land use & local amenity)	Construction aggregates make up most of the mineral output of the county. Worcestershire provides about 1 million tonnes or 7% of the annual apportionment of aggregates for the West Midlands region. Sand, gravel clay, moulding sand and limestone are the materials being commercially exploited in the foreseeable future. The enjoyment of the countryside is a key pull factor for many visitors to the county. About a quarter of the county's land is designated as green belt.

4.2.1 Areas Likely to be Significantly Affected

The appraisal has considered the areas likely to be significantly affected by implementation of the WCS in order to identify the sustainability characteristics of those areas. In reality, the effects of implementation of the plan can be considered on two levels.

First, the overall effects will be spread throughout the county because waste arises almost everywhere. Hence, waste transport will occur throughout the county and some of the impacts of recycling, recovery and disposal activities

will be widespread and borne by all. In this case, the relevant sustainability characteristics are those as set out in the baseline above and in *Annex B*.

On another level, some of the effects of the management of waste will occur in the vicinity of waste management sites. Areas of search within which development will be regarded as acceptable in principle have been identified, and the 57 areas of search are listed in the Submission WCS. An assessment has been made of the environmental and sustainability conditions in each of the areas of search. The key characteristics of those areas are summarised in *Annex F*. More detailed information on these characteristics is provided in a background document to the WCS, *Identifying Areas of Search*(1).

4.2.2 Worcestershire Characteristics that are Relevant to the WCS

Worcestershire has a number of characteristics that are relevant to the WCS. These are summarised below and described in detail in the baseline assessment presented in *Annex B*.

Worcestershire recycles a higher than average amount of municipal waste, with 45% of household waste recycled or composted in 2009/10 compared to 40% in England as a whole. It landfills slightly less municipal waste (45% compared to 47%). Commercial/industrial and construction/demolition wastes are each larger waste streams than the municipal solid waste stream, although data on how these waste streams are managed is poor.

Although there is relatively little traffic congestion on the county's road network, there are hotspots in and around the main towns and particularly around Worcester.

Air quality is generally good throughout the county, although there are some areas of poor air quality, largely due to transport emissions, and the number of AQMAs in Worcestershire has increased recently.

Construction aggregates make up most of the mineral output of the county. Worcestershire provides about 1 million tonnes or 7% of the annual apportionment of aggregates for the West Midlands region.

About 10% of the land area of the county is subject to flood risk, particularly from the rivers Severn, Teme, Avon and Stour.

The County contains parts of two areas designated as Areas of Outstanding Natural Beauty. There are also numerous historic townscapes including 147 conservation areas, and about a quarter of the county is designated as green belt. There are at least 47 heritage assets classified as being 'at risk' in Worcestershire.

(1) *Worcestershire Waste Core Strategy Background Document: Identifying Areas of Search*, Worcestershire County Council, September 2010

Worcestershire contains or is near to some areas which are designated as internationally important for biodiversity, including Special Protection Areas (SPA) and Special Areas of Conservation (SAC) designated pursuant to Directives 79/409/EEC (1) and 92/43/EEC (2). The sites are all subject to pressures, as indicated in the following table.

Table 4.2 Pressures on European Sites in or near to Worcestershire

European site	Key sensitivities
Lyppard Grange Ponds SAC	Pollution from run-off or change in groundwater levels resulting in change to quantity or quality of water. Atmospheric deposition of pollutants Development - disturbance to suitable terrestrial habitat for great crested newts within proximity of breeding ponds. Increased recreational pressure or interference from public.
Fens Pools SAC	Pollution from run-off or change in groundwater levels resulting in change to quantity or quality of water. Atmospheric deposition has potential to affect supporting terrestrial habitat.
Dixton Wood SAC	Pollution from run-off or change in groundwater levels or water movements. Old ash trees like damp soil conditions. Site would be affected if Areas of Search resulted in contamination of the soil water. Atmospheric deposition of nitrogen on ash woodland.
Bredon Hill SAC	Pollution from run-off or change in groundwater levels. Old ash trees thrive in damp soil conditions. Site would be affected if Areas of Search resulted in contamination of the soil water. Atmospheric deposition, particularly of nitrogen on woodland.
Rivers: • River Wye / Afon Gwy SAC • Severn Estuary SAC	Water quality – pollution through agricultural run-off and sewage outputs is a problem Flow (flow regime should be characteristic of the river). Abstraction should be regulated. Suspended sediments/siltation – through intensification of agricultural practices and other disturbance eg soil degradation around stock feeding points Inappropriate dredging Recreational pressure and disturbance – can lead to disturbance, damage and increases in suspended sediment eg footpath erosion, water-based activities Atmospheric pollution - deposition of oxides of nitrogen & sulphur, acidification of river water (deposition of nitrogen & ammonia) Climate change - change in rainfall patterns and transpiration rates, inc temp – more algal blooms, reduced summer flow. Inc high rainfall – more erosive runoff and sedimentation Illegal fish poaching Spread of introduced non-native species Artificial barriers to fish migration

(1) Directive 79/409/EEC on the conservation of wild birds
(2) Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

European site	Key sensitivities
Wet grassland: • Walmore Common SPA/Ramsar	Maintenance of appropriate grazing regime Water level – maintenance of hydrological regime (grassland communities are strongly influenced by the quantity and base status of the groundwater) Water quality – nutrient enrichment from fertiliser run-off etc Scrub encroachment (often due to undergrazing) Development pressure Spread of introduced non-native species Human disturbance (off-road vehicles, burning (vandalism)) Atmospheric pollution eg nitrous oxides from vehicle exhausts.
Estuarine habitat: • Severn Estuary SAC/SPA/Ramsar	Water quality – pollution Recreational/tourism disturbance Development eg dock/harbour creation, coastal defence works Erosion Siltation Dredging Over-fishing Maintenance of appropriate grazing regime Spread of non-native species Disturbance to bird feeding and roosting habitat (noise / visual)

Sources: Habitats Regulations Screening Assessment of the Worcestershire Waste Core Strategy Final Draft, ERM, June 2009; Draft Habitats Regulations Assessment of Worcestershire Waste Core Strategy, ERM, February 2011.

A Habitats Regulations Assessment (HRA) has been undertaken by ERM on behalf of Worcestershire County Council. The HRA Screening Assessment(1) concluded that there may be adverse effects on European nature conservation sites arising from implementation of the WCS but that this depends to a large degree on what facilities are developed and where, and that there is a need for further assessment as more details become available. A full HRA was subsequently undertaken and the draft findings have concluded that likely significant effects from the development of thermal treatment facilities at certain scales and within some areas of search on one designated site are uncertain. As a response to these draft findings, the geographic hierarchy and policy in the WCS have been amended to allow for this uncertainty and to avoid likely significant effects on that site.

(1) *Habitats Regulations Screening Assessment of the Worcestershire Waste Core Strategy: Final Draft*, ERM, June 2009

5 APPRAISAL OF THE WCS VISION AND STRATEGIC OBJECTIVES

5.1 INTRODUCTION

The WCS sets out a vision and strategic objectives. The objectives establish a set of policy objectives for the WCS which set the framework for the more detailed policies which follow, while the vision describes a desired state arising from the implementation of the WCS. The vision has been appraised using the appraisal framework. As recommended by government guidance, the strategic objectives have been tested both against the SA objectives and each other, to ensure compatibility with sustainable development objectives and internal consistency.

5.2 VISION OF THE WASTE CORE STRATEGY

The vision has been appraised against the SA framework using the methodology set out in *Section 2.2.6*. The detailed results of this are set out in *Annex C* and summarised below.

The vision explicitly promotes the waste hierarchy, which will support the reduction of greenhouse gas emissions and promote greater resource efficiency. Recovery of energy is not explicitly promoted, but implied through the waste hierarchy. The vision also promotes climate change mitigation and adaptation and therefore is likely to reduce emissions of greenhouse gases and promote flood risk management. Energy use and greenhouse gas emissions will also be reduced through the desire to locate facilities so that they serve communities, minimising road transport and indirectly supporting rail and water freight. Large recovery facilities may not minimise waste transport, although this also depends on the number of facilities and their location which are not known.

The vision aims to promote community-wide responsibility for waste in Worcestershire. By providing facilities in Worcestershire for Herefordshire's municipal waste, it does not necessarily support community responsibility in Herefordshire. However, community responsibility in Worcestershire is promoted and significantly more waste is generated in Worcestershire than in Herefordshire. The vision also supports the economic contribution of waste management and is likely indirectly to support the development of new technologies.

In seeking to avoid damage to environmental and cultural assets, the vision will help to ensure protection of air, water, soil, landscape, biodiversity and the built and historic environment, although it does not specifically address the potential for effects on health and amenity. The effects on the use of greenfield, agricultural and green belt land are unclear but the risk should be low.

In order to mitigate potential adverse effects identified above and to capitalise on opportunities, the vision should explicitly promote energy recovery, and explicitly seek to protect human health and amenity and to direct development towards previously developed land.

5.3 OBJECTIVES OF THE WASTE CORE STRATEGY

Government guidance recommends that the SA should undertake a compatibility analysis between the objectives of the WCS and the SA appraisal objectives. This has been done and the results are set out in *Table 5.1* below.

The purpose of this exercise is to determine whether the objectives of the WCS will contribute to sustainable development, and to identify any potential incompatibilities between the objectives of the WCS and sustainable development policy objectives. To do this, the WCS objectives have been compared with each of the SA appraisal objectives and an assessment made of the likelihood that the WCS will contribute to the achievement of each objective for sustainable development.

Box 5.1 Strategic Objectives of the WCS

WO1	To base decisions on the need to reduce greenhouse gas emissions and the need to mitigate 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
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
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 in accordance with the Spatial Strategy

Table 5.1 below shows the results of the test against SA objectives. There are no clear incompatibilities between the aims of the WCS and the appraisal objectives although there are a number of areas of uncertainty. The main reason for this is that the Spatial Strategy will direct development near to urban areas and so it has the potential to affect residential amenity, and may also direct development near to the AONBs. However, the likelihood of effects is unknown at this stage. Applications for waste development will be required to demonstrate no adverse impacts on amenity or on the AONBs. In

addition, moving waste up the waste hierarchy may increase the need for waste transport due to the need for multiple handling of waste streams, however the vision seeks to minimise road transport.

The targets set out in objective WO3 give some support to the waste hierarchy, but this could be strengthened by including recycling targets for C&I and C&D waste.

It is noted that there are no strategic objectives that could clearly cover the sustainable development objectives of raising skills levels and reducing crime and anti-social behaviour. However, these are not directly relevant to the scope of the WCS and therefore no recommendations are made for addressing these objectives.

Table 5.1 Assessment of Strategic Objectives against SA Objectives

Key:
✓ Positive compatible
× Possible conflict
0 Neutral
? Uncertain

WCS Objectives[1] SA Objectives	1	2	3	4	5	6	7	8	Comments
1. Waste Manage waste in accordance with the waste hierarchy	✓	0	✓	✓	✓	0	0	0	Objective WO3 sets targets for the amount of recovery for each of the three waste streams of MSW, C&I and C&D waste. In addition, it sets a minimum recycling target for MSW of 50% by 2020, in line with national targets. Stronger support for the waste hierarchy could be given by providing recycling targets for C&I waste.
2. Climate Change Reduce causes of and adapt to the impacts of climate change.	✓	0	✓	✓	✓	0	0	✓	The Spatial Strategy should enable facilities to be located close to the source of arisings, thereby reducing transport emissions of greenhouse gases. However, the significance of effects will depend on the number, size, type and precise location of facilities and therefore the effect is unclear at this stage.
3. Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0	✓	0	0	0	0	0	?	Protecting economic and environmental assets could indirectly ensure flood risk is appropriately managed. The effect of the Spatial Strategy depends on the precise location of development and design standards.
4. Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.	✓	0	?	0	0	0	0	✓	Promoting the waste hierarchy will increase the need for multiple handling of waste streams, which is likely to increase the need for waste transport, although the significance of effects depends on where facilities are located. The Spatial Strategy should enable facilities to be located close to the source of arisings, thereby reducing transport emissions of greenhouse gases. However, the significance of effects will depend on the number, size, type and precise location of facilities..
5. Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	0	0	✓	0	✓	0	✓	0	By encouraging the management of waste at higher levels of the waste hierarchy and requiring new facilities to address the capacity gap, the WCS is likely to support and encourage the development of waste infrastructure which uses new technologies for managing waste.

WCS Objectives[1] SA Objectives	1	2	3	4	5	6	7	8	Comments
6. Participation by all Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	0	0	0	0	0	✓	0	✓	The Spatial Strategy should enable facilities to be located close to the source of arisings, thereby enabling communities in Worcestershire to take responsibility for the waste they produce, although not necessarily in Herefordshire.
7. Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	✓	0	✓	0	✓	0	✓	0	
8. Energy generation and use Promote energy efficiency and energy generated from renewable energy and low carbon sources.	✓	0	✓	0	0	0	0	0	
9. Natural resources Protect and enhance the quality of water, soil and air.	0	✓	✓	0	0	0	0	0	Promoting the waste hierarchy will reduce landfill which will help to reduce the risk of pollution effects.
10. Access to services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	0	✓	0	0	0	0	0	Promoting the waste hierarchy will require improved access to waste management services to achieve increased recycling and composting levels.
11. Landscape Safeguard and strengthen landscape character and quality.	0	✓	0	0	0	0	0	?	The Spatial Strategy may direct development near to AONBs although the likelihood of effects is unknown.
12. Biodiversity, geodiversity, flora and fauna Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	✓	✓	0	0	0	0	0	0	
13. Health Improve the health and well being of the population and reduce inequalities in health.	0	✓	0	0	0	0	0	0	Protecting environmental cultural and social assets is likely to have a beneficial effect on health.

WCS Objectives[1] SA Objectives	1	2	3	4	5	6	7	8	Comments
14. Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	0	0	✓	0	0	0	?	The Spatial Strategy directs development near to urban areas which has the potential to affect residential amenity, although the likelihood of effects is unknown.
15. Population (learning and skills) Raise the skills level and qualifications of the workforce.	0	0	0	0	0	0	?	0	Promoting the waste management industry may help to raise skills levels, although the contribution to the workforce overall is likely to be small.
16. Cultural heritage, built design and archaeology Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	0	✓	0	✓	0	0	0	0	
17. Population (antisocial behaviour, crime, litter and graffiti) Reduce crime, fear of crime and antisocial behaviour.	0	0	0	0	0	0	0	0	
18. Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	0	✓	✓	0	✓	0	0	0	Protection of environmental assets should ensure protection of open space and greenfield and green belt land.

Note (1) Refer to *Box 5.1* for description of WCS Objectives

Table 5.2 shows the results of the test of internal compatibility of the WCS objectives. In no case are any of the WCS objectives clearly incompatible with any of the other objectives. However, there is one instance where there is a link between the objectives but it is not clear that the objectives are compatible. The key issue is in relation to strategic objective WO8 and the likelihood of effects of the Spatial Strategy on landscape and amenity. These uncertainties are examined further in the assessment of policies, in particular policy WCS2.

Table 5.2 Assessment of Internal Compatibility of Strategic Objectives

WCS Objective	2	3	4	5	6	7	8	Comments
1	✓	✓	✓	✓	0	0	✓	
2		0	0	✓	0	✓	?	The effect of the Spatial Strategy on landscape and amenity is unclear.
3			✓	✓	0	✓	0	
4				0	0	0	0	
5					0	✓	0	
6						0	0	
7							0	

5.4 CONCLUSIONS

There are a number of uncertainties about the sustainability effects of the vision and objectives, relating to land use issues and to the effects of the Spatial Strategy on amenity and landscape, and to the effects of the WCS more generally on waste transport and health.

These uncertainties could be clarified through the inclusion of an additional strategic objective on land use, giving priority to locations which are near to the main urban areas, are on previously developed land and are not affected by other land use constraints.

The targets set out in objective WO3 give some support to the waste hierarchy, but this could be strengthened by including recycling targets for C&I waste.

Either the vision or the objectives should also aim to minimise waste transport and should explicitly promote energy recovery.

6 APPRAISAL OF POLICIES

6.1 INTRODUCTION

The Submission WCS sets out some policies by which it is intended the WCS will achieve its vision and strategic objectives. The policies have been appraised and the results are set out in this section.

6.2 PROPOSED POLICIES

The Submission document sets out proposed policies, and describes the issues which each policy covers and how it is intended to address those issues. The policies are summarised for reference in *Box 6.1*.

Box 6.1 Summary of WCS Policies

WCS1: Reuse and Recycling

Direction of facilities to the appropriate level of the geographic hierarchy.

WCS2: Other Recovery

Direction of facilities to the appropriate level of the geographic hierarchy and requirements for other recovery facilities

WCS3: Landfill and Disposal

Restriction of development of new landfill sites and landfill gas management and restoration requirements

WCS4: Compatible Land Uses

Direction of facilities to the appropriate land type

WCS5: Development Associated with Existing Temporary Facilities

Conditions limiting the duration and impact of new developments connected to existing mineral or landfill sites or other temporary facilities

WCS6: Site Infrastructure and Access

Ensuring no adverse effects on transport and other infrastructure

WCS7: Environmental Assets

Ensuring proposals for development protect and enhance biodiversity, geodiversity and historic assets

WCS8: Flood Risk and Water Resources

Taking account of flood risk and impacts on water quality and flow

WCS9: Sustainable Design and Operation of Facilities

Promoting sustainable construction, resource-efficient development, land stability and landscaping

WCS10: Local Characteristics

Taking account of landscapes, green belt and the character of the built environment

WCS11: Amenity

Ensuring no adverse effects on amenity and health

WCS12: Social and Economic Benefits

Ensuring proposals contribute to social and economic sustainability

WCS13: New Development Proposed On or Near to Existing Waste Facilities

Safeguarding waste sites from other developments to ensure waste facilities are not compromised by neighbouring developments

WCS14: Making Provision for Waste in All New Development

Promoting recycling and recovery of waste from new developments

6.3 APPRAISAL RESULTS

An appraisal of the WCS policies has been carried out, according to the methodology set out in *Section 2.2.6*. The detailed findings from the appraisal of policies are set out, policy by policy, in *Annex C*. The overall conclusions are summarised in *Table 6.1* showing the assessment of the effects of the WCS policies according to the objectives of the appraisal framework. In addition to setting out information about the likely effects of the policies on each of the appraisal objectives, the tables in *Annex C* provide recommendations where appropriate for mitigation of effects.

Recommendations for mitigation are as follows:

- Policies should give a stronger impetus to the waste hierarchy by requiring applicants for recovery facilities to demonstrate that reuse and recycling has been "maximised" rather than "optimised" in WCS2.

- Policies should require planning applications to demonstrate how a facility will be located to minimise the distance that waste is transported, for example in policy WCS6.

- The assessment and mitigation of effects on flood risk, air quality, biodiversity, heritage assets and local residential amenity should be a particular requirement for planning applications at certain specific sites.

- WCS8 should promote flood risk reduction and water quality enhancement where practicable

- The supporting text to policy WCS9 should include reference to the role of waste transport in increasing energy efficiency and reducing greenhouse gas emissions.

- WCS10 should require the avoidance or minimisation of effects on landscape character and the quality of the built environment, and enhancement where practicable.

- WCS14 should give explicit support to the recycling of construction and demolition waste onsite in development projects.

Please refer to *Annex C* for further detail on mitigation recommendations.

Table 6.1 Summary of Appraisal of WCS Policies

Key

Impacts		Significance
+	positive impact	Low significance
-	negative impact	Medium significance
0	no significant impact	High significance
?	impact unknown	
Ø	not relevant	

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
1. Manage waste in accordance with the waste hierarchy	+	+/?	+	0	0	Ø	Ø	Ø	+	Ø	Ø	+	+	+	Support is given to the waste hierarchy across several of the policies where relevant, requiring delivery of capacity to meet the identified capacity gap at different levels of the hierarchy, and restricting landfill. However, no policy clearly prioritises reuse, recycling and composting over recovery and therefore continued improvement beyond the identified targets may fail to happen or even be prevented.
2. Reduce causes of and adapt to the impacts of climate change.	+	+	+	Ø	Ø	+	Ø	+	+	Ø	Ø	+	0	+	Policies will promote the reduction of greenhouse gas emissions through the facilitation of new developments to divert waste from landfill, recovery of resources including energy and recovery of landfill gases. Emissions from waste transport may also be reduced by locating facilities near to the main settlements thereby reducing waste transport, however this depends on the number, types and capacities of sites which are unknown. Policies also promote

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
															adaptation to climate change.
3. Avoid flood risk	?	?	Ø	Ø	Ø	Ø	Ø	+	Ø	Ø	Ø	Ø	0	Ø	Development management policy should ensure flood risk is not increased. However, zones 1 and 2 of the geographic hierarchy and some of the identified areas of search have increased flood risk associated with them. For planning applications which are located within Flood Zone 2 a more detailed Flood Risk Assessment will be required.
4. Reduce the need to travel and promote sustainable travel	?	?	-	+	+	+	Ø	Ø	?	Ø	0	+	?	-/0	By increasing recycling and recovery, the policies may increase the need for waste transport by requiring multiple handling of waste streams. The spatial strategy specifically aims to locate facilities near to the centres of population and therefore is likely to limit waste transport distances, although by dealing with Herefordshire's municipal waste in Worcestershire the policies are likely to promote relatively long waste transport distances for Herefordshire's waste. However, it is not possible to estimate the amount of waste transport required to implement the WCS because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. The use of rail and water transport

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
															are encouraged by the WCS, but not the minimisation of waste transport although co-location is supported. Policies should require planning applications to demonstrate how a facility will be located to minimise waste miles.
5. Develop a knowledge-driven economy	+	+	+	Ø	Ø	Ø	Ø	Ø	+	Ø	Ø	+	Ø	Ø	The WCS supports the development of waste management facilities, encouraging the growth and development of the waste sector in Worcestershire and increasing its economic contribution.
6. Encourage participation and responsibility	+/-	+/-	+	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	+	Ø	+	The facilitation of the development of new recycling and recovery facilities near to the urban areas in Worcestershire will indirectly support increased responsibility by its communities for the waste they produce, although not necessarily for Herefordshire's communities. The WCS will also make it easier for occupants of new developments to recycle their waste, and explicitly requires community involvement and participation in waste developments.
7. Promote new technologies	+	+	+	Ø	Ø	Ø	Ø	Ø	+	Ø	Ø	+	Ø	+	By facilitating the development of sites to divert waste from landfill and through support for climate change mitigation and adaptation and efficient use of energy, water and resources, the policies will help to support the development of new, resource-efficient technologies for managing waste.

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
8. Promote energy efficiency and renewable/low carbon generation	+	+	+	+	Ø	+	Ø	Ø	+	Ø	Ø	Ø	0	Ø	The policies give a strong emphasis on increasing energy efficiency by promoting energy recovery and renewable generation from landfill gas, and requiring waste developments to be energy efficient. Most of the identified areas of search could have some potential for the use of CHP, which is promoted in the supporting text. The impact of the WCS on the use of energy for waste transport is unknown.
9. Protect and enhance water, soil and air.	+/0/?	+/0/?	?	+	?	+	Ø	+	+	Ø	+	Ø	0	0	Policy requires the avoidance of adverse impacts on air and water quality and water flow, and will help to protect water by directing development away from sensitive areas. The quality of water should also be protected through a requirement for waste developments to be water-efficient. Soil quality is likely to be protected and enhanced through allowing development on greenfield land only where strongly justified, and through the use of landfill to restore derelict land which is likely to enhance soil quality.
10. Improve quality and access to services	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	+	Requiring developers to provide facilities for recycling and composting in new developments will help to improve access to recycling services.
11. Safeguard and strengthen	?	?	+	Ø	+	Ø	Ø	Ø	+	+	+	Ø	Ø	Ø	Policies explicitly require the protection and enhancement of

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
landscape quality															landscapes therefore significant adverse effects are unlikely.
12. Conserve and enhance biodiversity and geodiversity	+/-	+	+	Ø	?	Ø	+	+	+	Ø	Ø	Ø	Ø	Ø	Policies explicitly require the protection and enhancement of biodiversity and geodiversity, and biodiversity benefits may be secured in the long term through landfill restoration. However, five of the identified areas of search are very close to Special Wildlife Sites and therefore adverse impacts are likely at these sites; assessment and mitigation of effects should be a particular requirement for planning applications at these sites.
13. Improve health and well being	0	0	0	0	0	0	Ø	Ø	Ø	Ø	0	Ø	0	Ø	Policy requires that unacceptable effects on health are avoided, and health impacts are unlikely if facilities are operated in accordance with good practice standards.
14. Provide decent affordable housing for all	?	?	Ø	?	Ø	0	Ø	Ø	Ø	+	0	Ø	0	+	The zones in the geographic hierarchy are close to major settlements and therefore have the potential to affect residential areas. A number of the identified areas of search are in close proximity to residential areas, and therefore significant effects on the quality of local residential environments are possible although this depends on the specific location and nature of developments. However, policy requires developments to have no adverse effects on local amenity, therefore significant effects should be

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
															avoided. The significance and mitigation of possible effects on residential amenity should be taken into particular account in planning applications at these sites. The policy will support better designed developments by requiring the provision of waste facilities. Landfill restoration could provide valuable open space for communities, and safeguarding should prevent effects from existing waste sites on new residential developments.
15. Raise skills levels	?	?	?	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	+	Ø	Ø	By facilitating the development of new waste management facilities and technologies, the policy may help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.
16. Conserve and enhance the historic and built environment	+/?	+/?	Ø	Ø	Ø	Ø	+	Ø	+	+	+	Ø	0	+	Policy requires developments to avoid some types of historic designations, and promotes good design and resource-efficient developments. It specifically requires conservation and enhancement of the historic environment and heritage assets and to take account of local character. The methodology to identify areas of search takes into account designations of historical value and therefore significant effects are unlikely in the main. However, four of the areas of search are near to designated assets, including one which is within a conservation area. Therefore adverse effects are possible

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
															at these sites and assessment and mitigation of effects should be a particular requirement for planning applications at these sites. Safeguarding should ensure that the risk of adverse effects on the quality of the built environment is not increased by inappropriate development near to waste sites.
17. Reduce crime and antisocial behaviour	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	+	+	Ø	Ø	The WCS aims to educate communities about sustainable waste management which may help to reduce littering and fly-tipping, although this is unlikely to have a significant impact on crime levels overall in Worcestershire.
18. Ensure efficient use of land	+/-	+/-	Ø	+/-	+	Ø	+	Ø	+	+	Ø	Ø	0	?	The WCS requires developments to be in existing buildings or on previously developed sites, which will help to maximise reuse and avoid impacts on open spaces. It also protects the green belt from inappropriate development. However, some of the areas of search contain undeveloped land or are within the green belt where development could reduce openness, therefore adverse effects on open land and/or agricultural land and/or green belt are possible or in some cases likely. In addition, some types of land identified as suitable in a general sense for waste development are likely to be greenfield land (eg curtilage of agricultural/forestry buildings). In addition, some of the

WCS policies / SA objectives	WCS 1	WCS 2	WCS 3	WCS 4	WCS 5	WCS 6	WCS 7	WCS 8	WCS 9	WCS 10	WCS 11	WCS 12	WCS 13	WCS 14	Comments
															geographic zones level 1 and 2 are in green belt therefore adverse effects are possible. However, the effect on such land for the county as a whole is unlikely to be significant By promoting recycling and reuse and the minimisation of the use of primary construction materials, the policies will help to increase the supply of secondary aggregates and reduce demand for virgin mineral resources although policies do not promote the onsite reuse of demolition materials. By restricting the development of landfill capacity, the WCS may support incentives to recycle C&D waste and thereby help to safeguard mineral reserves. Landfill to restore previously developed or derelict land is promoted, and to provide open space for communities.

7 DEVELOPMENT AND APPRAISAL OF ALTERNATIVES

7.1 INTRODUCTION

The SA is required to appraise the impacts of the WCS and of reasonable alternatives to it. In developing the WCS, a number of options have been considered at various stages in the process, specifically at the Issues and Options stage, at the Emerging Preferred Options stage, at the First Draft Submission stage and now at the Submission stage.

In the progression from each stage of the process to the next stage, the options under consideration have been taken forward and developed or refined, also taking into account comments made by stakeholders including members of the public in response to the consultation at each stage.

7.2 OPTIONS AT ISSUES AND OPTIONS STAGE

The Issues and Options document which was published for consultation in September 2008 posed a number of questions on a range of issues, and in some cases identified possible options in response to the issues. The Sustainability Appraisal process undertook an assessment of the Issues and Options document, and set out the findings and conclusions in an Initial Appraisal Report.

For some of the issues and options which were raised, it was not considered useful to appraise them for sustainability implications as there were no clear sustainability issues involved. However, for other issues and options, it was clear that there were sustainability implications around the choice of preferred option, and therefore the Initial Appraisal assessed each of the relevant options to identify the likely sustainability effects arising from them.

The issues and options which were assessed in the Initial Appraisal are as follows.

- Geographic or locational issues to be considered in the spatial portrait for Worcestershire;
- The draft Vision statement;
- Guiding principles for the WCS;
- Draft local objectives for the WCS;
- Monitoring implementation of the WCS;
- Whether and how to allocate C&I and C&D capacity requirements to the individual lower tier authorities;
- Factors to consider in protecting the environment, health, employment and amenity;
- Future plans and strategies of spatial relevance in Worcestershire;
- Options for the approach to green belt;

- Options for focusing development in urban or rural locations;
- Options for the approach to commissioning small or large facilities;
- Options for whether to prioritise centralised or dispersed facilities;
- Options for quantities of waste to be managed at different levels of the waste hierarchy; and
- Whether to specify waste management technologies, or to identify broad locations or sites and broad types of suitable uses.

These options were selected for appraisal because they were identified as reasonable alternatives by the Issues and Options document. The discussion of these alternatives and rationale for selection is set out in detail in the Issues and Options document.

7.3 OPTIONS AT EMERGING PREFERRED OPTIONS STAGE

The Emerging Preferred Options document again discussed a number of issues to be considered in moving towards a set of preferred options, and in many cases identified a preferred option for addressing the issue. It then went on to set out proposed policies for delivering the preferred options, informed by the discussion of issues in the preceding sections of the Emerging Preferred Options report.

In most cases, the proposed policies incorporated the preferred option for each area of policy or type of issue addressed in the earlier sections of the document. However, in some cases, the preferred option was not yet identified. The following table sets out for each issue addressed by the proposed policies in the Emerging Preferred Option document the preferred option and alternatives to it, or the options which were still under consideration.

These options were selected for appraisal because they were identified as reasonable alternatives by the Emerging Preferred Options document. The discussion of these alternatives and rationale for selection is set out in detail in the Emerging Preferred Options document.

Table 7.1 Preferred Options and Reasonable Alternatives

Issue	Preferred Option	Alternatives
Urban or rural locations for facilities	To concentrate waste development in urban locations, with justified minimal development in rural areas	Refreshed Issues and Options consultation document identified the following alternative options: 1. Focus is evenly split between urban and rural locations 2. Focus is on development in rural locations with justified minimal development in urban locations
Centralised or dispersed facilities	To focus on centralised facilities but with dispersed facilities if justified	Refreshed Issues and Options consultation document identified the following options: **1.** Even split between centralised and dispersed facilities **2.** Focusing on dispersed facilities but with a countywide/central service facility, if justified
Large or small facilities	To establish primarily large facilities	Refreshed Issues and Options consultation document identified the following options: **1.** Even split of large and small waste management facilities **2.** Primarily small waste management facilities
Green belt	That waste development would be appropriate in the green belt when in accordance with national policy	Refreshed Issues and Options consultation document identified the following options: 1. Any new waste management facility in the greenbelt is inappropriate, unless exceptional circumstances are justified 2. New waste development in the green belt is appropriate when (i) on previously developed land; and (ii) when in accordance with national policy
Locational strategy for MSW, C&I, C&D	To adopt a hierarchy of towns indicating broad areas for waste development The role of large industrial estates within the broad areas hierarchy will be explored at the next stage of the WCS development.	No alternatives are proposed in the Emerging Preferred Options document. A 'do nothing' option, ie to have no locational strategy, is not considered realistic.
Allocating facilities to locational hierarchy[1]	No preferred option identified	The Emerging Preferred Options document proposes defining what facilities would be acceptable where on the basis of either 1. Size 2. Broad kind 3. Specific type

Issue	Preferred Option	Alternatives
MSW capacity needs	To meet targets in JMWMS for recycling/composting and diversion of biodegradable waste from landfill, and not specifying the type of residual treatment facility required.	No options identified. WCS should provide capacity to meet JMWMS targets therefore alternatives are not appropriate.
C&I capacity needs	To meet RSS targets for diversion from landfill	Refreshed Issues and Options consultation document identified the following alternative option: 1. Meeting BPEO[2] targets ie % targets for recycling, treatment and landfill
C&D capacity needs	Providing capacity to manage arisings	Refreshed Issues and Options consultation document identified the following alternative option: 1. Meeting BPEO[2] targets ie % targets for recycling and landfill
Hazardous waste capacity	Maintain the status quo, maintaining sufficient transfer capacity and developing policies to enable facilities to treat or dispose of waste if applications are made	The Emerging Preferred Options document identifies the following alternative: 1. Manage all of Worcestershire's hazardous waste in-county However, the Emerging Preferred Options document also states that this is not a realistic option and there is no evidence of need for any greater capacity than existing. It is therefore concluded that this is not a reasonable alternative to the status quo.

Notes

1: The issue of whether and how to allocate C&D capacity to the individual lower tier authorities was not carried forward into the Emerging Preferred Options. No explanation was given for this in the Emerging Preferred Options document.

2: Best Practicable Environmental Option identified and adopted in 2003

7.4 *OPTIONS AT FIRST DRAFT SUBMISSION STAGE*

The First Draft Submission WCS embodied some of the preferred options which were identified at the stage of the Emerging Preferred Options document. Table 7.2 shows how the options were taken forward from the Emerging Preferred Options to the First Draft Submission stage.

In addition, the First Draft Submission WCS identified some additional options which were considered and appraised in the SA of the First Draft Submission WCS:

- Alternative methods of calculating arisings and the predicted capacity gap;
- Alternative methods for identifying areas of search.

These options were selected for appraisal because they were identified as reasonable alternatives by the First Draft Submission Background Document Identifying Areas of Search (September 2010), which contains a detailed discussion of the options and rationale for their selection. However, the first group of alternatives was not appraised because there are no particular sustainability implications of any of the methods. The second group of alternatives is set out in more detail in *Table 7.3*.

7.5 *OPTIONS AT SUBMISSION STAGE*

The Submission WCS embodies some of the preferred options which were identified at the stage of the Emerging Preferred Options document and at the First Draft Submission stage. The following table shows how the options have been taken forward from the Emerging Preferred Options to the First Draft Submission stage and subsequently to the Submission WCS, and assesses the implications for further appraisal work for the SA.

The main change to the Preferred Options from the First Draft Submission stage was the introduction of a new approach to the geographic hierarchy. Instead of the previous approach of allocating an aspirational percentage distribution of capacity at the different levels of the hierarchy, the Submission WCS directs recycling/composting and recovery capacity to the upper levels of the hierarchy and only allows capacity to be provided at the lower levels of the hierarchy where it can be justified. This approach is embodied in policies WCS1 and WCS2 which have been appraised as part of the policy appraisal (see *Section 6* and *Annex C*).

In addition, a new set of options is introduced at Submission stage, in relation to the approach to hazardous waste. The reasons the particular alternatives were chosen are as follows:

- One option represents the previous approach of the WCS to hazardous waste (ie not to identify any capacity gap);

- A second option represents the approach of the Submission WCS to hazardous waste (ie to identify a capacity gap for recycling and recovery and encourage facilities to be developed to fill that gap);
- The third option is to reflect views made in representations on the First Draft Submission WCS (ie to provide for landfill of hazardous waste).

Table 7.2 Development of Preferred Options, Reasonable Alternatives and Approach of SA

Issue	Preferred Option at EPO Stage	Alternatives	Preferred Option at FDS Stage	Preferred Option at Submission Stage	Approach in SA of Submission WCS
Urban or rural locations for facilities	To concentrate waste development in urban locations, with justified minimal development in rural areas	Refreshed Issues and Options consultation document identified the following alternative options: 1. Focus is evenly split between urban and rural locations 2. Focus is on development in rural locations with justified minimal development in urban locations	As at EPO stage	As at FDS stage	Appraised at EPO stage. No further appraisal
Centralised or dispersed facilities	To focus on centralised facilities but with dispersed facilities if justified	Refreshed Issues and Options consultation document identified the following options: 1. Even split between centralised and dispersed facilities 2. Focusing on dispersed facilities but with a countywide/central service facility, if justified	FDS does not specify a preferred approach to whether facilities should be centralised or dispersed.	As at FDS stage	Appraised at EPO stage. No further appraisal
Large or small facilities	To establish primarily large facilities	Refreshed Issues and Options consultation document identified the following options: 1. Even split of large and small waste management facilities 2. Primarily small waste management facilities	FDS states that locations are identified to enable facilities of a range of scales and sizes to be brought forward.	As at FDS stage	Appraised at EPO stage. No further appraisal
Green belt	That waste development would be appropriate in the green belt when in accordance with national policy	Refreshed Issues and Options consultation document identified the following options: 1. Any new waste management facility in the greenbelt is inappropriate, unless exceptional circumstances are justified 2. New waste development in the green belt is appropriate when (i) on previously developed land; and (ii) when in accordance with national policy	Where proposals for waste development constitute inappropriate development in locations designated as green belt, very special circumstances must be demonstrated.	As at FDS stage	Appraised at EPO stage. This is in accordance with alternative 1, therefore no further appraisal necessary.

Issue	Preferred Option at EPO Stage	Alternatives	Preferred Option at FDS Stage	Preferred Option at Submission Stage	Approach in SA of Submission WCS
Locational strategy for MSW, C&I, C&D	To adopt a hierarchy of towns indicating broad areas for waste development. The role of large industrial estates within the broad areas hierarchy will be explored at the next stage of the WCS development.	No alternatives are proposed in the Emerging Preferred Options document. A 'do nothing' option, ie to have no locational strategy, is not considered realistic.	As at EPO stage	As at FDS stage	Appraised at EPO stage. No further appraisal.
Allocating facilities to locational hierarchy[1]	No preferred option identified	The Emerging Preferred Options document proposes defining what facilities would be acceptable where on the basis of either 1. Size 2. Broad kind 3. Specific type	FDS identifies areas of search, and those that may be suitable to accommodate large-scale facilities, but does not indicate the scale of facilities that are likely to be delivered.	Submission WCS identifies areas of search, some of which may be suitable to accommodate large-scale facilities, and directs recycling and recovery facilities to the upper levels of the geographic hierarchy, but does not indicate the scale of facilities that are likely to be delivered.	Appraised as policies WCS1 and WCS2 of Submission WCS. Alternative approaches appraised at FDS stage as per *Table 7.3* and as draft policy WCS1 of FDS WCS.
MSW capacity needs	To meet targets in JMWMS for recycling/composting and diversion of biodegradable waste from landfill, and not specifying the type of residual treatment facility required.	No options identified. WCS should provide capacity to meet JMWMS targets therefore alternatives are not appropriate.	At least 33% recycling/composting, maximum 22% landfill, remainder for energy recovery.	As at EPO stage, ie at least 50% recycling and composting by 2020, maximum 22% landfill, remainder for energy recovery.	Options were appraised at Issues and Options stage, therefore no further appraisal necessary.
C&I capacity needs	To meet RSS targets for diversion from landfill	Refreshed Issues and Options consultation document identified the following alternative option: 1. Meeting BPEO[2] targets ie 73% recycling, 23% landfill and 4% thermal treatment	As at EPO stage, i.e. 75% recycling/composting/recovery and 25% landfill	As at FDS stage	Appraised at EPO stage. No further appraisal
C&D capacity	Providing capacity to	Refreshed Issues and Options	Minimum of 75%	As at FDS stage	Very similar to

Issue	Preferred Option at EPO Stage	Alternatives	Preferred Option at FDS Stage	Preferred Option at Submission Stage	Approach in SA of Submission WCS
needs	manage arisings	consultation document identified the following alternative option: 1. Meeting BPEO[2] targets ie at least 76% recycling and maximum of 24% landfill	recycling and maximum of 25% landfill.		alternative 1 at EPO stage, with the same sustainability effects, therefore no further appraisal necessary.
Hazardous waste capacity	Maintain the status quo, maintaining sufficient transfer capacity and developing policies to enable facilities to treat or dispose of waste if applications are made	The Emerging Preferred Options document identifies the following alternative: 1. Manage all of Worcestershire's hazardous waste in-county However, the Emerging Preferred Options document also states that this is not a realistic option and there is no evidence of need for any greater capacity than existing. It is therefore concluded that this is not a reasonable alternative to the status quo.	As at EPO stage	Provide for facilities to come forward to meet the capacity gap identified for recycling and recovery of hazardous waste	Options appraised. See *Section 7.6.1*. An additional option has been considered: 2. Provide for facilities for new capacity for landfill of hazardous waste.

Notes

1: The issue of whether and how to allocate C&D capacity to the individual lower tier authorities was not carried forward into the Emerging Preferred Options. No explanation was given for this in the Emerging Preferred Options document.

2: Best Practicable Environmental Option, identified and adopted in 2003

Table 7.3 New Options Introduced at First Draft Submission Stage, Alternatives Considered and Approach of SA

Issue	Preferred Option at FDS Stage	Alternatives	Preferred Option at Submission Stage	Approach of FDS SA
Approach to directing development	1. Identify the locations where development would be acceptable and allow industry to bring forward proposals in other suitable locations	2. Allow industry to bring forward sites and assess them against policy criteria 3. Identify the locations where development would be acceptable	2. Allow industry to bring forward sites and assess them against policy criteria.	Options appraised at FDS stage. No further appraisal.
Approach to scale of locations	1. Identify areas of land	2. Identify specific sites 3. Identify broad locations on a key diagram	3. Identify broad locations on a key diagram.	Options appraised at FDS stage. No further appraisal.
Approach to allocating land	1. Identify land suitable for each individual category of waste management development	2. Identify land suitable for all categories of waste management development	As at FDS stage	Options appraised at FDS stage.
Approach to proximity and connectivity	1. Apportion capacity according to settlement hierarchy 2. Favour sites in areas with high arisings and resource demand 3. Determine site allocations according to connectivity to transport networks	4. Apportion to districts based on current arisings and resource demand 5. Apportion to districts based on future growth in employment land 6. Apportion according to current arisings by settlement 7. Determine site allocations according to opportunities for rail and water transport	As at FDS stage	Options appraised at FDS stage.
Allocating capacity to settlement hierarchy	5. Halving proportion by settlement at each level of hierarchy	1. Majority of distribution to top level of hierarchy 2. Almost equal distribution by level of hierarchy 3. Almost equal distribution by settlement at each level of hierarchy 4. Halving proportion at each level of hierarchy		Options appraised at FDS stage.

7.6 APPRAISAL OF OPTIONS AND ALTERNATIVES

For most of the issues set out ***Error! Reference source not found.***above, the preferred option for addressing the issue and reasonable alternatives to it were appraised at earlier stages of the WCS development against the appraisal framework, according to the methodology set out in *Section 2.2.6*. An assessment was made of the likely effects of implementing the preferred option or its alternatives, and conclusions drawn about the performance of the preferred option. Recommendations were made where appropriate for addressing the predicted impacts. The findings and recommendations from these assessments are set out in earlier SA reports as indicated in *Tables 7.2* and *7.3*:

- *Initial Sustainability Appraisal of Issues and Options for Waste Core Strategy for Worcestershire,* ERM, April 2009
- *Sustainability Appraisal of Emerging Preferred Options for the Waste Core Strategy for Worcestershire,* ERM, November 2009
- *Sustainability Appraisal of the First Draft Submission of the Waste Core Strategy for Worcestershire*, ERM, November 2010

The options for hazardous waste capacity are newly introduced at Submission stage and are appraised below.

7.6.1 *Approach to Hazardous Waste Capacity*

A detailed assessment of impacts is provided in *Table D.1* in *Annex D*.

Allowing for facilities to be provided to meet the capacity gap for recycling and recovery may give stronger encouragement to the waste hierarchy than maintaining the status quo and reduce waste transport and its associated greenhouse gas emissions. It will also help to provide new economic opportunities, some of which may be innovative and knowledge-driven. Providing for hazardous landfill will reduce waste transport further, but may encourage more landfill of hazardous waste which does not support the waste hierarchy.

Conclusion

The preferred option of allowing for facilities to meet the capacity gap for recycling and recovery provides the most sustainability benefits of the three options considered. Additionally providing for hazardous landfill may undermine the waste hierarchy while providing limited waste transport benefits.

8 OVERALL ASSESSMENT OF SUBMISSION WCS

8.1 INTRODUCTION

This section of the report draws together the findings and conclusions of the assessments of each of the different elements of the Submission WCS, specifically the vision and objectives from *Section 5*, the draft policies from *Section 6* and the preferred options from *Section 7*. The results of each of these appraisals are synthesised to make an assessment of the Submission WCS overall, and recommendations are provided for addressing the predicted effects.

8.2 OVERALL ASSESSMENT OF SUBMISSION WCS

Table 8.1 presents an assessment of the overall effects of the Submission WCS, giving an explanatory description of the predicted effects.

Table 8.1 Overall Appraisal of WCS

SA objectives	Assessment	Comments
1. Manage waste in accordance with the waste hierarchy	+	Support is given to the waste hierarchy across the vision, objectives and policies of the WCS, prioritising recovery of resources over landfill. However, stronger encouragement could be given to prioritise recycling and composting over other recovery, otherwise continued improvement beyond the recycling targets may fail to happen. The adoption of a recycling target for C&I waste in addition to a recovery target would provide a more sustainable outcome.
2. Reduce causes of and adapt to the impacts of climate change.	+/?	The WCS will promote the reduction of greenhouse gas emissions through the facilitation of new developments to divert waste from landfill, recovery of resources including energy and recovery of landfill gases. Emissions from waste transport may also be reduced by locating facilities near to the main settlements thereby reducing waste transport, however this depends on the number, types and capacities of sites which are unknown. Climate change adaptation is promoted by the WCS.
3. Avoid flood risk	+/?	Development management policy is likely to ensure flood risk is not increased, although some of the identified areas of search have increased flood risk associated with them and a more detailed Flood Risk Assessment of developments in these areas will be required at planning application stage.
4. Reduce the need to travel and promote sustainable travel	?	By increasing recycling and recovery, the policies may increase the need for waste transport by requiring multiple handling of waste streams. However, the spatial strategy aims to locate facilities near to the larger centres of population which will help to limit waste transport distances, although there will be longer transport distances for municipal waste from Herefordshire than if facilities for this waste were located in Herefordshire. It is not possible

SA objectives	Assessment	Comments
		to estimate the amount of waste transport required to implement the WCS because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. Alternative transport modes are encouraged, but the WCS should require planning applications to demonstrate how a facility will be located to minimise waste miles.
5. Develop a knowledge-driven economy	+	The WCS supports the development of waste management facilities, encouraging the growth and development of the waste sector in Worcestershire and increasing its economic contribution.
6. Encourage participation and responsibility	+/-	The facilitation of the development of new recycling and recovery facilities in Worcestershire will indirectly support increased responsibility by its communities for the waste they produce, although not necessarily for Herefordshire's communities. The WCS explicitly requires community participation in waste developments.
7. Promote new technologies	+	By facilitating the development of sites to divert waste from landfill and through support for climate change mitigation and adaptation and efficient use of energy, water and resources, the WCS will help to support the development of new, resource-efficient technologies for managing waste.
8. Promote energy efficiency and renewable/ low carbon generation	+	The WCS gives a strong emphasis on increasing energy efficiency by promoting energy recovery and renewable generation from landfill gas, and requiring waste developments to be energy efficient. The impact of the WCS on the use of energy for waste transport is unknown, although this is likely to be significantly smaller than the energy impact of the facilities themselves.
9. Protect and enhance water, soil and air	+	Policy requires the avoidance of adverse impacts on air, water and soil. Promotion of water efficiency, restricting greenfield development and using landfill to restore derelict land will also support the objective.
10. Improve quality and access to services	+	Requiring developers to provide facilities for recycling and composting in new developments will help to improve access to recycling services.
11. Safeguard and strengthen landscape quality	+	The WCS explicitly requires the protection and enhancement of landscapes therefore significant adverse effects are unlikely.
12. Conserve and enhance biodiversity and geodiversity	+/-	The WCS explicitly requires the protection and enhancement of biodiversity and geodiversity. However, five of the identified areas of search are very close to Special Wildlife Sites and therefore adverse impacts are likely at these sites; assessment and mitigation of effects should be a particular requirement for planning applications at these sites. Effects on European nature conservation sites are still to be assessed through the Habitats Regulations Assessment.
13. Improve health and well being	0	Health impacts from the WCS are unlikely if facilities are operated in accordance with good practice standards.

SA objectives	Assessment	Comments
14. Provide decent affordable housing for all	+/?	The zones in the geographic hierarchy are close to major settlements, and some of the identified areas of search are close to residential areas, and therefore effects on the quality of local residential environments are possible. However, policy requires developments to have no adverse effects on local amenity, therefore significant effects should be avoided. The significance and mitigation of possible effects on residential amenity should be taken into particular account in planning applications at these sites.
15. Raise skills levels	+	By facilitating the development of new waste management facilities and technologies, the policy may help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.
16. Conserve and enhance the historic and built environment	+/?	The WCS requires developments to contribute positively to built and historic assets, and promotes good design and resource-efficient developments. The methodology to identify areas of search takes into account designations of historical value and therefore significant effects are unlikely in the main. However, four of the areas of search are near to designated assets, including one which is within a conservation area. Therefore adverse effects are possible at these sites and assessment and mitigation of effects should be a particular requirement for planning applications at these sites.
17. Reduce crime and antisocial behaviour	+	Educating communities about sustainable waste management may help to reduce littering and fly tipping although this will not be significant for crime levels in Worcestershire overall.
18. Ensure efficient use of land	+/-	The WCS requires developments to be in existing buildings or on previously developed sites, which will help to maximise reuse and avoid impacts on open spaces. It also protects the green belt from inappropriate development. However, some adverse effects are possible on greenfield/agricultural/green belt land although the effect for the county as a whole is unlikely to be significant. The WCS is also likely to help increase the supply of secondary aggregates and reduce demand for virgin mineral resources although there are opportunities within the WCS to strengthen this. Landfill to restore previously developed or derelict land is promoted, and to provide open space for communities.

8.2.1 Conclusions

Support is given to the waste hierarchy across much of the WCS, and a strong emphasis is placed on mitigating and adapting to climate change and on energy efficiency and generation. This will reduce the emission of greenhouse gases from waste management activities. However, stronger encouragement could be given to prioritise recycling and composting over residual waste treatment, otherwise continued improvement beyond the targets may fail to happen. The adoption of a recycling target for C&I waste in addition to a recovery target would provide a more sustainable outcome.

The spatial strategy will help to limit waste transport distances by locating facilities close to the main centres of population. However, the exact effects on waste transport are uncertain, because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. Policies should require planning applications to demonstrate how a facility will be located to minimise the distance that waste is transported.

The WCS emphasises the protection and enhancement of natural, built and historic assets, although there is potential in the identified areas of search for adverse effects on biodiversity, air quality, historic assets, residential amenity, flood risk and open space, which should be a focus of assessment and mitigation at planning application stage.

The WCS is likely to give support to other sustainability objectives, particularly ensuring the efficient use of land, promotion of growth and innovation in the waste sector, and support for community responsibility for waste although not necessarily in Herefordshire. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.

8.3 CUMULATIVE EFFECTS

The SEA Directive requires assessment of an additional level of impacts in addition to straightforward direct impacts. These are specified as "secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative". The following approach has been taken to identifying such impacts.

A number of different types of impact are set out in European Commission guidance:

- separate developments causing the same impact – cumulative;
- different impacts acting together on a receptor eg air pollution and land take – cumulative;
- plan impacts which give rise to other indirect impacts – secondary; and
- different impacts which together give rise to yet another impact – cumulative and secondary.

There is therefore a need to consider both secondary and cumulative impacts in the appraisal. Secondary impacts were considered as an integral part of the main appraisal work, and this is indicated in the appraisal matrices in *Annex C* where impacts are either direct or indirect ie secondary. Certain other attributes are common to all types of impact: these are timescales (ie short, medium and long-term impacts), reversibility (ie permanent or temporary impacts) and whether the impacts are positive or negative. These attributes were also all considered as integral aspects of impact assessment, and this is

similarly indicated in the appraisal matrices in *Annex C*. Cumulative impacts are discussed in this section of the SA Report.

There are two types of situation which could give rise to cumulative impacts:

- the same effect arising from two or more different sources; and
- different effects where there is a relationship between the effects and potentially an interaction.

Synergistic effects are a type of cumulative impact. These are effects where the cumulative impact may be greater or smaller than the sum of the separate effects.

Cumulative impacts were considered in the appraisal in two ways:

- the potential for different developments to give rise to the same type of effect; and
- the potential for interaction between different types of effect.

In order to assess the cumulative impacts arising from all potential developments under the WCS, the appraisal considered the overall effect of the WCS as a whole on each of the SA objectives. The results of this are set out above in *Table 8.1* and *Section 8.2.1*.

The appraisal then considered the potential for effects arising from other plans and programmes which in combination with effects arising from the WCS may give rise to significant impacts. The results of the review of other plans and programmes and their potential to give rise to cumulative effects is set out in detail in *Annex E*. The findings are summarised below in *Table 8.2* and the conclusions are set out in *Section 8.3.1*

Table 8.2 Summary of Likely Significant Effects of JWCS and Other Plans and Programmes on Receptors

	Resource use (energy, water, minerals)	Waste generation	Climate change	Road networks	Alternatives to road	Flooding	Land use	Air quality	Ecosystems	Open space	Built and historic environment	Opportunities for CHP
WCS	+	+	+/?	?	?	+	+	+	+/-	+	+?	+
Regional Economic Strategy	-/+	-/+	-/+	-/+			+	?				
Economic Strategy for Worcestershire 2010 – 2020	-/?	-/?	-/?	-/?			-	?				
South Worcestershire Joint Core Strategy Preferred Options	-	-	-	-/+		?	+	?	?	?		+
Bromsgrove Draft Core Strategy 2	-	-	-	-/+	+		?	?		?		+
Redditch Revised Preferred Draft Core Strategy Document	-	-	-	-/+			?	?		-		
Wyre Forest Adopted Core Strategy	-	-	-	-/+		?		?				
Third Worcestershire Local Transport Plan				+				+				
Herefordshire Unitary Development Plan		-										
Birmingham Core Strategy Consultation Draft				-/+								
Warwickshire Waste Development Framework Core Strategy Revised Spatial Options		?		?								
Gloucestershire Waste Core Strategy Publication Version												
Shropshire Core Strategy Final Plan Publication				?				?	?			
Solihull Emerging Core Strategy				-				?	?			
Local Development Framework Directions for Stratford-on-Avon District Consultation Core Strategy				?				?	?			

8.3.1 Conclusions of Cumulative Impact Assessment

The following receptors have been identified as the most likely to be subject to cumulative effects. It should be noted that these receptors and their effects are all interrelated, for example effects on ecosystems are strongly related to air and water quality and land use, and effects on transport networks give rise to climate change and air quality effects. However, they have been selected on the basis that they are areas where the WCS is likely to have the impacts of greatest significance. Furthermore, all of the receptors have effects on and consequences for people.

- ***Resource use***. Several plans and strategies relevant to Worcestershire place a strong emphasis on economic and housing growth. This is likely to lead to increased resource use including energy, water and minerals, in order to facilitate the planned growth and development. However, the WCS will help to reduce the pressure on resource use through its positive effects on minimisation and recycling of waste and energy recovery, although the extent to which this will be able to offset the pressures of growth are not clear. There is also potential for the WCS to increase pressure on water resources in combination with the levels of growth planned for in other strategies, however the likely levels of consumption by waste facilities are unknown and development management policy requires developments to be water-efficient.

  Mitigation: It is recommended that the WCS gives greater support to the promotion of recycling by adopting targets for recycling of C&I waste and encouraging higher recycling of MSW, to support greater resource efficiency.

- ***Waste generation***. As with resource use, the growth and development expected to occur in Worcestershire is highly likely to lead to increased waste generation. The WCS includes measures to reduce waste generation in new development, although this is not likely to reduce significantly the effects of other plans and programmes.

  Mitigation: The County Council should press for continuous improvement in waste minimisation measures in Worcestershire, particularly through the Joint Municipal Waste Management Strategy, and for a strong emphasis on resource efficiency in all relevant plans and strategies including at regional level.

- ***Climate change***. The strong emphasis in other plans and programmes on housing and economic growth is likely to lead to increased greenhouse gas emissions and pressure for land for new development. Both of these effects are likely to have climate change consequences by increasing the risk of climate change occurring and adding to pressures from impacts such as flood risk and increased surface run-off due to land take. Although the WCS will help to reduce the emissions from waste management activities, it will not be able to offset all of the emissions arising from growth in the

county. It is also likely to add to land pressures through the need to seek sites for new waste management facilities, in some areas with flood risk constraints.

Mitigation: Flood Risk Assessments should be undertaken for proposed development in sites in areas of search within Flood Zone 2.

- ***Transport networks.*** The planned housing and economic growth in the county are likely to lead to increased road travel. A number of measures are planned to tackle the predicted increase, including demand management, promotion of public transport, highways improvements and rail network improvements. This will help to reduce the demand for road space and alleviate congestion, although the number of vehicles on the roads is nevertheless likely to increase. The effect of the WCS on the need for waste transport distances is currently uncertain. However, the Vision aims to promote opportunities for more sustainable modes of waste transport, although this is not echoed in policy and there are few synergies with other plans in this respect. The effect of waste development on local congestion is less clear as the scale and type of development on any particular site are unknown, and particularly in the medium and longer term when the effects of planned improvements are likely to take effect but are unknown at this stage.

  Mitigation: Assessment of impacts on waste transport distances and network congestion should be undertaken in any planning application for waste development. The WCS currently requires applicants for development to demonstrate no unacceptable impacts on congestion, but does not require an assessment of waste transport distances.

- ***Flooding.*** Growth in housing and jobs in the county will require substantial areas of land to accommodate the planned levels of development. This could place pressure on areas affected by flood risk particularly Worcester, Kidderminster, Stourport, Bewdley, Evesham, Pershore and to a lesser extent Upton. All of these towns are also identified in the hierarchy of towns for waste facilities, and therefore there is the potential for cumulative effects on flood risk particularly in Worcester and Kidderminster which are at the higher levels of the hierarchy. However, the WCS places a strong focus on avoidance of flood risk, although some areas of search are within Flood Zone 2.

  Mitigation: Flood Risk Assessments should be undertaken for proposed development in sites in areas of search within Flood Zone 2.

- ***Land use.*** A number of plans and programmes relevant to Worcestershire support housing growth and economic development. This is likely to lead to increased pressure for available sites with which waste developments will have to compete. The emphasis for waste development is on the use of previously developed land, as it is for housing and economic development.

Mitigation: None.

- ***Air quality.*** The main significant effects on air quality in the county are likely to arise from the increase in road traffic expected under a number of other plans and programmes (see above under transport networks). Measures to improve congestion may help to reduce the effect of increasing traffic on emissions, although the overall effect on emissions and air quality into the medium and longer term is uncertain. The effect of the WCS on air quality is also uncertain, mainly due to the uncertainty about likely emissions from developments but also uncertainty in possible effects on local congestion. These issues therefore need to be assessed in detail when developments come forward and appropriate avoidance or mitigation incorporated into the schemes. Policies in the WCS clearly require this.

  Mitigation: None.

- ***Ecosystems.*** There is the potential for cumulative effects on ecosystems arising from a number of plans and strategies, from the levels of housing and economic growth in the location of certain towns and also from specific developments at allocated sites. These effects are mainly linked to reductions in air quality. However, the likelihood of cumulative effects arising in combination with waste developments is unknown, due to the lack of detail about the scale and type of waste developments.

  Mitigation: Further assessment should be undertaken when more information is known about the nature of likely waste developments.

- ***Open space.*** Housing growth, particularly urban extensions which are planned for in other strategies, is likely to lead to a loss of open space which may be of value. The WCS focuses development on previously developed land, but several areas of search include currently undeveloped land. There is therefore the potential for cumulative effects on open spaces, particularly around Worcester and Kidderminster which are identified for significant levels of growth.

  Mitigation: Any planning applications which include the development of open space should be required to demonstrate that the land is not valuable open space.

- ***Combined Heat and Power.*** Levels of housing and economic growth planned for under various strategies could create opportunities for use of CHP in association with waste developments, particularly where urban extensions are envisaged. The use of CHP is promoted by the WCS.

  Mitigation: None.

8.4 RECOMMENDED MITIGATION

The following recommendations are made for mitigating the predicted adverse effects of the Submission WCS, in the light of the conclusions reached in *Sections 8.2* and *8.3* and also drawing on the mitigation recommended in *Section 6.3*.

Table 8.3 Mitigation Recommendations

No.	Recommendation
1	Stronger incentives should be given to prioritise recycling and composting over residual waste treatment, for example by requiring applicants for recovery facilities to demonstrate that reuse and recycling have been "maximised" rather than "optimised" in policy WCS2 and by adopting a recycling target for C&I waste.
2	The WCS should give explicit support to the recycling of construction and demolition waste onsite in development projects in policy WCS14.
3	Policies should require planning applications to demonstrate how a facility will be located to minimise waste miles, for example in policy WCS6.
4	The supporting text to policy WCS9 should include reference to the role of waste transport in increasing energy efficiency and reducing greenhouse gas emissions.
5	Applications for waste development should clearly show how impacts on flood risk, air quality, biodiversity, historic assets, residential amenity and open space will be avoided or enhancements delivered, for those sites in areas of search with constraints.
6	The WCS should promote flood risk reduction and water quality enhancement where practicable (WCS8).
7	WCS10 should require the avoidance or minimisation of effects on landscape character and the quality of the built environment, and enhancement where practicable.

In addition to the above recommendations for the content of the WCS, the County Council should also press for continuous improvement in waste minimisation measures in Worcestershire, particularly through the Joint Municipal Waste Management Strategy. It should also include, or seek, a strong emphasis on resource efficiency in all relevant plans and strategies including at regional level.

8.5 UNCERTAINTIES AND RISKS

There are a number of areas where there are uncertainties about the likely impacts of the WCS. These are set out below.

Some of these unknowns are due to the current lack of certainty about the development which will take place as a result of the WCS. Being technology-neutral, the WCS does not specify the type of recycling, composting or recovery facility which is sought in order to meet the identified capacity gap. It also does not specify the size of facilities which are sought, notably for recovery facilities, nor the number of facilities which are desired to meet the capacity gap. This is left for industry to determine. This is despite the

consideration of the issue of facility size at earlier stages of the WCS development, as set out in *Section 7.*

Section 8.29 of the WCS identifies a need for 283,500 tonnes of recovery capacity for MSW and C&I waste although it also suggests uncertainties about this figure. It also indicates that this may mean two facilities will be required to provide this capacity. A planning application was recently submitted for an Energy from Waste facility to treat 200,000 tpa of MSW. This is likely to be referred to the Secretary of State, and therefore it is not yet certain that the development will take place. There is, as yet, no indication of how the C&I waste might be recovered, or what additional capacity might be required.

The following are key areas where the likely impacts of the WCS are uncertain.

Air Quality

The main impacts will arise from emissions from waste facilities and transport, although the effects of transport will be small in comparison to the facilities themselves. The likely effect of developments on air quality is strongly dependent on the type and nature of developments which come forward, and any mitigation proposed, and is therefore unknown at this stage.

The Environmental Impact Assessment[1] for the proposed EfW facility at Hartlebury reports that the facility would have a negligible impact on air quality during operation, and low impacts during construction. However, additional facilities will be required to meet the identified capacity gap for recovery, recycling and composting, therefore the effects of the WCS as a whole are uncertain as their type, scale and location are unknown.

Waste Transport

The location of facilities will have a strong influence over waste transport distances, as will the methods by which waste is managed and the capacity, number and distribution of facilities. The overall balance of impacts on transport over time is therefore unclear, as many of these aspects of waste development in Worcestershire are still unknown. Monitoring is needed to better understand the amount of transport required for managing waste in Worcestershire and the scale of its contribution to levels of traffic overall.

Recommendations are made in *Section 8.4* for mitigation which would reduce the uncertainty over the effects on waste transport.

[1] Proposed Development of an Energy from Waste Facility on Land at Hartlebury Trading Estate: Environmental Statement Volume 3 Non Technical Summary, Mercia Waste Management, April 2010

The options appraisal[1] which accompanied the planning application for the EfW at Hartlebury made an assessment of likely transport distances, and estimated that the development would result in 1,203,000 km to be travelled by waste vehicles per annum. However, additional facilities will be required to meet the identified capacity gap for recovery, recycling and composting, therefore the effects of the WCS as a whole on transport are uncertain as their type, scale and location are unknown. Furthermore, it must be remembered that these movements will replace existing waste vehicle movements and not be in addition to them.

Greenhouse Gas Emissions

In order to estimate levels of greenhouse gas emissions, it is necessary to know precise information about waste management methods, including waste treatment, facility sizes and about likely waste transport distances. A more detailed, quantified assessment of emissions has not been possible as these aspects are still unknown.

The Environmental Impact Assessment[2] for the proposed EfW facility at Hartlebury reports that the facility would result in a reduction in greenhouse gas emissions of 7361 tonnes of CO_2 equivalents per annum. However, additional facilities will be required to meet the identified capacity gap for recovery, recycling and composting, therefore the effects of the WCS as a whole are uncertain as their type, scale and location are unknown, although the net effect of all these types of facility should be further reductions in greenhouse gas emissions.

Biodiversity

The effect on biodiversity is strongly dependent on site-specific circumstances, and also on the nature of developments and opportunities for mitigation. As yet there is insufficient information available about the scale and nature of developments and the likely effects on nature conservation value. The WCS has been amended to take account of the findings of the Habitats Regulations Assessment and therefore significant effects on European designated sites are unlikely. However, it has not been possible to assess the effect on biodiversity more generally. Insufficient information is available about undesignated biodiversity, existing local air quality and about the likely effects of facilities and waste transport on air quality.

Water Resources

Likely levels of water consumption are unknown, and dependent on particular technologies and design of facilities. Severn Trent Water's Water

[1] Hereford and Worcester Residual Waste Treatment Options Appraisal, Fichtner Consulting Engineers, April 2010

[2] Proposed Development of an Energy from Waste Facility on Land at Hartlebury Trading Estate: Environmental Statement Volume 3 Non Technical Summary, Mercia Waste Management, April 2010

Resource Management Plan[1] indicates that water resources are under pressure in the Severn resource zone including groundwater around Bromsgrove and Kidderminster. The analysis shows that the area continues to face a long-term supply/demand risk in the Severn zone and that the risk worsens over the period to 2035. By 2035 the supply shortfall is predicted to be around 145 Ml/d.

[1] Water Resources Management Plan Final Version, Severn Trent Water, June 2010

9 IMPLEMENTATION

9.1 LINKS TO OTHER TIERS OF PLANS AND STRATEGIES AND THE PROJECT LEVEL

9.1.1 Other Plans and Programmes

The WCS has links to other plans and strategies, at higher levels or county level, which set the overarching policy context. These have already been described in *Section 3.3*.

The WCS also has links with plans at lower tier authority level, notably those for waste collection arrangements. Implementation of the WCS will be strongly dependent on the nature and performance of waste collection activities by the individual districts, boroughs and city to enable the WCS to deliver on some of its objectives. This is particularly the case for achievement of recycling and composting performance and meeting the capacity targets for recycling and composting, recovery and landfill. The authorities need to work in partnership to ensure that plans and actions are coordinated to ensure that targets can be met in the most cost-efficient way.

9.1.2 Projects

The WCS sets the framework for the development consent of projects. It will achieve this in part through development management policies which list a range of issues which developers will be required to take into account when submitting planning applications for waste management facilities.

In addition, the monitoring recommendations presented below include data to be required from site operators on an annual basis to assess the ongoing impact of waste management facilities.

9.2 PROPOSALS FOR MONITORING

As required by the SEA Directive, a number of recommendations are made for indicators to monitor the likely significant impacts of the WCS. These are set out in *Table 9.1* corresponding to the relevant impacts identified and summarised in *Section 8.2.1*.

One of the aims of monitoring as specified by the SEA Directive is to identify unforeseen adverse effects in order to be able to take appropriate remedial action. To enable this to be done, recommendations are also made in *Table 9.1* for monitoring potential sustainability impacts which are not expected to occur as foreseen by the appraisal.

An Annual Monitoring Report will be produced to monitor the implementation of the WCS, and the recommendations given below for monitoring should be incorporated within this. Worcestershire County

Council should report annually on the following issues and suggested indicators.

Table 9.1 Monitoring Recommendations

Tonnages and % of waste arisings reused, recycled, composted, used for energy recovery, landfilled (potential links to NI 192 and 193):

- MSW
- C&I
- C&D
- Hazardous waste

MW of energy generated by:

- Thermal treatment;
- Anaerobic digestion;
- Landfill.

MW of CHP capacity.

Facility catchments and transport:

- Sources and destinations of waste, by quantity and type;
- Tonne-kilometres travelled by waste;
- No. of vehicle movements to and from sites;
- % of waste transported by different modes.

No. of developments with climate change mitigation and adaptation measures incorporated, by type of measure

Estimated greenhouse gas emissions from waste treatment facilities

No. of developments affecting:

- biodiversity or land of nature conservation value;
- landscape;
- geodiversity;
- congestion;
- historic assets.

Compliance/non-compliance with permit conditions:

- Water discharges;
- Air emissions: NOx; SO_2; PM10; CO_2; methane; other pollutants of public concern (dioxins and furans, PCBs) (potential links to NI 194);
- Pollution episodes.

Quality of land converted to waste uses, annual no. of hectares of:

- rural, urban or urban fringe;
- previously developed or undeveloped;
- green belt;
- amenity value;
- flood zones 2, 3a, 3b.

No. of developments providing integral recycling facilities

% of population within:

- 10km of a Household Recycling Centre;
- 5km of a recyclable collection point.

The indicators required to support the monitoring fall into four broad categories according to their likely source:

- data which is already collected by the County Council or lower tier authorities;
- data which WCC will need to collect;
- data which is collected by the Environment Agency; and
- data which needs to be collected from waste management operators.

10 NEXT STEPS

10.1 CONSULTATION ON SUBMISSION WCS

The Submission WCS will be issued for public consultation in late March 2011. Any consultation comments which are received on the Submission WCS will be considered by WCC and taken into account in the next stage of the development of the WCS, the Examination in Public. WCC will also take into account the results, conclusions and recommendations set out in this report on the SA of the Submission WCS.

10.2 SUBSEQUENT STAGES

Following the consultation on the Submission WCS, the WCS may potentially be further revised, and then will be submitted to the Secretary of State.

The submitted WCS will then be subject to an Examination in Public before an independent Inspector.

Assuming the WCS is found to be sound by the Inspector, the WCS will be adopted. At that stage, a post-adoption statement will be required for the SA to show how the SA has influenced the development of the WCS and to indicate the monitoring arrangements which will be put in place.

Annex A

Review of Policies, Plans and Programmes

Table A.1 Polices, Plans and Programmes Reviewed

International
Water Framework Directive
Waste Framework Directive
Landfill Directive
End of Life Vehicles Directive
Habitats Directive
Wild Birds Directive
Directive on Waste Electrical and Electronic Equipment
Air Quality Directive
National
UK Sustainable Development Strategy, Defra, March 2005
Natural Environment and Rural Communities Act 2006
Climate Change Act 2008
Planning Act 2008
The Air Quality Strategy for England, Scotland, Wales and Northern Ireland
Waste Strategy for England 2007, Defra, May 2007
Energy White Paper: Meeting the Energy Challenge
The UK Renewable Energy Strategy
Delivering a Sustainable Transport System
Transport White Paper: The Future of Transport – A Network for 2030
Safeguarding our Soils: A Soil Strategy for England
UK's National Strategy for Climate and Energy: Transition to a Low Carbon Society
Waste and Emissions Trading Act 2003
The Government's Statement on the Historic Environment for England 2010
Securing Biodiversity: A New Framework for Delivering Priority Habitats and Species in England
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
The UK Low Carbon Industrial Strategy
PPS1: Delivering Sustainable Development
PPS1 Supplement: Planning and Climate Change
PPG2: Green Belts
PPS5: Planning for the Historic Environment
PPS7: Sustainable Development in Rural Areas
PPS9: Biodiversity and Geological Conservation
PPS10: Planning for Sustainable Waste Management
PPG13: Transport
PPS22: Renewable Energy
PPG24: Planning and Noise
PPS25: Development and Flood Risk
West Midlands Region
Regional Economic Development Strategy
West Midlands Energy Strategy
Regional Sustainable Development Framework
England Rural Development Programme, West Midlands
County
Worcestershire County Structure Plan 1996 - 2011
The Third Worcestershire Local Transport Plan
Landscape Character Assessment
Partnership Towards Excellence – The Sustainable Community Strategy for Worcestershire Second Edition 2008 – 2013
Climate Change Strategy
Municipal Waste Strategy
Minerals Local Plan
An Economic Strategy for Worcestershire 2010–2020
Worcestershire County Council Corporate Plan
Learning and Skills Council Strategy for Sustainable Development

Worcestershire Biodiversity Action Plan
Other
Cotswold Area of Outstanding Natural Beauty Management Plan (2004)
Malvern Hills Area of Outstanding Natural Beauty Management Plan (2004)
H&W Social Enterprise Strategy
South Worcestershire Green Infrastructure Strategy

Table A.2 Implications Arising from the Review of Policies, Plans and Programmes

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
Landfill Directive	To prevent, or reduce, negative effects of waste management on the environment. Targets see waste strategy.	Objective relating to recovery, recycling and reuse of materials and pollution avoidance
Water Framework Directive	All surface and groundwater needs to be of good quality by 2015	Objective relating to water quality to be included
WEEE Directive	Sets measures to reduce, recycle and recover waste electrical and electronic equipment, and to minimise the risks and impacts to the environment associated with the treatment & disposal of these wastes	Objective relating to recovery, recycling and reuse of materials and pollution avoidance
ELVs Directive	Main requirements for members stats are to ensure that: • Producers limit the use of certain hazardous substances in the manufacture of new vehicles and automotive components; • ELV's are subject to de-pollution prior to dismantling, recycling or disposal; • Treatment facilities operate to higher environmental standards and have permits if dealing with under polluted ELVs; • Certain recovery targets are met by 01/01/06 and 01/01/15 and • By 2007, producers pay 'all or a significant part' of the cost of treating negative or nil value ELVs at treatment facilities.	Objective relating to recovery, recycling and reuse of materials and pollution avoidance
Waste Framework Directive	Member States are required: • To apply the "waste hierarchy" as a priority order in waste prevention and management legislation and policy; • To set up "separate collections" of waste for at least paper, metal, plastic and glass by 2015 where technically, environmentally and economically practicable. This applies to both household and business waste; • To recycle 50% of waste from households by 2020; • To recover 70% of construction and demolition waste by 2020; • To ensure that waste management is carried out without endangering human health, without harming the environment and, in particular: (a) without risk to water, air, soil, plants or animals; (b) without causing a nuisance through noise or odours; and (c) without adversely affecting the countryside or places of special interest. Member States must take measures to establish a network of disposal installations to enable them to move towards self-sufficiency. This must enable waste to be disposed of in one of the nearest appropriate installations, by means of the most appropriate methods and technologies in order to ensure a high level of protection for the environment and public health. Member States shall encourage the separate collection of bio-waste with a view to the composting	Ensure that sustainability objectives reflect these principles as appropriate, in particular promotion of the waste hierarchy, increased recycling and protection of the environment and health.

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	and digestion of bio-waste.	
Habitats Directive	Requires the protection of listed species. Plans and projects can only be permitted having ascertained no adverse effect on the integrity of an SAC, although may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest. Member States shall also endeavour to encourage the management of features of the landscape to support the network.	Include an objective on conserving and enhancing biodiversity
EU Wild Birds Directive	Requires the maintenance of the favourable conservation status of all wild bird species. Plans and projects can only be permitted having ascertained no adverse effect on the integrity of an SPA, although may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest. Member States shall also endeavour to encourage the management of features of the landscape to support the Natura 2000 network of which SPAs form a part.	Include an objective on conserving and enhancing biodiversity
Air Quality Directive	Aims to improve air quality throughout Europe by controlling the level of certain pollutants and monitoring their concentrations. In particular the Directive aims to establish levels for different air pollutants; draw up common methods for assessing air quality; methods to improve air quality; and make sure that information on air quality is easily accessible to Member States and the public.	Ensure that sustainability objectives reflect the need to protect and enhance air quality.
PPS 1 Delivering Sustainable Development	Planning should facilitate and promote sustainable and inclusive patterns of urban and rural development.	To ensure the requirement is reflected in the sustainability objectives
Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1	Planning authorities should expect new development to [inter alia] provide for sustainable waste management. In developing their core strategy and supporting local development documents, planning authorities should provide a framework that promotes and encourages renewable and low carbon energy generation. Policies should be designed to promote and not restrict renewable and low-carbon energy and supporting infrastructure. Low carbon energy supplies include those from energy-from-waste.	To include objective relating to climate change/atmospheric pollution
PPG 2 Green Belt	There is a general presumption against development that would harm the purposes of the designation.	To include an objective relating to reuse of previous developed land
PPS 5: Planning for the Historic Environment	The Government's objectives for planning for the historic environment are: • to deliver sustainable development by ensuring that policies and decisions concerning the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation; and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. • to conserve England's heritage assets in a manner appropriate to their significance by ensuring that o decisions are based on the nature, extent and level of that significance, investigated to a degree proportionate to the importance of the heritage asset o wherever possible, heritage assets are put to an appropriate and viable use that is consistent with their conservation	Ensure that sustainability objectives reflect these principles as appropriate.

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	o the positive contribution of such heritage assets to local character and sense of place is recognised and valued; and o consideration of the historic environment is integrated into planning policies, promoting place-shaping. • to contribute to our knowledge and understanding of our past by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available, particularly where a heritage asset is to be lost.	
PPS 7 Sustainable Development in Rural Areas	Amongst the governments objectives for rural areas is: • To promote more sustainable patterns of development; • Focusing development in, or next to, existing towns and villages; • Preventing urban sprawl; • Discouraging the development of Greenfield land; • Promoting a range of uses to maximise the potential benefits of the countryside fringing urban area; • Providing appropriate leisure uses. The conservation of the natural beauty of the landscape and countryside within designated AONB's is given great weight. Within Worcestershire there are two AONBs – the Cotswolds and Malvern Hills.	To include sustainability objective relating to rural regeneration and landscape protection
PPS 9 Nature Conservation	Key principles include the need for plan policies to be based upon up-to-date information about the environmental characteristics of their areas and should ensure that appropriate weight is attached to designated sites of international, national and local importance and the wider environment.	To ensure these requirements are reflected in the sustainability objectives
PPS10 Planning for Sustainable Waste Management	Key Planning Objectives: • help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for; • provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities; • help implement the national waste strategy, and supporting targets, are consistent with obligations required under European legislation and support and complement other guidance and legal controls such as those set out in the Waste Management Licensing Regulations 1994; • help secure the recovery or disposal of waste without endangering human health and without harming the environment, and enable waste to be disposed of in one of the nearest appropriate installations; • reflect the concerns and interests of communities, the needs of waste collection authorities, waste disposal authorities and business, and encourage competitiveness; • protect green belts but recognise the particular locational needs of some types of waste management facilities when defining detailed green belt boundaries and, in determining planning applications, that these locational needs, together with the wider environmental and economic benefits of sustainable waste management, are material considerations that should be	Ensure that sustainability objectives reflect these principles as appropriate

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	given significant weight in determining whether proposals should be given planning permission; • ensure the design and layout of new development supports sustainable waste management.	
PPG13 Transport	• Promote more sustainable transport choices for people and for moving freight by shaping the pattern of development and influencing the location, scale, density, design and mix of land uses. • Reduce the need to travel and the length of journeys • Make it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking and cycling.	Ensure that sustainability objectives reflect these principles as appropriate
PPS 22 Renewable Energy	10% of UK electricity from renewable energy sources by 2010 and to 20% by 2020. A key principle in realising the target is that renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.	To include objective relating to climate change/atmospheric pollution
PPG 24 Planning and noise	Outlines the considerations to be taken into account in determining planning applications both for noise-sensitive developments and for those activities which will generate noise. The aim of this guidance is to provide advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business.	Noted
PPS 25 Development and flood risk	To ensure that flood risk is taken into account at all stages in the planning process, to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk.	To address the issue of economic costs associated with natural hazards
Waste Strategy for England 2007	The Government's key objectives are to: • decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use; • meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020; • increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste; • secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and • get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.	To reflect objectives
National Air Quality Strategy	The Strategy sets objectives for eight main air pollutants to protect health. Within Worcestershire there are 3 local air quality management (LAQM) zones where this will be monitored.	To ensure that health and pollution objectives are covered
National Sustainable Development Strategy	Four broad objectives • Sustainable consumption and production – working towards achieving more with less. • Natural resource protection and environmental enhancement • From local to global, building sustainable communities	Ensure that issues are addressed through objectives

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	• Climate change and energy Overall objective of Government policy on waste is to protect human health and the environment by producing less waste and by using it as a resource wherever possible.	
Natural Environment and Rural Communities Act 2006	Places a biodiversity duty on public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.	Include an objective on conserving and enhancing biodiversity
Climate Change Act 2008	Sets emission reduction targets for 2020 and 2050. • to reduce the net UK carbon account for the year 2050 to at least 80% below the level of net UK emissions of targeted greenhouse gases in 1990. • the carbon budget for 2018-2022 must be set to reduce emissions of carbon dioxide by at least 26% by 2020, against 1990 levels. Also introduces a system of carbon budgeting which constrains the total amount of emissions in a given time period. Carbon budget periods will last five years, beginning with the period 2008-2012, and must be set three periods ahead. Sets out a procedure for assessing the risks of the impact of climate change for the UK, and a requirement on the Government to develop an adaptation programme on matters for which it is responsible. The Act also gives powers to direct persons or bodies with functions of a public nature and statutory undertakers on assessing the risks of climate change, the preparation of reports setting out policies and proposals for addressing those risks and assessing the progress made towards implementing those proposals and policies. Also includes: • a power to introduce charges for single use carrier bags; • a power to pilot local authority incentive schemes to encourage household waste minimisation and recycling; • powers and duties relating to the reporting of emissions by companies and other persons.	Ensure inclusion of climate change mitigation and adaptation measures, and assess the contribution of the CS to mitigation and adaptation objectives.
Planning Act 2008	Creates a new system of development consent for nationally significant infrastructure projects, covering certain types of energy, transport, water, wastewater and waste projects. A new independent body, the Infrastructure Planning Commission, will be responsible for examining applications for development consent for nationally significant infrastructure projects, and for deciding any such application when there is in force a relevant national policy statement. The Secretary of State will be responsible for determining an application for development consent where there is no national policy statement covering the relevant type of infrastructure. Changes are also being made in relation to local authorities' development plans, in particular the power of local planning authorities to decline to determine subsequent applications. The Secretary of State may make regulations providing for the imposition of a charge to be known as Community Infrastructure Levy (CIL). The overall purpose is to ensure that costs incurred in providing infrastructure to support the development of an area can be funded (wholly or partly) by owners or developers of land.	Noted

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
Energy White Paper: Meeting the Energy Challenge	Delivery of energy security and acceleration of the transition to a low carbon economy through saving energy, developing cleaner energy supplies and securing reliable energy at process set in competitive markets. Seeks the development of cleaner large scale electricity generation. There is scope for increased use of heat and distributed energy, and ensuring that the CHP option is considered. The target is for renewables to contribute 10% of electricity supplies 2010, with an aspiration for this level to double by 2020. Reducing transport energy use, through a combination of increasing fuel efficiency of vehicles and through choice of other transport modes.	Objectives to promote energy efficiency, increased energy generation including renewable energy generation, and increased transport efficiency.
The UK Renewable Energy Strategy	Put in place the mechanisms to provide financial support for renewable electricity and heat: extend and expand the Renewables Obligation for large-scale renewable generation. Increase investment in emerging technologies and pursue new sources of supply. Create new opportunities for individuals, communities and business to harness renewable energy: support investment in small-scale renewable heat and electricity generation; guidance for developers to share the benefits of large-scale projects with local communities; encourage greater adoption of renewables in central Government and the wider public sector.	Objectives to promote increased renewable energy generation.
Delivering a Sustainable Transport System	Goals include: • Reducing transport's emissions of CO_2 and other greenhouse gases, with the desired outcome of avoiding dangerous climate change. • Contributing to better health and longer life-expectancy through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health. • Improving quality of life for transport users and non-transport users, including through a healthy natural environment, with the desired outcome of improved well-being for all. Seeks to encourage modal shift and reduce the need to travel. Improving reliability and reducing congestion will be a priority. Enable people and freight to shift to lower carbon modes of transport such as the electrified railway.	Objecive on reducing the need for waste transport, promoting modal shift and reducing greenhouse gas emissions.
Transport White Paper: The Future of Transport – A Network for 2030	Balancing the need to travel with the need to improve quality of life. Keeping the environmental impacts of new and existing transport infrastructure to a minimum Deliver carbon savings and reduce the impact of other emissions which pollute the environment Reducing the impact of all forms of transport Ensuring that the noise impacts of transport are reduced and mitigated Reducing the impact of freight on congestion and the environment	Objecive on reducing the need for waste transport, promoting modal shift and reducing greenhouse gas emissions.

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	Encourage freight traffic to be shifted from road to rail or water where this makes sense	
Safeguarding our Soils: A Soil Strategy for England	Objectives include: • Better protection for agricultural soils, reducing the risk of degradation • Protecting and enhancing stores of soil carbon, including protecting valuable peat habitats • Preventing soil pollution, particularly from continued atmospheric deposition and the increase in the spreading of organic and inorganic materials to land • Effective soil protection during construction and development, supporting ecosystems, improving drainage and providing green space for communities, and taking sufficient account of soil quality particularly when significant areas of the best and most versatile agricultural land are involved. • Dealing with our legacy of contaminated land, promoting more sustainable remediation.	Objectives to protect and enhance soil quality and protect agricultural land and
UK's National Strategy for Climate and Energy: Transition to a Low Carbon Society	Sets out the Government's transition plan for becoming a low carbon country: cutting emissions, maintaining secure energy supplies, maximising economic opportunities, and protecting the most vulnerable. The plan seeks to: • build the UK's position as a global centre of green manufacturing in low carbon sectors. • support the development and use of clean technologies, including investment in offshore wind and marine energy. • Reduce the amount of waste sent to landfills, and better capture of landfill emissions. Targets for 2020 include: • UK emissions to be 18% below 2008 levels and over one third below 1990 levels. • 15% of all our energy – for electricity, heat and transport – from renewable sources. • Getting 40% of our electricity from low carbon sources. • Produce around 30% of our electricity from renewables. • Cut emissions from power and heavy industry together by 22% on 2008 levels. • Cut emissions from transport by 14% on 2008 levels. • Cut emissions from farming and waste by 6% on 2008 levels.	Objectives to promote new low-carbon technologies, increase renewable and low-carbon energy generation, reduce waste transport and reduce landfill of waste,
Waste and Emissions Trading Act 2003	Places a requirement on the Secretary of State to adopt a strategy to reduce the amount of biodegradable waste sent to landfill, including measures to achieve the targets by recycling, composting, biogas production, materials recovery or energy recovery.	Objectives to promote the waste hierarchy, reducing landfill and recovering energy and materials.
The Government's Statement on the Historic Environment for England 2010	Strategic aims include ensuring that all heritage assets are afforded an appropriate and effective level of protection, while allowing, where appropriate, for well-managed and intelligent change. In shaping places, Government at all levels must give priority to creating high quality environments for those who use them, developing and implementing policies which seek to retain local distinctiveness and give due weight to the obligation to protect, enhance and promote the historic environment. At the same time it is also important that the public sector continues to invest in our own significant historic estate, recognising the impact we have on quality of place.	Objectives to protect and enhance heritage assets and protect local environments

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
Securing Biodiversity: A New Framework for Delivering Priority Habitats and Species in England	Aims include to: • achieve biodiversity enhancements across whole landscapes and seascapes; • achieve our priority habitat targets through greater collective emphasis on habitat restoration and expansion; • support the restoration of designated sites, including by enhancing the wider countryside in which they sit;	Objective to protect and enhance biodiversity
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)	Country agencies may enter into management agreements to secure the conservation of a site, and provide for the control of potentially damaging operations, whereby consent from the country agency may only be granted once it has been shown through appropriate assessment that the proposed operation will not adversely affect the integrity of the site. However, an operation may proceed where there are no alternative solutions and which must be carried out for reasons of overriding public interest. In such instances the Secretary of State must secure compensation to ensure the overall integrity of the Natura 2000 system. It is an offence to deliberately capture, kill, disturb, or trade in the animals listed, or pick, collect, cut, uproot, destroy, or trade in the plants listed, except through the granting of licences Competent authorities should consider or review planning permission and restrict or revoke permission where the integrity of the site would be adversely affected.	Objective to protect and enhance biodiversity including designated sites, and incorporate the findings of a Habitats Regulations Assessment of the WCS.
The UK Low Carbon Industrial Strategy	Promotes an increase in British and global markets for low carbon goods and services, and also by using energy and other resources more efficiently to reduce costs. Promotes low carbon activities and priorities to become common across all parts of Britain, including greater energy efficiency, smarter low carbon procurement and the construction or retrofit of low carbon buildings.	Objectives to promote low carbon energy generation and energy efficiency.
Creating Advantage – The West Midlands Economic Strategy	Aims: • Increase wealth and make the most of competitiveness within West Midlands businesses through innovation. • Transform the West Midlands' economy by supporting the development of new and existing sectors to meet the demands of the future. • Develop a workforce that is highly skilled and can adapt to meet the challenges that will face businesses in the next 10 years. • Develop a culture of lifelong learning and continuous improvement. • Improve the movement of people, goods and services inside and outside the region. • Provide sites and premises of the right size and quality, and in the right place. • Encourage people to take part in economic and community life by targeting resources at communities and individuals that suffer poverty and social exclusion. • Develop the connections between public, private, voluntary and community sectors so we can support the complete development of the region to benefit everyone who lives here.	To reflect aims where relevant
England Rural Development Programme	Environmental, Social And Economic Goals: Environmental	To reflect goals where relevant

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
West Midlands	En1. Protect and enhance existing environmental assets and create new opportunities for environmental capital. En2. Improve people's understanding and appreciation of, access to, and involvement with, their environment. En3. To achieve economic and community benefits from the sustainable use of the region's assets. Social S1. Promote and develop sustainable rural communities and businesses. S2. Develop innovative solutions to meet the access needs of rural communities and businesses. S3. Stimulate community integration by greater ownership and understanding of the social, physical and economic environment Economic Ec1. Provide an environment conducive to start, grow, adapt and develop business competitiveness. Ec2. The provision of ICT and transport infrastructure that supports local development. Ec3. Foster a well advised, flexible and highly skilled workforce.	
West Midlands Regional Waste Planning Strategy (Draft)	The Region must play its part in delivering the targets set in the national waste. It is proposed that the national targets are adopted for the West Midlands (See National Waste Strategy, above). • Proximity Principle • Regional Self Sufficiency and County interdependency • Take account of Waste Hierarchy and BPEO • Encourage and promote waste reduction and reuse • Encourage the use of recycled materials in new developments and redevelopments.	Ensure that sustainability objectives reflect these principles as appropriate
West Midlands Energy Strategy	The strategy wants to achieve the following • Improved energy efficiency • Increased use of renewable energy • Business benefiting from commercial opportunities • Focused and practical delivery	Ensure that sustainability objectives reflect these principles as appropriate
Regional Sustainable Development Framework	Principles: • Putting people and the community first • A holistic view • Whole-life costing • Living within our means • The Precautionary Principle • The perpetrator pays • Embracing diversity • Valuing the environment • Consideration beyond the region Objectives • Developing thriving sustainable communities	Ensure that sustainability objectives reflect these principles and objectives as appropriate

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	• Enhance and protect the environment • Ensure prudent and efficient use of natural resources • Develop a flourishing, diverse and stable regional economy	
Worcestershire County Structure Plan	Objectives of the plan include seeking a reduction in the consumption of energy and finite resources through the more efficient use of resources, recycling, the use of renewable sources and the reduction in the amount of waste produced.	That the SA framework incorporates the land use sustainable development framework.
Worcestershire County Council Corporate Plan	Details the County Council's priorities: • Improving Community Safety; • Raising Standards in Schools; • Improving Highways, Footways & Transport Services; • Supporting Older People to Live Independent Lives; • Strengthening Worcestershire's Economy; and • Enhancing Services to Young People.	Objective relating to the creation of economic growth.
From Here to Sustainability: The Learning and Skills Council's Strategy for Sustainable Development	The LSC's vision is that the learning and skills sector will proactively commit and contribute to sustainable development through its management of resources, the learning opportunities it delivers and its engagement with communities.	
The Third Worcestershire Local Transport Plan	Objectives include: • To support Worcestershire's economic competitiveness and growth through delivering a reliable and efficient transport network • To reduce the impacts of transport in Worcestershire on the local environment, by reducing noise and transport-related emissions of carbon dioxide and other greenhouse gases • To enhance the quality of Worcestershire's Transport Asset, through sensitive and appropriate design with the desired outcome of reducing the costs and inconvenience of maintenance works.	Objectives relating to reduction of transport and greenhouse gas emissions.
Landscape Character Assessment (Worcestershire)	Ensure that new development or land use change is informed by and sympathetic to the landscape character of the locality. Within Worcestershire there are identified 22 different landscape types	Include sustainability objectives relate to conservation of landscape quality and character
Worcestershire Sustainable Community Strategy	Sets out 29 priority outcomes that the strategy will address, including: • To reduce harmful climate change causing gas emissions across the county • To assist adaptation to the impacts of climate change on the county • To enhance Worcestershire's countryside and urban greenspace and appropriate access to them while protecting the natural and historic environment • To maximise the diversion of waste away from landfill through prevention, re-use, recycling/composting and recovery • To address issues of water quality, supply, and consumption and land	To ensure sustainability objectives relate to climate change mitigation and adaptation, protecting and enhancing the natural and historic environment, promoting the waste hierarchy, energy efficiency, economic growth and

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
	• drainage in Worcestershire • To increase energy efficiency and increase the proportion of energy generated from renewable sources • To promote technology-led growth benefiting all sectors and parts of the county	new technologies.
Worcestershire Climate Change Strategy	Sets the target to reduce climate change causing gas emissions across the County by a minimum of 10% from 2005 levels by 2011 and 20% by 2020 and prepare land uses for adaptation to consequences of climate change.	To have an objective relating to The target of reducing climate change gas emissions.
Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004-2034	Aims to change the way that municipal waste is managed in Herefordshire and Worcestershire over the next 20 – 25 years through Our principles are as follows: • Meeting the challenge of Climate Change by viewing waste as a resource; • Commitment to the Waste Hierarchy of which Waste Prevention is the top; • Influencing Government, Waste Producers and the Wider Community; • Continued Commitment to Re-use, Recycling and Composting; • Minimising The Use Of Landfill; • Partnership; • Monitoring and Review; • Customer Focus; • Value for Money; • Consideration of Social, Environmental and Economic Impacts	To include an objective that covers the targets relating to reduction in waste generated and increase proportion recycled
Minerals Local Plan	Hard rock quarries are identified as a potential source for waste disposal, which in turn can aid restoration to former land levels. However only one site remains in operation and other sites have a restoration scheme already in place.	To include an objective relating to reuse of previously developed land
An Economic Strategy for Worcestershire 2010–2020	In ten years time, technology-led growth will have contributed to the sustainable development of Worcestershire and strengthened its role as an economic driver for the region – acting as a catalyst for all sectors of the economy and areas of the County to benefit and providing well paid and highly skilled jobs and high quality of life for residents. Three strategic objectives: 1. To support the development of a dynamic and diverse business base through engagement with existing businesses and encouraging growth of new businesses 2. Supporting the sustainable development of the county through infrastructure development especially transport, and continue supporting Worcester as an accessible West Midlands Growth Point 3. To enhance employability levels removing barriers to employment and improving skills	Objectives relating to the creation of economic growth and new technologies.
Worcestershire Biodiversity Action Plan	Contains details of 19 priority habitats and 20 species occurring in the County with typically five year plans for action.	Objective to conserve and enhance biodiversity
AONB Management Plans (Cotswold & Malvern Hills)	For both AONBs the central aim is the conservation and protection of the landscape.	Include sustainability objectives that relate to landscape quality and character.

Document	Key objectives/targets/guidance relevant to the WCS and SA	Implications for SA
Herefordshire & Worcestershire Social Enterprise Strategy	The strategy has five high level objectives: • Grow the social enterprise economy • Form a sustainable social economy • Increase access to local services • Enable access to quality employment • Coordinate sector development and resourcing.	Objectives to improve access to services and to support economic growth.
South Worcestershire Green Infrastructure Strategy	Contains a series of principles designed to protect and enhance the green infrastructure network around Worcester, addressing the following issues: • Landscape character • Historic environment • Biodiversity • Woodland • Recreation and tourism • Natural processes and environmental systems • Structural greenspace • Access and movement	Objectives to protect and enhance landscape character, historic environment, biodiversity, natural assets, open spaces and transport.

Annex B

Sustainability Baseline

Table B.1 Key Sustainability Issues and Trends

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Waste	The WCS estimates that in 2010, 1,591,000 tonnes of waste were produced in Worcestershire. Of this, the three main waste streams were as follows: • Municipal waste: 405,000 tonnes (25%) • Commercial and industrial waste: 598,500 tonnes (38%) • Construction and demolition waste: 510,500 tonnes (32%) In terms of household waste, Worcestershire residents produced an average of 613kg per household in 2009/10, compared to 1036kg for England as a whole. This has shown a reduction on recent years, from 637kg in 2008/09 and 689kg in 2007/08. In 2009/10, Worcestershire recycled 45% of municipal waste. This compares to 40% for England. 45% of municipal waste in Worcestershire was landfilled in 2009/10, compared to 47% in England as a whole. Worcestershire produced 321,000 tonnes of industrial waste in 2002/03 of which 38% percent was recycled or re-used. Worcestershire produced 307,000 tonnes of commercial waste in 2002/03 of which 31% percent was recycled re-used.	Without a planning framework to promote delivery of new waste facilities, waste will continue to be landfilled and future recycling and recovery targets are unlikely to be met. Landfill space will run out more quickly than anticipated with a need to find new sites within the county.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Climate Change	In 2008, Worcestershire's CO_2 emissions were 4799Kt. A third (32%) of the CO_2 emissions from Worcestershire were produced by industry and commerce, 30% from the domestic sector and 37% from transport. Between 2005 and 2008, CO_2 emissions from each of these sectors declined, although their relative proportions stayed similar. In 2008, Worcestershire emitted 8.4 tonnes per capita, more than the West Midlands average (7.9 tonnes per capita) and UK average (8.0 tonnes per capita). **County's Climatic Norms** (1961-1990 av): Mean max temperature 13.4C; Mean min temp 4.9C; Mean annual rainfall 669mm **Predicted changes in climate:** 2020 Temperature: Winter max +1.8C; Summer Max +1.4C 2020 Precipitation: Winter + 5%; Summer –12% 2080 Temperature: Winter max +1.9 - 3.2C; Summer Max +3.6 - 6.1C 2080 Precipitation: Winter +13 - 22%; Summer – 29 - 48% Likely to be increased incidences of intense rainfall, drought & heat waves in the future leading to increased risk of flooding, subsidence, water shortages, outdoor fires. The area of the indicative floodplain (2000) is approximately 22,300 ha. The Vale of Evesham is among the driest areas of England and Wales. Other areas within Worcestershire may also potentially be affected by water shortages in the future.	**Mitigation of Climate Change** If nothing is done to prevent an increase in amount of waste produced and waste is not managed appropriately there will be an increase in CO_2e emissions attributable to Worcestershire's waste (including methane). These emissions will contribute towards increased magnitude of climatic change **Adaptation to Climate Change** If the WCS does not take predicted climate change into account, flooding, health & safety problems could occur or be exacerbated e.g. increased risk of pests & disease associated with waste collection & disposal; increased fire, subsidence & instability risk on landfill. If facilities are not well-located to minimse waste transport, the WCS could lead to waste being transported over greater distances which will increase the amounts of CO_2 being produced.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Flooding	The area of indicative floodplain (2000) is approximately 22,300ha. Approximately 10% of the county is at risk of flooding, principally from the rivers Severn, Teme, Avon and Stour. Currently, 3.5% of properties (9039 properties) in Worcestershire are at risk of a 1 in 1000 year flood event and 1.8% (4653 properties) are at risk of a 1 in 100 year flood. Since 2009, there has been a reduction of 4% in the number of properties at risk of a 1 in 100 year flood and a reduction of 12% at risk of a 1 in 1000 year flood. An explanation for this decrease is that the watercourse of the River Teme through Worcestershire has changed over the last 12 months as has the Barbourne Brook. In the summer of 2007. Worcestershire received around 300% more rainfall than the average for the time of year. This led to widespread flooding and distruption of services Countywide. Local weather data provided by Wychavon District Council shows that 20th July was the wettest day in 2007 when 143.5 mm rainfall were recorded. The wettest day the previous year was recorded as 34.4 mm rainfall, 109.1mm less than the equivalent in 2007. There were also 8 days of rainfall exceeding 20mm and 93 days of rainfall greater than 2mm and 2007 had a total annual rainfall of 965.7mm (annual rainfall for 2006 was 553.5)	Climate change projections suggest that frequency of flooding is due to increase. There are no clear links between the WCS and flooding.
Transport	The limited number of river crossings is a key cause of congestion in Worcester with 77,000 movements across the City Centre Worcester Bridge and the A440 Carrington Bridge each day. Most problematic congestion points in the County: eastwest river crossing movements in Worcester, A456 Kidderminster Ring Road, A38 Bromsgrove-M42 junction 7 and A4184 Evesham Town Centre. Worcestershire's roads are far safer now than in 1990s. Worcestershire's roads are generally in good condition and improving. There is relatively little traffic congestion on the County's road network. Vulnerability to problems with bridges exacerbated by previous lack of investment in maintenance. Poor access to national rail services and poor reliability on local rail services. Potential key rights of way are sometimes unsuitable to provide access for all to the local services that they link to. Currently no major rail freight facilities located within Worcestershire.	Potential inappropriate use of road network for waste transport. Congestion in and around waste disposal sites

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Growth with prosperity for all	Median household income in Worcestershire in 2009 was £30,700, which compares favourably with the West Midlands in (£27,896) and England (£29,722). Although income increased consistently for 4 years, 2009 did see a decrease, probably due to the national recession. Between April 2008 and March 2009 the employment rate for working age people in Worcestershire was 77.8%, which was ahead of the West Midlands (71.3%) and England (74.0%). Further analysis at district level reveals Bromsgrove has the highest employment rate in Worcestershire. On the other hand, employment rates in Wyre Forest appear to be lower than county-wide and national comparators, but still slightly ahead of the regional figures. In terms of new businesses, 2,455 new enterprises were recorded in Worcestershire in 2008. The rate of new business enterprises in Worcestershire has fallen by 10.1% from 2004-2008, which is a greater fall than regionally or nationally. GVA per resident head for Worcestershire is £16,074, compared to the West Midlands at £17,044, and England at £20,458, and evidence suggests the gap is widening. Total number of people employed in recycling businesses in 2003 was 103 (sic Class 37)	Minimal impact.
Participation by all	One of the aims of the County Council is to provide a voice for the people of Worcester. 92% of residents think it is important that the Council keeps them informed about its services and policies (MORI Communications Survey November 2002). There is a direct correlation between how well informed people feel and how satisfied they are with the Council: 75% of those who don't feel well informed are dissatisfied with the Council overall, compared to only 21% of those who do feel well informed (MORI) In 2007/08 all of the districts collected materials from the kerbside of more than 90% of their households, with Redditch and Worcester providing 96% coverage and Malvern Hills 100%. By the end of 2008/09, Wychavon had also expanded its kerbside recycling scheme to 100% of properties and all other districts were providing over 93% of households with a recycling service.	Lessens the opportunity for promoting waste minimisation
Technology, innovations and inward investment	The business base of Worcestershire is concentrated towards public administration, education and health with the sector accounting for 26.3% of the county's employment, which is closely followed by distribution, hotels and restaurants at 25.2% of the county's employment. Employment concentration in banking, finance and insurance is high in Worcestershire at 17.1%, with 16.7% employed in manufacturing. In most respects the employment profile of Worcestershire is broadly similar to that of the West Midlands region.	Inward investment with regards to waste to develop the new technologies that will be required may not be attracted if there is no Waste Core Strategy in place.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Energy generation and use	Limited information is available for energy from renewable sources in Worcestershire, but potential sources of renewable energy generation include solar, biogas, energy crops, wind power and hydroelectricity. Figures for the total final energy consumption per capita (in GWh) for each local authority area have been produced by the Department for Energy and Climate Change. In Worcestershire, the figures for 2008 are as follows: Bromsgrove: 3,089.6 (2006 figure: 3,236.1) Malvern Hills: 2,337.4 (2006 figure: 2,378.1) Redditch: 1,908.5 (2006 figure: 2,089.6) Worcester: 1,802.2 (2006 figure: 1,979.3) Wychavon: 4,441.4 (2006 figure: 4,738.0) Wyre Forest: 1962.4 (2006 figure: 2,095.3) Worcestershire: 15,541.5 (2006 figure: 16,516) An estimated 5% of total renewable energy in the West Midlands comes from Worcestershire. Most of this will likely be from landfill gas. There are several wood-fuel, ground source and solar systems in operation. Biofuel is on sale at one location in county. Work is currently being undertaken to investigate feasibility of producing energy from biogas by biodigestion of organic domestic, commercial and agricultural waste. Also biodiesel from waste vegetable oil.	Amount of energy used in County is likely to increase, especially use of fossil fuels. It is likely opportunities to produce energy from waste and to use CHP will be lost. Waste collection & disposal may not be energy efficient. It is likely opportunities to use renewable energy to power waste collection, recycling & disposal could be lost. Amount of waste produced may not be reduced. (Waste reduction is the most energy efficient method of managing waste)

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Landscape	The Worcestershire Landscape Character Assessment identifies and describes 23 different landscape types that occur in the County. Within the landscape there are numerous historic townscapes – including 147 conservation areas. The County contains parts of two areas designated as Areas of Outstanding Natural Beauty (AONBs), due to their recognised high landscape interest. These are the Costwolds (to the south of the County) and the Malvern Hills (to the west of the County). The tranquillity of the landscape has been mapped by the Campaign to Protect Rural England (at Herefordshire & Worcestershire level). The map shows that for major parts of Worcester City, Bromsgrove District and Redditch Borough there are very few areas of real tranquillity remaining. There are large parts of Malvern Hills and Wychavon districts that are still very tranquil. About a quarter of the county is designated as green belt.	The 23 different landscape types have been identified. This is a defined result from a process of assessment, based upon physical factors and cultural evolution. The number of landscape types and their extent will not change as a result of the Waste Core Strategy (WCS), or indeed any other strategy or policy document for which an SEA or SA is required. Similarly, the number of AONBs within the county, and their extent, is not going to change as a result of the WCS. Landscape character impacts on landscape condition. The creation of landfill sites would continue with the associated problems of landscaping. The creation of new, pronounced landforms associated with landfill sites can generally be integrated into the landscape as 'extensions' of similar adjacent topography, providing the appropriate tree cover and hedgerow structures can be introduced to them.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Biodiversity, Flora and Fauna	There are 111 Sites of Special Scientific Interest (SSSIs) in Worcestershire, occupying 2.72% of the county's area (3,763 ha). Across the county, the percentage of SSSI area classed as favourable or recovering was 93.3% at 1 April 2010. The condition of SSSIs within Worcestershire districts is as follows: Bromsgrove: 13 SSSIs (154.61ha). 55% in favourable or recovering condition. Malvern Hills: 43 SSSIs (1112.25ha). 99% in favourable or recovering condition. Redditch: 6 SSSIs (54.73ha). 100% in favourable or recovering condition. Worcester: 2 SSSIs (6.14ha). 100% in favourable or recovering condition. Wychavon: 32 SSSIs (906.06ha). 91% in favourable or recovering condition. Wyre Forest: 18 SSSIs (1361.69ha). 94% in favourable or recovering condition. There are 2 Special Areas of Conservation (SACs) in Worcestershire: Bredon Hill SAC has been designated because of the presence of the Violet Click Beetle (Limoniscus violaceus), as it is one of just three known locations in the UK. The UK SAC data form for the site states that the main threats are the lack of a replacement generation of trees for the current ancient trees over much of the hill, as many of the younger trees have been removed to increase stock grazing areas; the overall number of ancient trees suitable for Limoniscus violaceus is relatively small. Management agreements are being used to preserve existing tree stocks and to provide replacement planting. Lyppard Grange Ponds SAC has been designated for Great Crested Newts (*Triturus cristatus*). The UK SAC data form states that the site is composed of two ponds in an area of public open space surrounded by residential development. The site is vulnerable to the effects of recreational pressure from the public and in particular the introduction of fish, which affect the suitability of ponds as breeding habitats for great crested newts. One of the ponds is currently overrun with sticklebacks which is affecting the long-term survival of the newt population at the current level. A series of measures, including the notification of the site as an SSSI, development of a Management Plan, the implementation of an action plan to remove stickleback and construction of hibernacula and refugia and water management systems, are being undertaken to secure the conservation of the newt population. In 2010, there were approximately 460 Special Wildlife Sites (SWS) in Worcestershire. There are approximately 90 Regionally Important Geological/Geomorphological Sites (RIGS) in Worcestershire. SWS and RIGS are known collectively as 'Local Sites'. **Local sites under positive management regimes** | | Biodiversity sites | Geodiversity sites | | Bromsgrove | 21.5% | 80.0% | | Malvern Hills | 24.6% | 39.7% | | Redditch | 36.4% | 0.0% | | Worcester City | 77.8% | 0.0% | | Wychavon | 35.8% | 31.3% | | Wyre Forest | 31.1% | 37.5% | | Worcestershire | 29.3% | 40.2% | Worcestershire has 11 National Nature Reserves, 25 Local Nature Reserves and 5,848ha of ancient semi-natural woodland. The Biodiversity Action Plan was revised and re-launched in 2008 and now provides a plan of action for 19 priority habitats and 25 priority species.	Degradation of wider biodiversity interests arising from direct and indirect impacts of the waste management infrastructure.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Natural Resources (air, water and soil)	**Soil Quality** The majority of soils are Grade 3 in the agricultural land classification but significant areas of Grade 1 and 2 also occur. Worcestershire County Council's 'Planning for Soils' research paper suggest that the amount of land falling within Agricultural Land Classifications (in hectares) is as follows: Grade 1, 4,834; Grade 2, 28,884; Grade 3, 110,578; Grade 4, 17,135; Grade 5, 411; Non-agricultural, 2,526; Urban, 9,683. The research paper notes that no regional assessment of agricultural land has been identified, but the following figures for Grade 1 agricultural land (in hectares) in neighbouring counties are known: Warwickshire: 105; Shropshire: 10; Gloucestershire: 2,883; Herefordshire: 8,961. **Air Quality** There are currently 9 AQMAs which have been declared in Worcestershire, due to poor air quality, with several of these having recently been declared. The AQMAs are associated with busy arterial and main roads and are: Welch Gate, Kidderminster; Horsefair, Kidderminster; Redditch Road, Stoke Heath; Kidderminster Road, Hagley; Lickey End, Bromsgrove; Port Street, Evesham; Newport Street/Dolday, Worcester; Lowesmoor/Rainbow Hill, Worcester; Newtown Road, Worcester. **Water Quality** To compare the quality of water, the Environment Agency uses Water Framework Directive (WFD) classifications. 82 river and canal water bodies fall wholly or partially within Worcestershire County representing around 700 kilometres of watercourse. 6 water bodies have been designated as 'artificial', 12 as 'heavily modified' water bodies. These water bodies must meet Good Ecological Potential (GEP). The remaining 64 'natural' water bodies are required to meet Good Ecological Status (GES). 2010 data states that 10 of Worcestershire's watercourses are rated as 'Good'; 56 as 'Moderate'; 11 as 'Poor'; and 5 as 'Bad'. Worcestershire Water Courses do not compare very favourably with watercourses in the wider area. Within the Midlands region, 22% of watercourses are designated as good, compared to 8% within Worcestershire. Within the River Severn basin, 29% of the watercourses have a good status. Nationally, 26% of rivers have a good status. Kidderminster and Bromsgrove overlie a major aquifer of high vulnerability which spreads south along the line of the Severn; its southern extent is approximately level with Droitwich..	Potential contamination by inappropriate/illegal disposal of waste and contaminants. Without the Waste Core Strategy, facilities may be built in inappropriate locations that may give rise to traffic congestion. This in turn could lead to air pollution. Even without the Waste Core Strategy pollution controls would largely be met through existing environmental controls and legislation.
Access to services	In Worcestershire in 2008/09, 93% of people had access by public transport, walking and cycling to healthcare (hospitals and GP surgeries); education (primary, secondary and higher education sites); food shops; and employment sites. In 2008, 79% of working age people in Worcestershire had access to employment by public transport (and other specified modes). This is the same level as in 2007. A full range of services and facilities are available to the local population, including various social, leisure, cultural and religious buildings, along with schools, health centres, clinics and hospitals. There are 602 community buildings including village halls and community centres in Worcestershire. There are 152 Super Output Areas (approximately 42%) within Worcestershire that are ranked within the top 20% most deprived areas nationally in terms of their distance from a range of key local services. 47 areas (approx. 13%) are within the top 5%, and 7 areas (approx. 2%) are within the top 1%.	There will be less incentive for developers to include recycling facilities within new housing developments.

<table>
<tr><th>Sustainability issues</th><th>Characteristics</th><th>Likely evolution of baseline hout implementation of WCS</th></tr>
<tr><td>Health</td><td>ONS statistics reveal that for the period 2006-2008, male life expectancy in Worcestershire at birth is 76.6 and female life expectancy at birth is 82.5. This compares to the West Midlands regional figures of 77.2 years for males and 81.6 years for females, and the UK figures of 77.5 years for males and 81.7 years for females.
Self Assessed Health as Resident Population %
<table><tr><th>District</th><th>Good</th><th>Fairly Good</th><th>Not Good</th></tr><tr><td>Worcestershire</td><td>69.7%</td><td>22.3%</td><td>8.0%</td></tr><tr><td>Redditch</td><td>70.2%</td><td>21.9%</td><td>8.0%</td></tr><tr><td>Wychavon</td><td>70.4%</td><td>22.2%</td><td>7.4%</td></tr><tr><td>Malvern Hills</td><td>69.1%</td><td>22.5%</td><td>8.4%</td></tr><tr><td>City of Worcester</td><td>69.9%</td><td>22.3%</td><td>7.8%</td></tr><tr><td>Bromsgrove</td><td>71.1%</td><td>21.2%</td><td>7.7%</td></tr><tr><td>Wyre Forest</td><td>67.5%</td><td>23.7%</td><td>8.9%</td></tr></table>There are approximately 177 medical and health care establishments in Worcestershire, including GP Surgeries, dentist and NHS Hospitals.
In the United Kingdom in 1999 there were nearly 74,000 admissions to hospital due to asthma.
In 2000, annual hospital admission rates for asthma were 48 per 10,000 children aged under 5 years and 16 per 10,000 children aged 5 to 14 years.</td><td>People’s mental health may decrease if the environment they live in suffers from fly tipping due to insufficient infrastructure in place where people can dispose of rubbish.</td></tr>
<tr><td>Provision of housing</td><td>Number of households with residents 223,049.
9,244 houses are described as being overcrowded.
The average household size in Worcestershire is 2.39 persons.
632 of households in Worcestershire do not have their own bath/shower and toilet.
13,742 households in Worcestershire do not have central heating.
169,629 houses are owner occupied.
There are 5,967 vacant household spaces.</td><td>No impact</td></tr>
</table>

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Population 1 (learning and skills)	The 2009-10 Worcestershire Economic Assessment shows that across Worcestershire, 28% of the population aged 19-retirement age was qualified to Level 4 or higher in 2008. This is below the average for England (31%), but higher than for the West Midlands (26%). Percentages are highest in Worcester (37%) and Malvern Hills (35%) and lowest in Wyre Forest (22%) and Redditch (23%). Almost 49% of the population were qualified to Level 3 or above in Worcestershire, compared to 45% for the West Midlands and 50% for England. However, a greater proportion of the Worcestershire population is qualified to Level 2 or higher than the national average. Nearly 72% of the 19-retirement age population is qualified to this level in Worcestershire, compared to 69% nationally.	Without the promotion of new high technology waste management solutions, skills in this sector are unlikely to be affected.

Highest Qualification Held by People of Working Age

District	Level 2 or higher	Level 3 or higher	Level 4 or higher
Malvern Hills	74.9%	54.3%	35.0%
Wychavon	73.0%	49.8%	26.3%
Bromsgrove	71.6%	46.7%	28.2%
Wyre Forest	66.3%	40.9%	22.0%
City of Worcester	73.6%	57.8%	37.0%
Redditch	70.7%	44.8%	22.6%
Worcestershire	71.5%	48.9%	28.2%
West Midlands	65.8%	45.2%	26.2%
England	69.4%	49.5%	30.5%

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Cultural heritage, built design and archaeology	There are nearly 6,000 listed buildings in the county, together with 485 scheduled ancient monuments, 147 conservation areas, 1 registered battlefield, 15 historic parks and gardens, and over 22,000 entries on the County Historic Environment Record. The 2010 Heritage at Risk register states that there are a total of 47 heritage assets classified as being 'at risk' in Worcestershire, comprising 4 Conservation Areas; 28 Scheduled Monuments; 2 Registered Parks & Gardens; and 13 Buildings listed at Grades I and II*. The district breakdown of heritage at risk is provided in the following table:	Minimal impact.

	Conservation Areas*	Scheduled Monuments	Reg. Parks & Gardens	Buildings at Risk
Bromsgrove	1	6	1	2
Malvern Hills	1	7	0	2
Redditch	0	0	0	0
Worcester	2	1	0	3
Wychavon	0	14	1	4
Wyre Forest	0	0	0	2

* It should be noted that the survey of Conservation Areas at risk is not yet comprehensive, and that not all districts have been able to undertake condition surveys. The actual number of Conservation Areas at Risk could therefore be higher than indicated.

Sustainability issues	Characteristics	Likely evolution of baseline hout implementation of WCS
Population 2 (anti social behaviour, crime, litter and graffiti)	Crime statistics from WCC Research & Intelligence show that between April 2009 and March 2010, 33,790 crimes were recorded in Worcestershire. This is a reduction of 6.48% compared to 2008/09. Urban areas of Worcestershire saw the highest crime rates, with Worcester City having the highest (8 offences per 1,000 people). Over the last 4 years, the peak crime level occurred in October 2006, when 3,483 crimes were recorded. Crime levels have continued to slowly decline with a 14.82% decrease between April 2006 and March 2010. The lowest number of crimes over the four year period was recorded in December 2009, when 2,427 crimes were recorded. The most common type of crime over the four year period was criminal damage. In 2008/09, there were 8,308 criminal damage offences in Worcestershire, comprising 23% of total crime. Criminal damage offences decreased in 2009/10, when there were 6,861 offences, comprising 20% of total crime. Crime figures for 2009/10 are listed below: Criminal damage 20.3% Other thefts 10.9% Thefts from a motor vehicle 8.9% Thefts of a motor vehicle 2.3% Non-domestic Burglary 7.2% Dwelling burglary 3.8% Violent Crime 14.8%	No impact.
Material assets (including land use & local amenity)	Construction aggregates make up most of the mineral output of the County. Worcestershire provides about 1 million tonnes or 7% of the annual aggregates apportionment of the West Midlands region. Sand, gravel clay, moulding sand and limestone are the materials being commercially exploited both at present and in the foreseeable future. The main sand and gravel resources in the County occur in solid deposits in north Worcestershire, terrace deposits along the Rivers Severn and Avon and fan deposits to the south and east of Bredon Hill, close to the County boundary with Gloucestershire. The Abberley/Suckley/Malvern Hills, the edge of the Cotswolds near Broadway, and Bredon Hill contain the hard rock resources of the County, whereas brick clay is found near Hartlebury. The enjoyment of the countryside is a key pull factor for many visitors to the County. 172 access and informal recreation sites were identified in the 2010 Worcestershire Access and Informal Recreation Strategy. About a quarter of the county is designated as green belt.	Use of primary aggregates will continue to increase.

Annex C

Appraisal of Vision and Policies

Key:

Impacts	Significance	Probability of effects	Direct or indirect effects	Reversibility
+ positive impact - negative impact 0 no significant impact ? impact unknown Ø not relevant Multiple symbols are used to indicate differential scale of effects	Low significance Medium significance High significance	L low probability M medium probability H high probability	D direct effect I indirect effect	✓ reversible effect × not reversible ie permanent effect

Table C.1 Assessment of Vision

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	+	+	The vision explicitly promotes the waste hierarchy.	H	D	✓/×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	0	+	+	By promoting the waste hierarchy the vision will support the reduction of greenhouse gas emissions from waste management activities. The vision explicitly promotes climate change mitigation and adaptation.	H	I/D	✓/×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0	+	+	The vision does not specifically address flood risk issues, although by promoting climate change adaptation it may indirectly support the reduction and management of flood risk.	M	I	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	0	+/?	+/?	The vision seeks to locate facilities where movement by road is minimised, thereby reducing waste transport and encouraging more sustainable modes. However, large recovery facilities may not minimise waste transport, although this depends on the number of facilities and their location.	H	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	0	+	+	Recognises the importance and contribution of waste management to the economy, although this will not be a major contribution to the knowledge-driven economy or skills base. Rural areas are unlikely to benefit significantly.	H	D	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	0	+/-	+/-	Aims to promote community-wide responsibility for waste, although does not address participation in decision-making. By providing facilities to deal with Herefordshire's municipal waste in Worcestershire, the vision does not necessarily promote community responsibility for waste in Herefordshire.	H	D	✓
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	+	+	Promoting the waste hierarchy is likely indirectly to support the development of new resource efficient and environmental technologies.	H	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	0	0	0	Energy recovery from waste is not explicitly promoted although it is implied through the waste hierarchy.	M	I	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	0	+	+	Aims to avoid compromising environmental assets. Minimsing road transport should also help to protect air quality.	M	D	✓/×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	+	+	The vision seeks to locate facilities to serve communities.	H	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	0	+	+	The vision seeks to avoid compromising local characteristics and environmental and cultural assets and for developments to complement their surroundings, which	H	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				should help to protect landscape quality and character.			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	0	+	+	Aims to avoid damage to environmental assets, which should include biodiversity assets. Also reflects the findings of the Habitats Regulations Assessment to ensure no likely significant effects on European sites.	H	D	✓
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	?	?	Seeks to minimise adverse impacts generally, although vision does not specifically address effects on human health and amenity.	L	D	✓
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	?	?	Seeks to avoid compromising local characteristics and environmental and cultural assets. This may help to protect residential environments but vision does not specifically address effects on health and amenity.	L	D	✓
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant to vision			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	0	+	+	Aims to avoid damage to cultural assets, which should include the historic and built environment. Also seeks to promote good design which complements the surroundings.	H	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and	0	+/?	+/?	By promoting the waste hierarchy, the vision will help to support the use of secondary aggregates thereby reducing the need for virgin minerals. The vision also directs development to land which has had a previous economic use, and therefore the risk of impacts on greenfield land is	H/L	I/D	✓/×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
biodiversity interest.				reduced but still possible, and impacts on the greenbelt and agricultural land are also possible although the likelihood is unknown. However, the vision aims to protect environmental assets and local characteristics, therefore impacts on open space should be minimised and on biodiversity avoided.			
Summary	The vision explicitly promotes the waste hierarchy, which will support the reduction of greenhouse gas emissions and promote greater resource efficiency. However, recovery of energy is not explicitly promoted, but implied through the waste hierarchy. The vision also promotes climate change mitigation and adaptation and therefore is likely to reduce emissions of greenhouse gases and promote flood risk management. Energy use and greenhouse gas emissions will also be reduced through the desire to locate facilities so that they serve communities, minimising road transport and indirectly supporting rail and water freight. However, large recovery facilities may not minimise waste transport, although this depends also on the number of facilities and their location. The vision aims to promote community-wide responsibility for waste, although by providing facilities in Worcestershire for Herefordshire's municipal waste, it does not necessarily support community responsibility in Herefordshire. It also supports the economic contribution of waste management and is likely indirectly to support the development of new technologies. In seeking to avoid damage to environmental and cultural assets, the vision will help to ensure protection of air, water, soil, landscape, biodiversity and the built and historic environment, although it does not specifically address the potential for effects on health and amenity. The effects on the use of greenfield, agricultural and green belt land are unclear but the risk should be low.						
Mitigation	The vision should explicitly promote energy recovery. The vision should explicitly seek to protect human health and amenity.						

Table C.2 Policy WCS1: Reuse and Recycling

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	+	+	The policy promotes new reuse and recycling facilities and therefore encourages the management of waste at higher levels of the waste hierarchy than currently.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	+	By enabling development of reuse and recycling facilities, the policy will help to reduce greenhouse gas emissions. However, it is not possible to estimate the scale of reductions as the amount and type of recycling/composting is not clear, which will have a direct influence on the climate change effects of waste management.	H	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	?	?	?	Areas of flood risk occur throughout the county, but particularly in the Worcester and Kidderminster/Stourport zones in level 1 and Droitwich zone in level 2. However, the likelihood of effects on flood risk is dependent on the specific location of any development within those zones rather than the zones themselves. Some of the areas of search could have an uncertain impact on flood risk as indicated in Annex F but this will depend on the nature and location of the development.	L	D	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	?	?	?	It is not possible to quantify the amount of waste transport required to implement the WCS because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. However, the methodology by which the areas of search have been identified has taken into account	L	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				the possibility for rail and water transport, and the location in relation to the estimated scale of arisings and markets for resources. Some of the areas of search perform better than others against these two criteria, as shown in Annex F, and alternative transport modes are encouraged in policy WCS6.			
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	+	+	By facilitating the development of reuse and recycling facilities, the policy will indirectly help to support the economic growth of the waste sector and supporting infrastructure and skills, although this will be a relatively small contribution to the knowledge economy as a whole.	M	I	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	+/-	+/-	+/-	Although not relevant to participation, the facilitation of the development of new waste facilities in Worcestershire will indirectly support increased responsibility by its communities for the waste they produce, although not necessarily for Herefordshire's communities.	H	I	×
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	+	+	+	The policy will help to support the development of new, more resource-efficient technologies and innovation through support for new methods of managing waste.	M	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	+	+	+	The spatial strategy specifically aims to locate facilities near to the centres of population and therefore is likely to limit waste transport distances and therefore fuel consumption by vehicles.	M	D	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	+/?/?	+/?/?	+/?/?	The methodology to identify areas of search takes into account the location of Source Protection Zones and therefore will help to protect water quality. Air quality and in	H/L	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				particular proximity to Air Quality Management Areas, and impacts on water quality more broadly, are not taken into account, but this is more appropriately dealt with through development control policy when likely impacts can be more accurately assessed. Some sites have an uncertain impact on air and soil quality, as indicated in Annex F, although the significance for soil quality within the county as a whole is likely to be low.			
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	?	?	?	None of the identified areas of search are within AONBs and therefore significant effects on areas of high landscape quality are unlikely. The methodology to identify appropriate sites prevents development in AONBs. Other areas of landscape quality will be protected through the implementation of policies WCS7, WCS9 and WCS10. The Malvern zone and Pershore zone may be very close to the AONBs, although the significance of any effects depends on the type of facility which is developed in those zones and on WCS10 which protects landscape quality of AONBs.	H	D	×
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	+/-	+/-	?	All significant biodiversity and geodiversity designations are taken into account in the methodology to identify areas of search, therefore significant adverse effects are unlikely in the main. However, five of the identified areas of search are very close to Special Wildlife	H/M	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				Sites and therefore adverse impacts are likely at these sites and assessment and mitigation of effects should be a particular requirement for planning applications at these sites. Likely impacts on protected species and species and habitats identified in Biodiversity Action Plans will be protected through implementation of policy WCS7.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Health effects are unlikely if facilities are operated according to good practice standards and in line with permit conditions.	H	I	×
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	?	?	?	The zones in the geographic hierarchy are close to major settlements and therefore have the potential to affect residential areas. A number of the identified areas of search are in close proximity to residential areas, and therefore significant effects on the quality of local residential environments are possible. It is not possible to assess the likelihood of significant effects at this stage as this is dependent on the type of development, design and exact location within areas of search, although some of the areas of search are very near to residential areas and there is a greater risk of effects than for other areas where residential areas are more distant. However, policy WCS11 requires developments to have no adverse effects on local amenity, therefore significant effects should be avoided. The significance and mitigation of possible effects on residential amenity should be taken into particular account in planning applications at these sites.	L	I	×
Population (learning and skills)	?	?	?	By facilitating the development of new	L	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
15. Raise the skills level and qualifications of the workforce.				waste management facilities and technologies, the policy may help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+/?	+/?	?	Dependent on specific locations for facilities and the type and design of development rather than location within the geographic hierarchy and therefore is more strongly dependent on policies WCS7 WCS9 and WCS10, and significant effects are unlikely in the main. However, four of the sites are near to designated assets, including one which is within a conservation area. Therefore adverse effects are possible at these sites and assessment and mitigation of effects should be a particular requirement for planning applications at these sites.	H/M	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+/-	+/-	?	Dependent on specific locations for facilities and the type and design of development rather than location within the geographic hierarchy. All of the identified areas of search are on industrial estates/sites and therefore development is most likely to take place on previously developed or previously disturbed land. The methodology for identifying suitable locations for development will help to focus development on similar land, although it is possible that greenfield sites may also be appropriate (eg land with use rights for waste management purposes, land adjoining a sewage treatment works,	H	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				curtilage of agricultural/forestry buildings). However, some of the areas of search contain undeveloped land, or are within the green belt where development could reduce openness, as are geographic zones 1 and 2, therefore adverse effects on open land and/or agricultural land and/or green belt are possible or in some cases likely. However, the effect on such land for the county as a whole is unlikely to be significant.			
Summary	The policy facilitates the waste hierarchy, increased resource efficiency and reduced greenhouse gas emissions by enabling reuse and recycling facilities. This will help to promote community responsibility for waste and the development of the waste sector and new technologies. The spatial strategy specifically aims to locate facilities near to the centres of population and therefore is likely to limit waste transport distances and reduce emissions of greenhouse gases and other pollutants. This will help to ensure community responsibility for waste. However, by providing facilities in Worcestershire for Herefordshire's municipal waste, it does not necessarily support community responsibility for waste in Herefordshire and is likely to promote relatively long transport distances for waste from Herefordshire. It is not possible to quantify the amount of waste transport required to implement the WCS because it is not known how many facilities will be required nor of what capacity or type, all of which have an effect on the amount of waste transport required. Alternative modes to road transport are taken into account in the identification of areas of search, and encouraged in other policy. Significant impacts on air, water and soil quality and landscape are unlikely, although some adverse impacts on flood risk, biodiversity, heritage assets, open land and the quality of local residential environments are possible at some sites.						
Mitigation	Require planning applications to demonstrate the impact of development of a facility on waste transport distances. The assessment and mitigation of effects on flood risk, biodiversity, heritage assets and local residential amenity should be a particular requirement for planning applications at certain specific sites (flood risk at sites 5, 9, 23, 29, 30, 31, 33; air quality at sites 3, 6, 7, 8, 25, 36-39; biodiversity at sites 3, 4, 5, 19, 64; heritage assets at sites 9, 11, 15, 28; residential amenity at sites 2, 3, 5, 6, 7, 9, 10, 11, 12, 21, 22, 24, 25, 26, 29, 31, 32, 34, 39, 42, 47, 48, 50, 52, 63, 64).						

Table C.3 Policy WCS2: Other Recovery

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	+/?	+/?	The policy promotes development of recovery facilities and therefore encourages the management of waste at higher levels of the waste hierarchy than currently. It requires recovery facilities to demonstrate that reuse and recycling has been "optimised" although it is not clear what this would mean. Support for the waste hierarchy could be strengthened by requiring reuse and recycling to be maximised instead.	M	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	0	+	+	By enabling development of recovery facilities and requiring energy recovery, the policy will help to reduce greenhouse gas emissions. However, it is not possible to estimate the scale of reductions as the type of technology which will be implemented is not clear, which has a direct influence on the climate change effects of waste management.	H	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0	?	?	Areas of flood risk occur throughout the county, but particularly in the Worcester and Kidderminster/Stourport zones in level 1 and Droitwich zone in level 2. However, the likelihood of effects on flood risk is dependent on the specific location of any development within those zones rather than the zones themselves. Some of the areas of search could have an uncertain impact on flood risk as indicated in Annex F but this will depend on the nature and location of the development.	L	D	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	0	?	?	It is not possible to quantify the amount of waste transport required to implement the WCS because it is not known which of the	L	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				areas of search might be developed for waste management purposes, nor the number, type or capacity of facility which might be developed, all of which have an effect on the amount of waste transport required. However, the methodology by which the areas of search have been identified has taken into account the possibility for rail and water transport, and the location in relation to the estimated scale of arisings and markets for resources. Some of the areas of search perform better than others against these two criteria, as shown in Annex F, and alternative transport modes are encouraged in policy WCS6. Looking solely at the 5 locations suitable for strategic facilities in relation to the distance from centres of population, and by implication from the main sources of waste to be managed at those sites, sites no. 15, 42 and 45 are much closer to the main settlements than sites 51 and 53. Waste transport would be minimised through development at these three sites in comparison to sites 47 and 53.			
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	0	+	+	By facilitating the development of recovery facilities, the policy will indirectly help to support the economic growth of the waste sector and supporting infrastructure and skills, although this will be a relatively small contribution to the knowledge economy as a whole.	M	I	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility	0	+/-	+/-	Although not relevant to participation, the facilitation of the development of new waste facilities in Worcestershire will indirectly support increased responsibility by its communities for the waste they	H	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
in the local community.				produce, although not necessarily for Herefordshire's communities.			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	+	+	The policy will help to support the development of new, more resource-efficient technologies and innovation through support for new methods of managing waste.	M	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	0	+	+	By facilitating the development of recovery facilities and by requiring energy recovery from treatment facilities, the policy is likely to support the increased generation of energy from waste, although this is dependent on the type of facility and technology employed. Most of the areas of search are industrial estates and therefore may have some potential for implementation of CHP, as indicated in Annex F.	H	D	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	0	+/0/?	+/0/?	The methodology to identify areas of search takes into account the location of Source Protection Zones and therefore will help to protect water quality. Air quality and in particular proximity to Air Quality Management Areas, and impacts on water quality more broadly, are not taken into account, but this is more appropriately dealt with through development control policy when likely impacts can be more accurately assessed. Some sites have an uncertain impact on soil and air quality, as indicated in Annex F, although the significance for soil quality within the county as a whole is likely to be low.	H/L	D	×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
age, gender, ethnicity, disability, socio-economic status or educational attainment.							
Landscape 11. Safeguard and strengthen landscape character and quality.	0	?	?	None of the identified areas of search are within AONBs and therefore significant effects on areas of high landscape quality are unlikely. The methodology to identify appropriate sites prevents development in AONBs. Other areas of landscape quality will be protected through the implementation of policies WCS7, WCS9 and WCS10. The Malvern zone and Pershore zone may be very close to the AONBs, although the significance of any effects depends on the type of facility which is developed in those zones and on WCS10 which protects landscape quality of AONBs.	H	D	×
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	0	+	?	All significant biodiversity and geodiversity designations are taken into account in the methodology to identify areas of search, therefore significant adverse effects are unlikely in the main. The policy takes into account the findings of the Habitats Regulations Assessment and therefore significant impacts on European sites are unlikely. Five of the identified areas of search are very close to Special Wildlife Sites although none of these are identified as suitable for development of strategic facilities and therefore adverse impacts are unlikely. Likely impacts on protected species and species and habitats identified in Biodiversity Action Plans will be protected through implementation of policy WCS7.	H	D	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Health effects are unlikely if facilities are operated according to good practice standards and in line with permit	H	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				conditions.			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	?	?	The zones in the geographic hierarchy are close to major settlements and therefore have the potential to affect residential areas. A number of the identified areas of search are in close proximity to residential areas, one of which is identified as an area for development of strategic facilities, and therefore significant effects on the quality of local residential environments are possible. It is not possible to assess the likelihood of significant effects at this stage as this is dependent on the type of development, design and exact location within areas of search, although some of the areas of search are very near to residential areas and there is a greater risk of effects than for other areas where residential areas are more distant. However, policy WCS11 requires developments to have no adverse effects on local amenity, therefore significant effects should be avoided. The significance and mitigation of possible effects on residential amenity should be taken into particular account in planning applications at this site.	L	I	×
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	0	?	?	By facilitating the development of new waste management facilities and technologies, the policy may help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.	L	I	×
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	0	+/?	?	Dependent on specific locations for facilities and the type and design of development rather than location within the geographic hierarchy and therefore is more strongly dependent on policy WCS7, and significant effects are unlikely in the main. However, four of the sites are near to	H/M	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				designated assets, including one which is identified as appropriate for development of strategic facilities area. Therefore adverse effects are possible at this site and assessment and mitigation of effects should be a particular requirement for planning applications at this site.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	0	+/-	?	Dependent on specific locations for facilities and the type and design of development rather than location within the geographic hierarchy. All of the identified areas of search are on industrial estates/sites and therefore development is most likely to take place on previously developed or previously disturbed land. The methodology for identifying suitable locations for development will help to focus development on similar land, although it is possible that greenfield sites may also be appropriate (eg land with use rights for waste management purposes, land adjoining a sewage treatment works, curtilage of agricultural/forestry buildings). However, some of the areas of search and geographic zones 1 and 2 are within or contain green belt where development could reduce openness, including one site which is identified as appropriate for development of strategic facilities, therefore adverse effects on green belt are possible.	H	D	×
Summary	The policy facilitates the waste hierarchy, increased resource efficiency and reduced greenhouse gas emissions by enabling recovery facilities and promoting energy generation from waste. This will help to promote community responsibility for waste and the development of the waste sector and new technologies. However, the policy does not give a strong impetus						

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
	to the waste hierarchy as it is not clear what "optimised" reuse and recycling means and therefore does not clearly promote recycling and reuse in preference to other recovery. The spatial strategy specifically aims to locate facilities near to the centres of population and therefore is likely to limit waste transport distances and reduce emissions of greenhouse gases and other pollutants. This will help to ensure community responsibility for waste. However, by providing facilities in Worcestershire for Herefordshire's municipal waste, it does not necessarily support community responsibility for waste in Herefordshire and is likely to promote relatively long transport distances for waste from Herefordshire. It is not possible to quantify the amount of waste transport required to implement the WCS because it is not known how many facilities will be required nor of what capacity or type, all of which have an effect on the amount of waste transport required. Alternative modes to road transport are taken into account in the identification of areas of search, and encouraged in other policy. Significant impacts on air, water and soil quality and landscape are unlikely, although some adverse impacts on flood risk, biodiversity, heritage assets, open land and the quality of local residential environments are possible at some sites. However, three of the five locations for strategic facilities are much closer to the likely sources of arisings than the other two. Many of the locations are likely to have some potential for use of CHP therefore encouraging low carbon and renewable energy.			
Mitigation	Require planning applications for recovery facilities to demonstrate that reuse and recycling has been "maximised" rather than "optimised". Require planning applications to demonstrate the impact of development of a facility on waste transport distances. The assessment and mitigation of effects on flood risk, air quality, biodiversity, heritage assets and local residential amenity should be a particular requirement for planning applications at certain specific sites (flood risk at sites 5, 9, 23, 29, 30, 31, 33; air quality at sites 3, 6, 7, 8, 25, 36-39; biodiversity at sites 3, 4, 5, 19, 64; heritage assets at sites 9, 11, 15, 28; residential amenity at sites 2, 3, 5, 6, 7, 9, 10, 11, 12, 21, 22, 24, 25, 26, 29, 31, 32, 34, 39, 42, 47, 48, 50, 52, 63, 64).						

Table C.4 Policy WCS3: Landfill and Disposal

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	+	+	The policy only allows development of new landfill facilities under certain circumstances, and therefore encourages the management of waste at higher levels of the waste hierarchy than currently.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	+	By restricting landfill development and requiring landfill gas management, the policy will help to reduce greenhouse gas emissions. However, it is not possible to estimate the scale of reductions as the amount of recycling/composting and recovery is not clear, nor is the type of technology which will be implemented, both of which have a direct influence on the climate change effects of waste management.	H	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	-	-	-	By restricting the development of landfill, the policy is likely to promote greater waste transport distances by requiring the multiple handling of waste streams. It is not possible to quantify the amount of waste transport required to implement the WCS because it is not known which of the large number of areas of search might be developed for waste management purposes, nor the number, type or capacity of facilities which might be developed, all of which have an effect on the amount of waste transport required.	L	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	+	+	By restricting landfill development, the policy will encourage the development of reuse, recycling and recovery facilities and therefore will indirectly help to support the economic growth of the waste sector and supporting infrastructure and skills, although this will be a relatively small contribution to the knowledge economy as a whole.	M	I	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	+	+	+	Although not relevant to participation, the restriction of new waste facilities in Worcestershire will indirectly support increased responsibility by its communities for the waste they produce.	H	I	×
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	+	+	+	The policy will indirectly help to support the development of new, more resource-efficient technologies and innovation through restriction of landfill development.	M	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	+	+	+	By requiring energy recovery from landfill facilities, the policy is likely to support the increased generation of renewable energy from waste, although the amount generated will reduce with reduced landfill of biodegradable waste.	H	D	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	?	?	?	By restricting the development of new landfill sites, the policy may help to protect the quality of water and soil and air, although emissions new recovery facilities also have the potential to affect air quality. However, the likelihood of effects is more strongly dependent on the location of sites, development control policies and operational standards including at landfill sites.	L	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	0	0	+	Landfill restoration schemes can help to improve the local landscape after landfill sites have closed. However, few if any new landfills will be built, therefore this is unlikely to significantly affect the quality of landscape in the county overall.	L	D	×
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	0	0	+	Landfill restoration schemes could provide help to improve the local landscape after landfill sites have closed. However, few if any new landfills will be built, therefore this is unlikely to significantly affect the quality of landscape in the county overall.	L	D	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Health effects are unlikely if facilities are operated according to good practice standards and in line with permit conditions.	H	I	×
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Relevant to choice of location of facilities and design.			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	?	?	?	By restricting the development of landfill, the policy will encourage the development of new waste management facilities and technologies and therefore may indirectly help to raise skills levels, although this is unlikely to be significant for the county's workforce as a whole.	L	I	×
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Relevant to choice of location of facilities and design.			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	Ø	Ø	Ø	Relevant to choice of location of facilities.			
Summary	The policy facilitates the waste hierarchy, increased resource efficiency, reduced greenhouse gas emissions and renewable energy generation by restricting the development of new landfill sites and by promoting energy generation from landfill gas. This will help to promote community responsibility for waste and the development of the waste sector and new technologies. By restricting the development of landfill, the policy is likely to promote greater waste transport distances by requiring the multiple handling of waste streams. However, it is not possible to quantify the amount of waste transport required to implement the WCS because insufficient detail is known about the likely locations, number, types and capacities of facilities that will be developed.						
Mitigation	None						

Table C.5 Policy WCS4: Compatible Land Uses

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	0	0	The policy does not indicate preference for any particular level of the waste hierarchy above any other, therefore does not give any clear impetus to moving waste up the waste hierarchy.	M		
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	Ø	Ø	Ø	Not relevant			
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Dependent on choice of location rather than type of land use.			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	+	The policy supports the co-location of waste facilities and therefore may help to reduce the need to transport waste.	M	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			
Energy generation and use	0	+	+	The supporting text indicates that co-	H	D	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.				location with end users of heat or energy produced by a facility is encouraged, thereby supporting the reuse of energy from waste, some of which will be renewable energy, and increased energy efficiency.			
Natural resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy discourages location on greenfield land, helping to protect soil quality.	H	I	×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Dependent on choice of location and design standards rather than type of land use.			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Dependent on specific locations and their biodiversity value rather than type of land use.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	The policy is unlikely to affect health and health inequalities.	H		
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	?	?	?	By promoting the development of facilities on industrial and employment land or mineral or agricultural/forestry sites, facilities should be located in areas which are less likely to affect residential environments than if they were located on other land, although the likelihood and significance of effects depends on individual locations/circumstances, the type of facility and standards of design. However, policy WCS11 directly requires developments to have no adverse effects on local amenity, therefore significant effects	L	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				should be avoided.			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Dependent on specific locations and their heritage value rather than type of land use.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+/-	+/-	?	The policy discourages greenfield development unless strongly justified, therefore it is likely to help maximise use of previously developed land and buildings and protect open space. However, it is possible that greenfield sites may also be appropriate (eg land with use rights for waste management purposes, land adjoining a sewage treatment works, curtilage of agricultural/forestry buildings), therefore adverse effects on open land and/or agricultural land are possible or in some cases likely. However, the effect on such land for the county as a whole is unlikely to be significant.	H	D	×
Summary	The policy is likely to help protect soil quality and to maximise the use of previously developed land by directing development to appropriate types of land use. Although adverse effects on some types of open land are possible or in some cases likely, this is unlikely to be significant for the county as a whole. The policy promotes co-location with other waste uses and therefore may help to reduce the need to transport waste. It also supports co-location with users of heat and energy, and therefore will help to promote energy efficiency and reuse, some of which is likely to be renewable.						
Mitigation	None.						

Table C.6 Policy WCS5: Development Associated with Existing Temporary Facilities

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	0	0	The policy does not indicate preference for any particular level of the waste hierarchy above any other, therefore does not give any clear impetus to moving waste up the waste hierarchy.	M		
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	Ø	Ø	Ø	Not relevant			
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Dependent on choice of specific location.			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	?	The policy enables the temporary co-location of some types of facility and therefore may help to reduce the need to transport waste.	M	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Not relevant			
Natural resources 9. Protect and enhance the quality of water, soil and air.	0	?	?	The policy prevents adverse impacts on site restoration and therefore is likely to help to ensure restoration of soil quality on certain sites such as mineral workings and landfill sites, although this depends on the existence of such conditions on the original activity.	L	I	✓
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	0	+	+	The policy prevents adverse impacts on site restoration and therefore is likely to help to ensure restoration of landscape on certain sites such as mineral workings and landfill sites, although this depends on the existence of such conditions on the original activity.	M	D	✓
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	0	?	?	The policy prevents adverse impacts on site restoration and therefore may help to ensure biodiversity enhancement on certain sites such as mineral workings and landfill sites, although this depends on the existence of such conditions on the original activity.	L	I	✓
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	The policy is unlikely to affect health and health inequalities.	H		
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant			
Population (learning and skills)	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
15. Raise the skills level and qualifications of the workforce.							
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Dependent on choice of specific location.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+	+	?	The policy enables the temporary co-location of some types of facility and therefore may help to encourage the use of previously developed or previously disturbed land.	H	I	✓
Summary	The policy is likely to help protect soil quality and to maximise the use of previously developed or previously disturbed land by enabling the temporary co-location of some types of facility. This may also help to reduce the need to transport waste. By preventing adverse impacts on site restoration, the policy may also help to ensure restoration of landscape, improvement of soil quality and provision of biodiversity enhancement, although these are also dependent on the existence of such restoration conditions on the original activity.						
Mitigation	None.						

Table C.7 Policy WCS6: Site Infrastructure and Access

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	Ø	Ø	Ø	Not relevant			
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	?	The supporting text emphasises that water shortages could frustrate development and therefore the policy may help to ensure that developments consider and adapt to future impacts of climate change, although it is not explicitly addressed by the policy. Adapting to climate change impacts is more directly addressed in policies WCS8 and WCS9.	L	I	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	+	The policy promotes alternatives to road transport thereby promoting more sustainable travel patterns. The supporting text indicates that travel by the workforce and visitors should be minimised, but does not encourage minimisation of waste transport.	M	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
in the local community.							
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	+	+	+	Promoting alternatives to road transport may help to increase the energy efficiency of waste management, although the effects are likely to be minor in comparison to waste management methods at the treatment facilities themselves.	M	I	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy requires adequate infrastructure at a site including water supply and wastewater infrastructure, thereby indirectly helping to protect water quality.	H	I	×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	The policy promotes safe access to the site and safety and amenity along transport networks, therefore significant health effects associated with transport and access should be avoided.	H	D	✓/×
Provision of housing 14. Provide decent affordable housing for all, of	0	0	0	The policy promotes protection of amenity along transport networks, therefore	H	D	✓/×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
the right quality and tenure and for local needs, in clean, safe and pleasant local environments.				significant amenity effects associated with transport should be avoided.			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Not relevant			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	Ø	Ø	Ø	Not relevant			
Summary	The policy is likely to help avoid adverse impacts on health and the amenity of local environments associated with transport by promoting safe access to the site and safety and amenity along transport networks. More sustainable transport patterns are promoted thereby encouraging greater energy efficiency in waste transport. However, the policy does not explicitly encourage reduction of the need to transport waste whereas reduction of travel by visitors and workforce is. The policy may indirectly help to protect water quality and to promote climate change adaptation, by requiring developments to take account of water supply and wastewater infrastructure including potential water shortages.						
Mitigation	The policy, or as a minimum the supporting text, should require applicants to show how waste transport will be minimised.						

Table C.8 Policy WCS7: Environmental Assets

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	Ø	Ø	Ø	Not relevant			
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	Ø	Ø	Ø	Not relevant			
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	Ø	Ø	Ø	Not relevant			
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			
Energy generation and use 8. Promote energy efficiency and energy	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
generated from renewable energy and low carbon sources.							
Natural resources 9. Protect and enhance the quality of water, soil and air.	Ø	Ø	Ø	Not relevant			
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	+	+	+	The policy explicitly requires the protection and enhancement of biodiversity and geodiversity.	H	D	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+	+	+	The policy explicitly requires conservation and enhancement of heritage assets.	H	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+	+	+	The policy explicitly requires the protection and enhancement of biodiversity and geodiversity, and therefore may also indirectly help to protect some open spaces.	H/M	D/I	×
Summary	The policy explicitly requires protection and where possible enhancement of biodiversity, geodiversity and heritage assets. This may also indirectly help to protect some open spaces..						
Mitigation	None.						

Table C.9 Policy WCS8: Flood Risk and Water Resources

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	Ø	Ø	Ø	Not relevant			
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	?	By requiring flood risk to be taken into account, the policy promotes adaptation to climate change as indicated in the supporting text.	H	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	+	+	?	The policy and supporting text explicitly require developments not to have an unacceptable adverse impact on flood risk and to be located in areas of lowest risk, although contribution to reducing flood risk where possible is not explicitly encouraged.	H	D	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	Ø	Ø	Ø	Not relevant			
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Not relevant			
Natural resources 9. Protect and enhance the quality of water, soil and air.	+	+	?	The policy specifically requires developments to avoid adverse impacts on the quality and flow of water. Water quality enhancement is not encouraged.	H	D	×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	+	+	+	The policy explicitly requires the avoidance of adverse impacts on biodiversity in relation to surface water and groundwater.	H	D	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Not relevant			
Population (antisocial behaviour, crime, litter	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.							
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	Ø	Ø	Ø	Not relevant			
Summary	The policy requires the management of flood risk in developments, although does not specifically encourage flood risk reduction. The supporting text emphasises the need to take account of the effect of climate change on flood risk and therefore will help to encourage climate change adaptation. Water quality and flow will be protected, as will biodiversity in relation to surface water and groundwater. Water quality enhancement is not explicitly encouraged.						
Mitigation	The policy should promote flood risk reduction and water quality enhancement where practicable.						

Table C.10 Policy WCS9: Sustainable Design and Operation of Facilities

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	+	?	By promoting minimisation of the use of primary materials in construction, the policy will help to increase the use of secondary recycled materials.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	+	The policy emphasises both the reduction of greenhouse gas emissions and resilience to climate change.	H	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	?	?	?	The policy does not explicitly address transport minimisation and sustainability, but could indirectly support this through the requirement to reduce energy demand where possible.	L	I	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	+	?	By requiring developments to incorporate climate change mitigation and adaptation, the policy may indirectly help to support the knowledge economy, although the significance of effects for the economy as a whole is likely to be small. It is unlikely to affect skill levels or distribute benefits widely.	M	I	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of	+	+	?	The policy could help to support markets for new technologies and innovation through support for climate change	M	I	×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.				mitigation and adaptation and efficient use of energy, water and materials.			
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	+	+	+	The policy explicitly promotes energy efficiency within waste developments and the generation of renewable energy.	H	D	×
Natural resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy does not specifically address the quality of air or soil, but it does require developments to incorporate water efficiency which will help to protect water quality.	H	D	×
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The policy explicitly requires developments to reflect landscape character which will help to protect and may enhance landscape.	H	D	×
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	+	+	+	The policy explicitly promotes design which links and extends natural habitats, helping to enhance networks of habitats. Minimising the use of primary materials in construction may indirectly help to conserve geodiversity although this is more strongly dependent on specific policy to conserve geodiversity.	H/L	D/I	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant			
Population (learning and skills) 15. Raise the skills level and qualifications of	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
the workforce.							
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+	+	+	The policy directly promotes good design and resource-efficient developments which respect landscape character.	H	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+	+	?	By promoting the reuse of existing buildings and minimisation of the use of primary construction materials, the policy will help to reduce demand for virgin mineral resources.	H	D/I	×
Summary	The policy will help to increase the sustainable use of resources in both the design and operation of waste facilities, helping to support the development of new environmental technologies, reduce demand for virgin materials, promote use of recycled materials and promote climate change mitigation. Energy efficiency and renewable energy generation are also promoted, as well as explicitly requiring climate change mitigation to be taken into account, thereby helping to reduce greenhouse gas emissions from current levels in waste management. The policy emphasises the need for climate change resilience. Water efficiency will help to protect the quality and quantity of water, and landscape character and habitat networks should be protected and may be enhanced. The policy does not explicitly address transport minimisation and sustainability, but could indirectly support this through the requirement to reduce energy demand where possible.						
Mitigation	The supporting text should include reference to the role of waste transport in increasing energy efficiency and reducing greenhouse gas emissions.						

Table C.11 Policy WCS10: Local Characteristics

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	Ø	Ø	Ø	Not relevant			
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	Ø	Ø	Ø	Not relevant			
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	Ø	Ø	Ø	Not relevant			
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			
Energy generation and use 8. Promote energy efficiency and energy	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
generated from renewable energy and low carbon sources.							
Natural resources 9. Protect and enhance the quality of water, soil and air.	Ø	Ø	Ø	Not relevant			
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The policy explicitly requires the protection and enhancement of designated landscapes, and to take account of local character.	H	D	×
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	+	+	+	By requiring developments to take account of local character, the policy can help to protect the quality of local residential environments.	H	D	×
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+	+	+	The policy explicitly requires developments to take account of the character of the built environment and local and historic landscapes, although it does not specifically require avoidance or minimisation of effects or enhancement.	M	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+	+	+	The policy prevents inappropriate development in the green belt.	H	D	×
Summary	The policy explicitly requires developments to protect and enhance designated landscapes, and to take account of the character of the built environment and local and historic landscapes. This can also help to protect the quality of local residential environments. However, it does not specifically require avoidance or minimisation of effects on landscape generally. It prevents inappropriate development in the green belt.						
Mitigation	The policy should require the avoidance or minimisation of effects on landscape character and the quality of the built environment, and enhancement where practicable.						

Table C.12 Policy WCS11: Amenity

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	Ø	Ø	Ø	Not relevant.			
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	Ø	Ø	Ø	Not relevant.			
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant.			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	0	0	0	The policy is unlikely to have any significant impact on waste transport distances or sustainable travel patterns. Waste transport is addressed in other policy.	M		
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant.			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant.			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant.			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Not relevant.			
Natural resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy requires that unacceptable impacts on air are prevented. Soil and water quality impacts are addressed in other policies.	H	D	✓
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The policy requires developments to avoid unacceptable impacts through visual intrusion. Landscape impacts more generally are addressed in other policies.	H	D	✓
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant. Addressed in other policies.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	The policy requires that unacceptable effects on health are avoided.	H	D	×/✓
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	0	0	The policy requires that unacceptable effects on amenity are avoided, therefore adverse impacts on residential environments are unlikely.	H	D	×/✓
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+	+	+	The policy requires developments to avoid adverse impacts on air quality which will help to protect some historic buildings and other assets. It also requires avoidance of visual intrusion which may help to contribute to a high quality built	M	D	✓/×

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				environment. However, the significance of effects on the historic environment is more strongly related to other policies.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	+	+	?	The policy requires developments to have no unacceptable adverse impacts on litter, although this is unlikely to have a significant impact on crime levels overall in Worcestershire.	L	D	✓
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	Ø	Ø	Ø	Not relevant			
Summary	Adverse impacts on amenity, air quality and health are unlikely.						
Mitigation	None						

Table C.13 Policy WCS12: Social and Economic Benefits

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	+	+	By encouraging the provision of facilities to contribute to equivalent self-sufficiency for Worcestershire, the policy directly promotes the management of waste at higher levels of the hierarchy than currently.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	+	+	By encouraging the provision of facilities to contribute to equivalent self-sufficiency for Worcestershire, the policy will move waste management up the hierarchy and therefore indirectly help to reduce emission of greenhouse gases from waste.	H	I	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant.			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	+	Encouraging equivalent self-sufficiency may help to reduce waste transport distances below what might otherwise be required if waste were to be exported for management.	L	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	+	?	The policy explicitly promotes the development of a knowledge-driven economy.	H	D	✓
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	+	+	?	The policy explicitly requires community involvement and participation in waste developments.	H	D	✓
Technology, innovation and inward investment	+	+	?	The policy explicitly promotes the development of new environmental	H	D	✓

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.				technologies.			
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Not relevant.			
Natural resources 9. Protect and enhance the quality of water, soil and air.	Ø	Ø	Ø	Not relevant.			
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant.			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant.			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant.			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	+	+	+	May contribute to skills development for the waste industry, but unlikely to have significant impacts on skills for the workforce as a whole.	M	I	✓
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built	Ø	Ø	Ø	Not relevant.			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.							
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	+	+	?	Educating communities about sustainable waste management may help to reduce littering and fly-tipping, although this is unlikely to have a significant impact on crime levels overall in Worcestershire.	L	I	✓
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	+	+	+	The policy safeguards mineral reserves from sterilisation through development.	L	D	×
Summary	By encouraging the provision of facilities to contribute to equivalent self-sufficiency for Worcestershire, the policy will move waste management up the hierarchy and therefore help to reduce emission of greenhouse gases, and may help to reduce waste transport distances below what might otherwise be required. The policy also explicitly promotes new environmental technologies which will help to support a knowledge-driven economy, and community involvement and participation are required.						
Mitigation	None						

Table C.14 Policy WCS13: New Development Proposed On or Near to Existing Waste Management Facilities

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	+	+	The policy will support the management of waste above landfill by ensuring the availability and continued operation of sites to manage waste.	H	D	✓
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	0	0	0	Unlikely to have significant effects on climate change	L		
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0	0	0	Unlikely to have significant implications for flood risk.	L		
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	?	?	?	Effects on waste transport are not clear, but are unlikely to be significantly affected and are more directly dependent on the effect of implementation of other policies.	L	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	Ø	Ø	Ø	Not relevant			
Energy generation and use	0	0	0	Unlikely to have significant implications for	L		

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.				energy generation and use.			
Natural resources 9. Protect and enhance the quality of water, soil and air.	0	0	0	Unlikely to have significant implications for air, water and soil quality.	L		
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Safeguarding should ensure that the risk of adverse effects on health and amenity are not increased by inappropriate development near to waste sites.	H	D	×
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	0	0	Safeguarding should ensure that the risk of adverse effects on local residential environments are not increased by inappropriate development near to waste sites.	H	D	×
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	0	0	0	Safeguarding should ensure that the risk of adverse effects on the quality of the built environment are not increased by inappropriate development near to waste sites.	H	D	×
Population (antisocial behaviour, crime, litter	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.							
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	0	0	0	Unlikely to have significant implications for the efficient use of land.	L		
Summary	The policy will directly support the management of waste at higher levels of the waste hierarchy than landfill by ensuring the availability and continued operation of sites to manage waste. Safeguarding should ensure that the risk of adverse effects on health and amenity and local residential and built environments are not increased by inappropriate development near to waste sites.						
Mitigation	None						

Table C.15 Policy WCS14: Making Provision for Waste in All New Development

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	++	++	The policy gives direct support to the waste hierarchy by requiring developers to incorporate facilities to enable waste to be recycled or recovered during occupation.	H	D	✓
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	+	++	++	By facilitating the implementation of the waste hierarchy in the occupation of developments, the policy will help to reduce greenhouse gas emissions through greater resource efficiency.	H	I	✓
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Not relevant			
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	-/0	-/0	-/0	Increased recycling and recovery of materials is likely to require more waste transport compared to landfill. However, this is more strongly dependent on the choice of location for recycling and treatment facilities than the provision of facilities to separate waste in new developments. Encouragement within policy for reuse of demolition materials onsite would contribute to reducing waste transport.	M/L	I	✓
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	Ø	Ø	Ø	Not relevant			
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility	+	++	++	The policy will support greater civic responsibility by making it easier for the occupants of developments to recycle their waste.	M	I	✓

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
in the local community.							
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	+	+	+	By requiring increased focus on reuse and recycling, the policy will indirectly help to encourage more innovative ways of managing waste and may support the development of new technologies and markets for recycled products.	L	I	✓
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Not relevant			
Natural resources 9. Protect and enhance the quality of water, soil and air.	0	0	0	Unlikely to have significant effects. More strongly dependent on operational standards at waste management facilities.	M		
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	+	++	++	The policy requires developers to provide facilities for recycling, which will help to improve access to services.	H	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Not relevant			
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Not relevant			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	+	++	++	The policy will support better designed developments in relation to the provision of waste facilities.	H	D	×
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant			

SA objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	+	++	++	The policy will support better designed developments in relation to the provision of waste facilities. It could give clearer support to reuse of construction materials onsite as indicated in the supporting text.	H/L	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	?	?	?	The policy does not promote recycling of materials onsite in new developments, which would help to increase the supply and use of secondary aggregates and help to conserve mineral reserves, although this is suggested by the supporting text.	L	D	×
Summary	The policy gives direct support to the waste hierarchy during occupation of new developments. This will help to reduce greenhouse gas emissions through greater resource efficiency, and may support the development of new technologies and markets for recycled products. Access to recycling facilities will be increased, supporting greater civic responsibility, and the design of housing and other developments will be improved. The policy does not explicitly promote recycling of construction and demolition waste onsite although this is suggested by the supporting text. This would help to increase the supply and use of secondary aggregates and to conserve mineral reserves, and would help to reduce the need for waste transport.						
Mitigation	The policy should give explicit support to the recycling of construction and demolition waste onsite in development projects.						

Annex D

Options Appraisal

Key:

Impacts	Significance	Probability of effects	Direct or indirect effects	Reversibility
+ positive impact - negative impact 0 no significant impact ? impact unknown Ø not relevant Multiple symbols are used to indicate differential scale of effects	Low significance Medium significance High significance	L low probability M medium probability H high probability	D direct effect I indirect effect	✓ reversible effect × not reversible ie permanent effect

Table D.1 Assessment of Approach to Hazardous Waste Capacity

SA objectives	Option 1 Maintain status quo	Option 2 Identified capacity gap	Option 3 Include new landfill capacity	Comments	Prob	Dir/Ind	Rev?
Waste 1. Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	+	-	Allowing for facilities to be provided to meet the capacity gap may give stronger encouragement to the waste hierarchy than maintaining the status quo by encouraging facilities to recycle and recover hazardous waste. Option 3 may encourage more landfill of hazardous waste.	M	D	×
Climate Change 2. Reduce causes of and adapt to the impacts of climate change.	0	+	++	Options 2 and 3 may enable more hazardous waste to be managed within Worcestershire, which may reduce emissions of greenhouse gases. Option 3 is likely to enable the export to landfill to be reduced. Emissions will occur from new facilities within Worcestershire but this would simply offset the emissions that would occur from facilities outside the county. Adaptation is more appropriately a matter for policy.	L	D	×
Flooding 3. Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	Ø	Ø	Ø	Relevant to specific locations and development standards.			

SA objectives	Option 1 Maintain status quo	Option 2 Identified capacity gap	Option 3 Include new landfill capacity	Comments	Prob	Dir/Ind	Rev?
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	0	+	++	Options 2 and 3 may enable more hazardous waste to be managed within Worcestershire, which would reduce waste transport. Option 3 is likely to enable the export to landfill to be reduced, reducing waste transport still further.	H	D	×
Growth with prosperity for all 5. Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	0	+	+	By encouraging new facilities within the county to manage hazardous waste, the WCS will help to provide new economic opportunities, some of which may be relatively knowledge-driven.	M	I	×
Participation by all 6. Provide opportunities for communities to participate in and contribute to the decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.	Ø	Ø	Ø	Not relevant			
Technology, innovation and inward investment 7. Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	+	+	By encouraging new facilities within Worcestershire to manage hazardous waste, the WCS may help to support new technologies, although this may simply be replacing similarly innovative facilities which would have been developed elsewhere.	M	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable energy and low carbon sources.	Ø	Ø	Ø	Dependent on specific nature of facilities which is not known.			
Natural resources 9. Protect and enhance the quality of water, soil and air.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			
Access to services 10. Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	Ø	Ø	Ø	Not relevant			
Landscape 11. Safeguard and strengthen landscape character and quality.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			

SA objectives	Option 1 Maintain status quo	Option 2 Identified capacity gap	Option 3 Include new landfill capacity	Comments	Prob	Dir/Ind	Rev?
Biodiversity, geodiversity, flora and fauna 12. Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			
Provision of housing 14. Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	Ø	Ø	Ø	Not relevant			
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	0	+	+	By encouraging new facilities within Worcestershire to manage hazardous waste, the WCS may help to support skills development, although this is unlikely to be significant for the workforce as a whole.	L	I	✓
Cultural heritage, built design and archaeology 16. Conserve and enhance the historic and built environment and seek well-designed, resource efficient, high quality built environment in new development proposals which respects local character and distinctiveness.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant			
Material assets 18. Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously developed land and reuse of vacant buildings, where this is not detrimental to open space and biodiversity interest.	Ø	Ø	Ø	Relevant to development control and operational standards rather than approach to providing capacity.			

SA objectives	Option 1 Maintain status quo	Option 2 Identified capacity gap	Option 3 Include new landfill capacity	Comments	Prob	Dir/Ind	Rev?
Summary	Allowing for facilities to be provided to meet the capacity gap for recycling and recovery may give stronger encouragement to the waste hierarchy than maintaining the status quo and reduce waste transport and its associated greenhouse gas emissions. It will also help to provide new economic opportunities, some of which may be innovative and knowledge-driven. Providing for hazardous landfill will reduce waste transport further, but may encourage more landfill of hazardous waste which does not support the waste hierarchy.						

Annex E

Effects Arising from Other Plans and Strategies

1 INTRODUCTION

This annex sets out the findings of a review of other plans and programmes of relevance to the WCS. It summarises the contents of each of those plans and programmes which have either been adopted or are reasonably likely to be adopted, and which could potentially give rise to effects in combination with the WCS. The purpose of the review was to inform an assessment of the likely cumulative impacts of arising from the WCS and other plans acting in combination.

1.1 REGIONAL STRATEGIES

Connecting To Success: West Midlands Economic Strategy, Advantage West Midlands, December 2007

The region needs to increase businesses' engagement in global markets in order to drive up their competitiveness and provide wider opportunities. Businesses will need to continuously improve their competitiveness, productivity, market profile and local supply chain linkages so they can take advantage of new product and market opportunities.

The focus will be upon:

- Creating new businesses both to develop economic activity and inclusion, and to attack some new and valuable markets;
- Growth and development in existing businesses, particularly those in the mid-sized bracket;
- Stimulating new strategic industries for both products and services in growth and value added markets.
- Increasing the value of international trade carried out by West Midlands businesses, expanding the number of businesses succeeding in overseas markets and generate a stronger flow of inward investment to the region.

The Economic Strategy targets spatial interventions on three primary areas:

- Areas of multiple market failure – the Regeneration Zones which represent concentrations of deprivation and disadvantage within the region; the areas of greatest need and market failure;
- Concentrations of knowledge assets – including the High Technology Corridors, represent key mechanisms for promoting regional-scale growth while supporting development and opportunity within the major urban areas, and represent agglomerations of innovative potential to support the diversification of our economy into higher value added sectors;
- Birmingham – as the major economic driver within the West Midlands economy, hosts an agglomeration of essential economic assets and needs to remain economically competitive. It is a global city and gateway to the region as a whole, and aims to be resource-efficient and low-carbon, taking advantage of, and resilient to, climate change.

The RES will also focus more limited resources on a number of other settlements and locations:

- Market towns, which act as important centres within rural economies, stimulating employment, investment and services in the rural areas. Sustaining this success will be essential in ensuring the long-term viability and contribution of our rural economy.
- Locations facing economic change or responding to opportunity These locations may not need significant support and overall the allocation of resources will continue to be concentrated in those areas of greatest need.

Long-term shifts in the region's environmental impact must be driven by changes in underlying patterns of consumption and demand. Changes in patterns of travel, waste production, energy use and overall consumption will encourage businesses to adapt their methods and stimulate the supply of lower-impact goods and services. The RES seeks to stimulate a proactive and ambitious business response to the economic opportunities of the low-carbon agenda by exploiting new markets and ways of working, and by responding ambitiously to the challenges of energy and resource efficiency and climate change adaptation.

The built environment and wider infrastructure needs to build in resilience to climate impacts. We will also need to improve the standards of our new and renewed built environment. We need to encourage people at home and in their workplaces to stimulate demand for more sustainable goods, services, and working practices.

The Strategy will seek to improve the levels of business ICT adoption, help the region's business maximise the ever-increasing market opportunities in this field, increase the quantity and quality of ICT advisers/suppliers, develop the ICT skills of the workforce, and maintain a competitive broadband infrastructure across the region.

Travel demand is expected to grow and travel patterns to become more diverse in the future, placing even greater pressure on the transport infrastructure. It is essential to take a coordinated approach to housing and employment land development across urban and rural communities in a way that reduces transport demands and energy use.

It is important to encourage both the adoption of sustainable forms of transport and improvements to transport networks and services to help people access jobs and support business competitiveness, as well as reducing the environmental impact. The RES seeks to improve the efficiency, reliability and capacity of the region's transport and communication networks, making the best use of existing networks, increasing the availability of public transport, and maximising the use of technology and new infrastructure where required and appropriate. In supporting Birmingham International Airport in enabling long-distance business travel, it will be essential to manage the carbon impact of such travel so that the low-carbon ambitions for the region can still be met. It is equally important to ensure that the region is resilient to climate change impacts as they happen.

The region has pockets of deep and interlocking deprivation, the most substantial of which are located in our major urban areas and have been targeted through the Regeneration Zones. The RES seeks to regenerate and support the sustainable development and growth of the most deprived areas, developing links with economic and employment opportunity.

The region has a significant and increasing amount of brownfield and derelict land that is often not attractive for private investment. Forecast changes in economic structure suggest the number of such sites will grow. Several areas will require focused attention to avoid the risk of such sites detracting from our ambitions. It is essential to ensure that development aims to bring brownfield land back into use in a constructive way that contributes to meeting wider regional objectives.

The RES seeks to accelerate the attraction, relocation and retention of visitors, people and businesses to the region by promoting the high quality of life and strong heritage, natural environment and cultural offer, as well as tourism and rural assets, to maximise benefits for the region as a whole.

Potential Contribution to Cumulative Effects
The RES seeks to promote economic growth *inter alia* through increasing the business base and by attracting people to the region. It also aims to increase international trade and travel. This will increase the demand for travel and increase energy, water and other resource consumption and waste generation, while at the same time the RES aims to promote more sustainable travel behaviour and greater resource efficiency and to reduce carbon emissions. The overall balance of effects on travel, water and energy consumption, greenhouse gas emissions and waste generation is uncertain. Air quality may reduce through increased demand for transport, although this may be offset to a certain extent by more sustainable transport patterns. The Focus on Regeneration Zones and High Technology Corridors is likely to support increased economic activity and demand for employment land in Malvern, Worcester, Droitwich and Bromsgrove and to a more limited extent in the rural north west of the county. Increased amounts of brownfield land should be brought back into beneficial use, although the likely locations of sites within the region are not known.

1.2 LOCAL PLANS

An Economic Strategy for Worcestershire 2010 – 2020, Worcestershire County Council, June 2010

The Worcestershire Economic Strategy covers:

- Areas of market failure and disadvantage – Rural Regeneration Zone
- Concentrations of knowledge assets – Central Technology Belt
- Strategic Growth Point (Impact Investment Location) – Worcester City, which is the key economic development priority

- Towns undergoing economic restructuring – Kidderminster, Redditch (which are the secondary priority areas).
- Larger towns providing a focus for economic activity – Bromsgrove, Droitwich, Malvern
- Market towns as a focus for rural regeneration – Pershore, Evesham, Bewdley, Stourport, Tenbury Wells, Upton on Severn

The Economic Vision for the next 10 years is that "In ten years time, technology-led growth will have contributed to the sustainable development of Worcestershire and strengthened its role as an economic driver for the region – acting as a catalyst for all sectors of the economy and areas of the County to benefit and providing well paid and highly skilled jobs and high quality of life for residents"

Three strategic objectives:

1. To support the development of a dynamic and diverse business base through engagement with existing businesses and encouraging growth of new businesses

   The revised priorities identified related to business are:

   - Establishing clear links with and providing sustained long term support including leadership to strategic businesses and companies in their supply chains
   - Developing Strategic Employment Sites, particularly the Worcester Technology Park.
   - Building on economic strengths and heritage.
   - Providing support for business retention and new business creation
   - Supporting key growth sectors particularly environmental technologies and tourism
   - Supporting new business formation
   - Retaining and developing a skilled workforce to support high tech jobs and businesses especially future growth sectors
   - Improving the environmental performance of businesses
   - Working with employers and education providers to deliver the skills levels of the workforce to meet future business needs, especially for growth sectors

2. Supporting the sustainable development of the county through infrastructure development especially transport, and continue supporting Worcester as an accessible West Midlands Growth Point

   Priorities under this objective are:

   - Implementing Worcester City's West Midlands Growth Point Status as a first priority
   - Developing the transport infrastructure where resources permit in line with Integrated transport Strategy
   - Revitalising the rest of the county's towns, especially Redditch and Kidderminster
   - Regenerating the rural parts of the county

- Exploiting the potential of key regeneration sites
- Ensuring the right supply of land and property
- Developing the ICT infrastructure especially the provision of Super Fast Broadband in the county
- Marketing the county and attracting inward investment
- Improving resilience to the impact of climate change

3. To enhance employability levels removing barriers to employment and improving skills

   The revised priorities identified are:

   - Supporting job creation at all levels including self employment
   - Addressing worklessness especially:
     - Reducing youth unemployment
     - Economic inclusion of the most deprived communities and groups who are farthest away from the job market
   - Supporting people to gain at least NVQ 2 skills including improvements to the quality of training and education to meet employers' needs
   - Increasing Apprenticeships especially in Engineering and Manufacturing
   - Supporting people who are made redundant
   - Facilitating employer engagement with the skills agenda
   - Improving opportunities for those who are not in Education, employment and Training (NEET), particularly around the age of 19
   - Improving the quality of the training infrastructure

Potential Contribution to Cumulative Effects
The Economic Strategy seeks to promote economic growth *inter alia* through increasing the business base, regenerating and revitalising areas, improving infrastructure including transport infrastructure, attracting businesses to the county and improving skills and employability. This will increase the demand for travel and increase energy, water and other resource consumption and waste generation, while at the same time the strategy aims to improve the environmental performance of businesses. The overall balance of effects on travel, water and energy consumption, greenhouse gas emissions and waste generation is uncertain. Air quality may reduce through increased demand for transport. The focus on key settlements could support increased economic activity and demand for employment land particularly in Worcester, Redditch and Kidderminster, but also in all the other main towns and to a more limited extent in the rural east and north east of the county.

South Worcestershire Joint Core Strategy Preferred Options Consultation Document, September 2008

New development should be located in accordance with the following settlement hierarchy:

- Worcester will be the focus for strategic housing and employment development and city centre development with the objective of maintaining and enhancing its sub-regional role as a major retail, leisure, university and tourist centre.
- Malvern, Droitwich Spa, Evesham offer the greatest range of services and employment opportunities and other facilities outside of Worcester
- Tenbury Wells, Upton-upon-Severn, Pershore offer a wide range of services, facilities, employment and town centres serving the wider rural communities

Development throughout the rural areas will be restricted to that required to meet local needs generated from within the rural areas themselves and as an aid to rural regeneration. Development within the open countryside (beyond development boundaries) will be strictly controlled.

The total amount of development will be as follows.

Table 1.1 Development Allocations

District	**Indicative Housing Requirements (Dwellings)**	**Indicative Employment Requirements (Hectares)**
Worcester		
Worcester urban extensions/adjacent to Worcester, including Fernhill Heath	10,853	41 ha
Regional Investment Site		25 ha
Malvern Hills		
Malvern	1,600	17 ha
Tenbury Wells	100	
Upton-upon-Severn	100	
Category 1 & 2 villages	500	
Wychavon		
Droitwich	1,750	10 ha
Evesham	2,300	10 ha
Pershore	1,000	5 ha
Villages	1050	

Worcester

Worcester's housing needs and employment needs will be accommodated by:

- Infill development within the city,
- Limited Greenfield extension at Kilbury Drive immediately outside the City Boundary,
- Major urban extensions to the west and north west, and south and south east of the city, and
- Limited Greenfield development in the vicinity of Fernhill Heath.

Central to the spatial strategy will be the priority implementation of the Integrated Transport Strategy for Worcester including strategic park and ride sites, quality bus corridors incorporating extensive bus priority, quality cycle and pedestrian routes, a new city centre bridge and the dualling of the Southern Link Road. Rail halts will be pursued to the north, south and west, in the longer term together with a Worcestershire Parkway at Norton.

3,200 dwellings can be accommodated within the city boundary. The remaining 7,300 dwellings will be accommodated in two new urban extensions. One of these urban extensions would be located to the west/north west of the city and would accommodate approximately 3,500 dwellings together with 16 hectares of employment, a local centre to include, health care, retail, community and leisure facilities, provision for the emergency services and two schools. Transport infrastructure requirements are the development of a park and ride site to the west, a rail halt in the Rushwick area and the dualling of the Southern Link Road. These would require significant improvements in the rail infrastructure. It will be important that a route for a future north-west city by-pass is not constrained by this proposed development.

The second of the new urban extensions will be located to the south/south east of the city for approximately 3,000 dwellings together with 25 hectares of employment, a local centre to include community, primary health care, retail, emergency services and leisure facilities together with one or two schools. This would require the dualling of the Southern Link Road, the possible development of a railway halt at Battenhall/Norton with long-term link to a Worcestershire Parkway station at Norton, the development of bus park and ride off the A38. Evidence from the rail authorities at this time suggests that the development of a Parkway station is not likely to occur until the end of the plan period so at this time the provision of development in that location would not be sustainable. However, it would open up longer-term growth opportunities using the rail corridor.

500 dwellings could be accommodated as a greenfield extension to the north west of Fernhill Heath outside the Green Belt. Development will be associated with the provision of a range of shopping, social, health, and community facilities and a school. A rail halt at Fernhill Heath would enable rail park and ride. However, significant signalling improvements are required to the rail line to make this possible.

There is support for a new concept of a 'community sports hub' on the northern edge of Worcester in the Hindlip area. This would require good sustainable transport links not only into Fernhill Heath but also to Worcester to ensure easy access by other means than the private car.

The remaining 300 dwellings will be built on a greenfield site adjacent to the urban area at Kilbury Drive to the south east of Worcester, which will enable local improvements to facilities, public transport and public open space.

There is evidence to support the identification of a 25 hectare Regional Investment Site in the vicinity of junction 6 on the M5 motorway. This will require substantial improvements at Junction 6, but could accommodate the needs of larger investors or for indigenous growth.

The city centre will remain the focus of the expanded community for shopping, leisure, tourism and commerce and education. 55,000m^2 of city centre office space should be provided in Worcester.

The implementation of the integrated transport strategy envisages a new city centre bridge.

Malvern

There is a need to find land for up to 1,600 dwellings and up to 17 hectares of employment land within or on the edge of Malvern. The majority of the growth will be in the form of sustainable urban extensions to the north and/or east of Malvern, with a mix of uses to deliver housing, employment and associated community facilities. Development will need to be supported by new transport infrastructure.

The Malvern Hills Science Park would continue to be the leading location in South Worcestershire with regard to the Research and Development sector and that this sector will require further land allocations into the future. One or two large sites will be required in Great Malvern town centre to accommodate 5,000sqm of non-food goods floorspace needed over the next 10 years.

Accessibility to Malvern from its rural hinterland will be enhanced through improvements to sustainable transport infrastructure to ensure better access to the services for the rural population. This will include more frequent and reliable train services brought about by upgrading the single track line from Hereford to Worcester and bus priority measures within the town. There will also be a Park and Ride utilising the existing rail corridor between Malvern and Worcester and rail enhancements.

Droitwich

Broad locations for development are:

- Town centre – retail, residential and employment.
- South – residential and mixed use development comprising 1500 dwellings at the Area of Development Restraint referred to as Copcut Lane and greenfield sites either side of Chawson Lane. Residential development, comprising 250 dwellings on greenfield land referred to as the north of Pulley Lane.
- The south of the town should provide employment land in the Area of Development Restraint to satisfy the town's role as a centre in the Central Technology Belt

Up to 2,000 square metres of comparison goods retail floorspace between 2012 and 2017 will be provided for in the town centre.

Infrastructure needs include improved public transport to Birmingham and Worcester and increased parking capacity at Droitwich Spa railway station.

Evesham

The following are broad locations for development:

- Town Centre - employment, residential and retail

- East (within the A46T) residential development comprising 1500 on greenfield sites either side of Offenham Road;
- South West – residential development comprising 800 on greenfield site off Pershore Road, Hampton;
- South – employment 10ha at Vale Business Park.

Tenbury Wells

There is a need to provide up to 100 dwellings in Tenbury Wells over the period to 2026. The majority of employment land is situated north of the river, in Burford, and it is considered that the existing employment sites in Malvern Hills District should be the focus for small-scale local needs employment growth only. There is also scope to make more intensive use of the existing land at Tenbury Business Park, to the south of the town. Scope may exist to identify land, for small starter type units/live work units. Development of the former Cattle Market site for commercial uses, including retail, employment uses, and / or for recreation, leisure and community uses will be encouraged where these are of a scale and size appropriate to the location and compatible with flood policy.

Upton on Severn

Tunnel Hill with Holly Green/ Ryall should be a focus for limited housing growth for Upton-upon-Severn, for up to 100 dwellings. Employment opportunities will be small scale, but there will be scope for some growth in jobs at Upton marina. There may be scope for small-scale employment growth for small workshops or live/work units in Tunnel Hill.

Pershore

Development in Pershore will take place in the following broad locations:

- South west – residential comprising 150 dwellings off Three Springs Road;
- North – residential comprising 400 dwellings off Station Road;
- North east – residential comprising 450 dwellings either side of Wyre Road;
- North east – employment 10ha at Keytec 7;
- Town Centre – retail, comprising up to 2,000 sq metres;

Infrastructure improvements include the link from the A44/Wyre Piddle By-pass roundabout to Keytec 7 Business Park. This will also help to alleviate the congestion hotspot at the Pinvin/A44 junction.

Potential Contribution to Cumulative Effects
The planned housing development and economic growth in Worcester, Malvern, Droitwich and Evesham will lead to increased consumption of resources, increased waste generation and increased greenhouse gas emissions. There may be potential competition for previously developed land for new housing development and employment land, particularly within Worcester, and there could potentially be increased pressure for development in areas constrained by flood risk. Urban extensions will lead to a loss of open space which may be of value, but may present opportunities for CHP use. Economic and housing development in Worcester, Droitwich and Malvern may create competition for potential sites and increase traffic in the area, although planned infrastructure improvements may help to reduce traffic growth or alleviate the pressures. Plans are in place for road improvements and schemes to promote more sustainable travel patterns. Changes in transport patterns and traffic levels are likely to affect air quality, although the direction of change is unknown. This could potentially give rise to adverse effects on ecosystems particularly from developments in Worcester but the likelihood of effects is unknown.

Draft Core Strategy 2, Bromsgrove District Council, January 2011

The Draft Core Strategy 2 aims to provide 4000 dwelling units by 2021 and 26ha of employment land by 2026. The Council's Strategic Housing Land Availability Assessment identifies that there are insufficient amounts of brownfield land available to meet these targets and greenfield development will be required. Areas of potential growth are identified on the key diagram on the northern, western and southeastern fringes of Bromsgrove, on the outskirts of Redditch, and in Hagley, Catshill, Barnt Green, Alvechurch and Wythall.

There will be four main facets to the delivery of housing in Bromsgrove District:

- Development of previously developed land or buildings within existing settlement boundaries which are not in the designated Green Belt
- Expansion Sites around Bromsgrove Town
- Development Sites in large settlements
- Rural exception schemes in small settlements where it is of an appropriate scale and supported by robust evidence proving a local need

A sustainable urban extension is proposed around the west and north of Bromsgrove Town. The urban extension contains three development opportunities: Norton Farm, Birmingham Road; Perryfields Road; Whitford Road. Individually and collectively these are of such scale and significance that they are central to the success of the Core Strategy. They will consist of a minimum of 1850 dwellings, 5 hectares of employment land, local centre(s) and retail and community facilities.

Other housing development sites include Wagon works/St Godswalds Road. This development site is located south of existing residential development at Scaife Road, south/west of St Godwalds Road and in relative close proximity to Bromsgrove railway station. This site comprises almost 8 hectares of land currently used for grazing purposes. The maximum capacity is 212 dwellings.

The Council will promote the following:

a. New technology opportunities as part of the 'Central Technology Belt', including Longbridge and Bromsgrove Technology Park.
b. Office and mixed use schemes within Bromsgrove Town Centre.
c. A range and choice of readily available employment sites to meet the needs of the local economy.
d. Economic development opportunities within Strategic Sites.
e. Limited economic development in rural areas that help to maintain the vitality and viability of villages, whilst discouraging migration from Major Urban Areas.
f. Appropriate skills development and training as part of the promotion of employment sites.

There are two major areas of economic concern requiring regeneration within the District - Bromsgrove Town Centre and Longbridge. Both areas are at different stages in the in the preparation/implementation of Area Action Plans which aim to stimulate regeneration and growth of the areas.

Economic growth will primarily be focused on Bromsgrove Town and Longbridge. Bromsgrove will maintain low levels of unemployment by providing a range of jobs in various sectors, with growth primarily focussed on knowledge based industries and high tech manufacturing situated at the Bromsgrove Technology Park and at Longbridge.

Outside the Town Centre and Longbridge, employment growth is expected to be provided primarily in existing industrial estates and business parks, often located close to motorway junctions. These include Buntsford Hill/Buntsfordgate and Bromsgrove Technology Park. Industries with higher paid jobs need to be encouraged to stay or to locate in the District. It would appear that further development in high tech manufacturing and knowledge based industries is required to redress the imbalance. The Bromsgrove Technology Park, which will cater for these industries and go some way to addressing the shortfall in jobs and pay available in the District, has been established but is not yet operating at full capacity.

Other identified employment development sites include Ravensbank expansion site, located to the south/east of the existing Ravensbank employment site and is approximately 10 hectares in area. The original employment site caters for Redditch Borough's needs and it is envisaged that this expansion site could provide additional capacity for Redditch's needs on a similar basis.

All major developments:

- will be accessible by safe and sustainable modes of transport;
- will support increased public transport usage and;
- will incorporate proposals to increase the scope for walking and cycling in a safe environment.

Sustainable travel will be promoted by improving pedestrian priority, linkages and mobility within and across the Town Centre; improving pedestrian and cycle linkages between Bromsgrove Railway Station and the Town Centre, and improving key junctions including Birmingham Road/Stourbridge Road. Significant improvements in public transport, will be encouraged particularly to bus services in order to provide an integrated and regular bus service which will connect new and existing residential areas to the Railway Station, with the Town Centre acting as the focal transport hub.

Opportunities will also be encouraged in new schemes to mitigate against and adapt to the effects of climate change, for example, renewable energy and recycling.

The Council will deliver climate resilient developments with low impact on the climate through:

- Ensuring developments are located away from high risk areas (e.g. floodplain, areas that have high risks of fire and subsidence).
- Ensuring developments are in locations well-served by public/ sustainable transport and existing local facilities and infrastructure.
- Ensuring the construction and design of developments follow the energy and waste management hierarchies.
- Supporting developments to incorporate zero or low carbon energy generation technologies, especially for developments in the rural areas.
- Where there is a firm delivery plan of such schemes, developments nearby are expected to provide infrastructure/ to connect to the zero/ low-carbon energy scheme.

Potential Contribution to Cumulative Effects

The planned housing development and economic growth in Bromsgrove, Longbridge and elsewhere will lead to increased consumption of resources, increased waste generation and increased greenhouse gas emissions, and may contribute to reduced air quality in Bromsgrove from higher levels of traffic. There is unlikely to be competition for land for new housing development, but there may be competition for employment land, particularly in Bromsgrove and around Redditch, potentially affecting areas of search at Ravensbank, Bromsgrove Technology Park, Buntsford Hill and Buntsford Gate. The draft Core Strategy gives significant support to the use of sustainable transport, renewable energy and recycling and CHP use in new developments.

Revised Preferred Draft Core Strategy Document, Redditch Borough Council, January 2011

The location and scale of new development should accord with the following settlement hierarchy and reflect the services present, accessibility, and character and local distinctiveness of each settlement.

- Redditch urban area, as the Main Settlement shall be the focus for development as it provides the highest level of services and facilities provision.
- Astwood Bank is a Sustainable Rural Settlement that offers an appropriate range of services and facilities. Development within the settlement boundary will be the focus for local needs development
- Feckenham is a small, rural settlement which offers limited local facilities but has important conservation and historic merit. In order to preserve and enhance these characteristics, development within the settlement boundary will provide for identified local needs only.

The remainder of Redditch's rural area offers sparse development patterns with no local service provision. These hamlets will provide for identified local needs only.

In order to plan and provide for future development demands, certain lands within Redditch Borough at the edge of Redditch's urban area are identified as Areas of Development Restraint (ADR); namely A435 ADR and Webheath ADR. ADRs will be safeguarded to meet longer term development needs beyond 2026

Provision is made for the construction and completion of around 2,200 new dwellings within Redditch Borough between 2011 and 2026. A total of around 3200 houses will therefore be provided between 2006 and 2026 within Redditch Borough.

Provision is made for 33.3 hectares of land which are available for employment uses for the period up to 2026. Total provision for a minimum of 9 hectares is made for a rolling 5 year programme. Sites include land at East Moons Moat, Park Farm, Washford and Pipers Road.

Sites other than those set out in the Employment Land Review may come forward for development, redevelopment or change of use. Within the Redditch urban area these will be judged against the following principles as applicable:

(i) Close proximity to suitable transport routes, having regard to the scale and nature of the traffic likely to be generated;
(ii) Within easy reach of existing residential land with or without the use of private transport, where amenity is not negatively affected;
(iii) In all cases, development should be acceptable in terms of their impact on biodiversity and the wider environment and demonstrate adequate Infrastructure including Green Infrastructure.

It may be necessary for new sites to be developed for waste facilities to be able cope with demands from new growth. Employment Land in the Borough can be suitable locations for these new facilities. Where a site is proposed for a waste facility, this should particularly consider the impacts on residential amenity.

The following standards must be met in order to ensure adaptation and mitigation to climate change:

- in the first instance development should be located in accessible locations and take account of the accessibility between any development site and key facilities considering how flexible and smarter working practices can be maximised;
- the energy efficiency of the development has been maximised through its siting and orientation, and through the adoption of energy conservation measures, including natural ventilation and lighting;
- new non-domestic development must be assessed against the BREEAM assessment method;
- proposals for medium and large-scale development (greater than 5 residential units or 1,000 square metres for non-residential developments) should be accompanied by a sustainability statement demonstrating that at least the 'good' standards, and wherever possible 'best practice' standards, as set out in the West Midlands Sustainability Checklist for Development, are achieved for each category in the Checklist;
- demonstrate that the use of sustainable, locally sourced and recycled materials has been considered;
- the retrofit of the existing housing stock with improved insulation and water saving devices will be sought and
- low carbon vehicle infrastructure in appropriate developments and locations will be encouraged.

The draft Core Strategy also aims to encourage safer, sustainable travel patterns, improve accessibility and maintain a balanced road hierarchy and reduce the need to travel;

Potential Contribution to Cumulative Effects
The planned housing development and economic growth in Redditch will lead to increased consumption of resources, increased waste generation and increased greenhouse gas emissions. There is likely to be competition for land for new employment development, which could particularly affect areas of search at East Moons Moat, Park Farm, Washford and Pipers Road. Although the draft Core Strategy aims to promote sustainable transport, the envisaged growth is nevertheless likely to lead to an increase in traffic around the borough and require greenfield development.

Development objectives include:

1. To provide a range of high-quality, highly energy efficient, market and affordable housing options for residents of all ages and needs to achieve sustainable communities.
2. To diversify and grow the District's economy, emphasising the development of the service sector, high tech industry and sustainable tourism.
3. Continue to develop Kidderminster as the strategic centre for the District and beyond and to maintain the important roles of Stourport-on-Severn and Bewdley as market towns.
7. Safeguard and enhance natural resources, minimise waste and increase recycling, especially the re-use of land and buildings.
9. Ensure the District is equipped to adapt to and mitigate the impacts of climate change by ensuring that future developments are low or zero-carbon and that they do not increase flood risk to new and existing property.
10. Improve the District's air quality, particularly in the town centre areas of Kidderminster, Stourport-on-Severn and Bewdley.
11. Support the development of an accessible, integrated, sustainable transport network through new and existing developments to provide attractive alternatives for all residents and visitors and promote sustainable freight transport.

The Core Strategy seeks to:

- Ensure that new development does not exacerbate flood risk within the District.
- Address the low uptake of renewable energy schemes and domestic micro-generation.
- Overcome the District's reliance on the private motor car as the preferred mode of travel and providing sustainable transport choice.
- Delivering higher levels of affordable housing across the District.
- Ensuring that development continues to be deliverable on brownfield sites to assist with the regeneration of Kidderminster and Stourport-on-Severn.
- Address the need to provide strategic infrastructure to support diversification and regeneration, particularly within the Kidderminster area.

The Core Strategy provides for 4000 net additional dwellings to 2026, and 44 ha of employment land for the long term. It also provides for 25,000 sq m of comparison retailing, and 40,000 sq m of office space.

New development will be concentrated on brownfield sites within the urban areas of Kidderminster and Stourport-on-Severn. Limited opportunities for development to meet local needs will be identified on brownfield sites in Bewdley and within the rural settlements. Development in the open countryside will be closely controlled to safeguard the integrity of the District's Green Belt and landscape character.

Preference will be given to the following sequential approach to the allocation and subsequent phased release of sites:

1. Key regeneration sites within the Kidderminster Central Area Action Plan (KCAAP) boundary.
2. Other major (>1 ha) brownfield sites within Kidderminster and Stourport-on-Severn urban areas.
3. Smaller infill brownfield sites within Kidderminster, Stourport-on-Severn and Bewdley.
4. Brownfield sites within the rural settlements.

Kidderminster will meet 60% of the housing requirement and all of the comparison retail and large office space requirements.

Possibly the most important site to be allocated under this DPD with regard to the regeneration of Kidderminster is the former British Sugar site. This site provides a large opportunity to provide new industry and employment opportunities. However, due to viability concerns it may be necessary to consider a mixed use approach as part of the Site Allocations and Policies DPD to deliver this potential, including a significant area of residential. Joined together with the Stourport Road Employment Corridor and the other surrounding industrial estates, the former British Sugar site will help form the District's largest employment area.

Up to 44 hectares of employment land will be brought forward in the period up to 2026 in line with Policy DS01: Development Locations.
Major new employment development will be located within the urban area of Kidderminster, particularly within the Stourport Road Employment Corridor (SREC). All future employment development within the urban areas will be on previously developed land and should be located in highly accessible locations. A portfolio of employment sites for a range of businesses (B1, B2 and B8)(26) will be provided in terms of location, size and quality. The development of small scale businesses and starter units will be particularly encouraged.

The 2008 Employment Land Review identified that enough employment sites exist within the District to accommodate the identified need to 2026. hieve the indicative longer term requirement over the plan period. There is a large number of vacant and underused brownfield employment sites. The Issues and Options for the Site Allocations DPD identifies a number of sites including Finepoint, Hoo Farm, British Sugar, Foley Business Park, Foley Industrial Estate, Coppice Trading Estate, Oldington Trading Estate, Vale Industrial Estate, Greenhill Industrial Estate, Cursley Distribution Park,

The Stourport Road Employment Corridor (SREC) is seen as a key strategic area within the District. Perhaps the most important site for future redevelopment within this corridor is the former British Sugar Site. The site is 24 hectares in size (split into 2 phases of roughly 12ha each) and is located about a mile south of the town centre. The site is identified as having significant redevelopment potential that could be of strategic importance to the District and the wider sub-region. The site could have a key role to play in providing more modern and efficient business premises which would have

the potential to provide space for Kidderminster's existing businesses to relocate, as well as enticing new firms into the area.

New development for retail and commercial uses should follow a sequential approach and be directed to Kidderminster town centre, as the strategic centre in the District, in the first instance.

For new office development the focus will be on Kidderminster and the following sequential approach:

- Brownfield - In centre
- Brownfield - Edge-of-centre
- SREC
- Other allocated employment areas

All new development proposals within the District must demonstrate how they reduce their impact on the environment. The design, layout, siting, orientation, construction method and materials used should seek to maximise energy conservation and efficiency.

A minimum of 10% of the energy requirements of major (6) new developments should be met on-site from low or zero-carbon energy sources. The technologies installed should be retained and maintained during the full lifetime of the building. Consideration should be given to the use of combined heat and power systems on larger sites, particularly on industrial sites or sites of new community infrastructure.

The following strategic transport infrastructure schemes will be sought to support regeneration during the plan period:

- Provision of a new Kidderminster Railway Station building and improved access for all modes of transport to the station facilities. Connection of the Severn Valley Railway line to the national rail network at Kidderminster Station to facilitate improved accessibility to the tourism attractions of the West Midlands Safari Park, Bewdley and the Wyre Forest.
- Improvements to facilitate the multi-modal use of Kidderminster Ring Road and to enhance accessibility to the town centre and in particular pedestrian access.
- Provision of a new A451/A449 Hoobrook link road to facilitate the Stourport Road Employment Corridor.
- Provision of a Stourport Relief Road as a longer term scheme for delivery later on in the plan period during 2021-2026.

Contributions towards these strategic transport infrastructure schemes will be sought from major development proposals throughout the plan period. Future development proposals that will include part of an identified strategic transport route or transport infrastructure, must be designed to accommodate this provision and reserve the land required for the scheme. Proposals which are likely to prejudice the future development of strategic transport infrastructure will not be permitted.

Sustainable transport links and infrastructure to promote ease of access to the Wyre Forest, Bewdley, West Midlands Safari Park and Kidderminster Railway Station will be sought.

Potential Contribution to Cumulative Effects
The planned housing development and economic growth in Kidderminster, Stourport and Bewdley will lead to increased consumption of resources, increased waste generation and increased greenhouse gas emissions. There is unlikely to be competition for land for new employment development, although several of the WCS areas of search are identified as likely locations for meeting the District's future employment land needs and therefore there may be competition on those particular sites. Although the planned growth will lead to increased levels of traffic, the Core Strategy contains plans for a number of schemes which will help to reduce demand and increase capacity particularly for the Stourport Road Employment Corridor site. Air quality in Kidderminster may be adversely affected by the planned levels of growth although this may be offset to an extent by road and rail improvements.

The Third Worcestershire Local Transport Plan, Worcestershire County Council, February 2011

Objectives include:

- To support Worcestershire's economic competitiveness and growth through delivering a reliable and efficient transport network

- To reduce the impacts of transport in Worcestershire on the local environment, by reducing noise and transport-related emissions of carbon dioxide and other greenhouse gases
- To enhance the quality of Worcestershire's Transport Asset, through sensitive and appropriate design with the desired outcome of reducing the costs and inconvenience of maintenance works.

The LTP's economic aims include:

- To improve accessibility by all modes, particularly to Worcestershire's main urban areas
- To improve journey time reliability and network efficiency by reducing congestion, to enable in particular the expeditious movement of freight in, out and across Worcestershire
- To ensure that new developments are designed to minimise their impacts on Worcestershire's transport networks, by locating new developments in the most accessible locations and developing supportive transport infrastructure and services.

Environmental aims include:

- To reduce the impacts of transport noise and vibrations on the built and natural environments
- To optimise the resilience of Worcestershire's transport networks to the

negative impacts of climate change (in particular flooding), maintaining a reliable service during major weather events and temperature change
- To reduce the primary and secondary impacts of transport on local communities, reducing transport's contribution to climate change and wider environmental deterioration.

Asset management aims include:

- Prioritise funding towards investment in the transport infrastructure and services in the busiest /most used transport corridors and congested urban areas
- Safeguard and enhance existing river crossings and promote new river crossing opportunities
- Ensure that the appropriate levels of financial contributions are provided by developers toward the capital and ongoing maintenance costs of the transport infrastructure and services to deliver sustainable developments

Major schemes are:

- Evesham Abbey Bridge and Viaduct
- Phase 1 of Worcester Transport Strategy
- Worcestershire Parkway
- Kidderminster Transport Strategy
- Redditch Transport Strategy

The structures programme for 2011/12 includes the completion of two major maintenance schemes: Ombersley and Talbot Bridges [A449] and Holt Fleet Bridge, as well as the first phase of a maintenance programme to Eckington Bridge (listed monument), reconstruction of a retaining wall on the recently detrunked A456, repainting of two major bridges (Upton-upon-Severn and Powick New Bridge), repairs to Pershore New Bridge and major repairs to Teme Bridge in Tenbury.

Schemes in north east Worcestershire include various works in Redditch and Bromsgrove.

Schemes in south Worcestershire include packages of schemes in Worcester, Droitwich Spa, Great Malvern, Tenbury Wells and Upton upon Severn, in addition to works in Evesham and Pershore.

Schemes in Wyre Forest include packages of schemes in Kidderminster, Stourport-on-Severn, and Bewdley.

Potential Contribution to Cumulative Effects
The Local Transport Plan contains a range of measures to reduce demand for road space and implement capacity improvements. Benefits should be particularly secured in Worcester, Kidderminster, Stourport, Bewdley, Bromsgrove, Redditch, Droitwich and Great Malvern. Air quality improvements may be secured particularly in Bewdley, Kidderminster and Bromsgrove.

Waste

The sustainable and efficient management of waste will be sought by basing waste management decisions on the Best Practicable Environmental Option (BPEO) Assessment results, the principles of the waste hierarchy (including reduction and minimisation, re-use, recovery, recycling and landfill), the proximity principle and regional local self-sufficiency.

Housing

A four tier housing location strategy has been adopted. Most provision will be concentrated in Hereford (the first tier) and the market towns (the second tier) principally from a combination of allocated sites, urban capacity sites and some urban extensions. The third tier locates housing on allocation sites in the more sustainable main villages. In addition, there will be some windfall development mainly on capacity sites in these villages. The fourth tier of the strategy caters for other rural housing needs essentially through windfall developments on infill plots in named smaller settlements. The distribution of housing is as follows: Hereford 3,781 dwellings; Leominster 1,037 dwellings; Ross-on-Wye 693 dwellings; Ledbury 956 dwellings; Bromyard 480 dwellings; Kington 275 dwellings; Main villages 3,044 dwellings; Wider rural area 1,918 dwellings.

Employment

The UDP makes provision for 100 hectares of land for employment development, which includes land allocations in a range of locations throughout the County and existing planning permissions. In addition to the larger scale allocations, policies will permit suitable employment development in the rural areas which are consistent in scale with their location, in order to help ensure balanced communities and to secure rural regeneration. The following sites are identified for employment development: Rotherwas Industrial Estate, Hereford(14.3ha); Moreton on Lugg depot, Moreton on Lugg; Legion Way, Hereford; Leominster Enterprise Park, Leominster; Land north of railway viaduct, Ledbury; Land north and east of Lower Road Trading Estate, Ledbury (4ha); land south of Linton Trading Estate, Bromyard (5.2ha); land north of petrol filling station, Overross, Ross-on-Wye (1.2ha); Gooses Foot Industrial Estate, Kingstone (2.1ha); Tram Inn, Allensmore (0.7ha); Land north of A40, Model Farm, Ross-on-Wye (10.0ha); Land east of Whitestone Business Park, Withington (2.9ha)

Minerals

- Aggregates: Shobdon, Portway and Moreton Camp are likely to be operational beyond 2011, easily able to supply 283,000 tonnes pa between them and to provide a choice of operators. This provides an adequate productive capacity for the Plan period.
- Crushed rock: Leinthal Earls, Perton and Nash Scar are expected to be operational in the medium to long term

Potential Contribution to Cumulative Effects
The UDP promotes the BPEO for Herefordshire and Worcestershire for managing its waste arisings. Although it also promotes the proximity principle and "regional local self-sufficiency" it is likely that municipal waste will be transported to Worcestershire for management. No other cumulative effects are likely to arise from the UDP.

Birmingham Core Strategy 2026 Consultation Draft, Birmingham City Council, December 2010

Waste

The City Council will seek to move and manage Birmingham's waste up the waste hierarchy and manage an equivalent tonnage of waste arisings.
The key policy objectives of the City Council will be to minimise the amount of waste created, treat waste as a resource and encourage recycling, reuse and composting. There is currently a shortfall in the number of waste recycling facilities and more will need to be constructed during the plan period. There will also be a requirement to increase disposal capacity.

The following locations are considered suitable for developments that involve the management, treatment and processing of waste:

a. Industrial areas including the Core Employment Areas identified on the Proposals Map. This includes areas at Longbridge, Frankley, Kings Norton Green and Cotteridge.
b. Sites currently or previously in use as waste management facilities.
c. Appropriate sites adjacent to existing waste management facilities.

The Tyseley Environmental Enterprise Area has potential to accommodate new waste and sustainable energy technologies, including recycling, Combined Heat and Power and waste recovery

It will also be essential to increase waste recycling and encourage the use of renewable energy. More commercial, household and garden waste will need to be recycled at depots and centres within the city, reducing the amount going to landfill sites.

Housing and Employment

The contribution of South Birmingham to the housing and employment land allocations will be as follows:

- 12,000 additional dwellings. This will include: Longbridge SUN around 1600 (including 700 in Bromsgrove); Druids Heath around 500. Kings Norton SUN around 500; North Worcestershire Golf Course around 800.
- New employment land, including: Longbridge; (including the 25ha Regional Investment Site); Druids Heath; minimum 5ha.
- In addition, Core Employment Areas will be protected for employment purposes including: Kings Norton Business Park.

- A new local centre at Longbridge in line with the Longbridge Area Action Plan

Transport

Developing accessibility and mobility within and to the city will be achieved by measures to improve public transport, particularly through high quality sustainable means, reduced congestion, improvements to the reliability of journeys and encouraging access by sustainable modes for people and freight.

Schemes include the electrification to Bromsgrove including extension of Cross City service, and highway and public transport improvements in Longbridge, the A38 Bristol Road Corridor, the A441 Pershore Road Corridor and the A435 Alcester Road Corridor.

The City Council will support measures which seek to ensure that the most sustainable mode choices are also the most convenient,

Opportunities offered by emerging technology to support greater and more effective connectivity whilst reducing the impact on the environment will be supported. This will include the use of low carbon vehicles for personal and public transport, and for the movement of freight; and the exploration of opportunities for reducing the carbon footprint resulting from transport infrastructure.

Potential Contribution to Cumulative Effects
Developments near to Longbridge have the potential to conbribute to cumulative effects in combination with any waste developments in or near Longbridge, although no areas of search have been identified near Longbridge. In particular, increased traffic is likely from the housing growth in the Longbridge area, although transport infrastructure improvements may help to reduce the demand for road space.

Waste Development Framework Core Strategy Revised Spatial Options, Warwickshire County Council, June 2008

The Revised Spatial Options document sets out the previous preferred option in response to key issues for waste management, and invites comments on these:

- For MSW: to adopt a strategy whereby a qualitative and quantitative approach based on the waste hierarchy, the principles of proximity and self-sufficiency and the sub-regional need for municipal waste strategies is used to determine the location and mix of municipal waste treatment facilities.
- For C&I: to adopt strategies aimed at delivering the waste hierarchy and the principles of proximity and self-sufficiency in order to meet the sub-regional need, that would reduce the amount of industrial and commercial waste that is sent for final disposal.

- For C&D: to adopt strategies aimed at delivering the waste hierarchy and the principles of proximity and self-sufficiency that would limit the amount of waste sent for final disposal and developers would be expected to re-use construction and demolition wastes in new build where practicable.
- For hazardous waste: to adopt a quantitative and geographic approach taking into account the principles of proximity and self-sufficiency to establish the type of facility and general location for hazardous waste facilities.

In addition to waste management location options, Warwickshire County Council must also identify an appropriate scale for waste management facilities. Following earlier consultation the preferred option for addressing this issue was to adopt policy based on providing flexible local waste facilities scaled to meet most of the requirements of each local district, or a pair of adjoining districts, supported by specialist facilities scaled to meet the counties or sometimes wider need to treat particular materials.

A series of spatial options are presented for the strategic approach to locating waste facilities, but no preferred option is identified and no specific sites are identified.

Potential Contribution to Cumulative Effects
There is potential for cross-border movements of waste between Redditch and Warwickshire, particularly the Stratford-upon-Avon District, however the likely potential for cumulative effects is unknown at this stage, as the scale and type of any development in Redditch or Warwickshire as a whole are currently unknown.

Minerals Core Strategy Revised Spatial Options, Warwickshire County Council, February 2009

The draft Core Strategy contains sites which have been put forward by the minerals industry and landowners for consideration, including the following for sand and gravel extraction:

- Berry Coppice, Dunnington
- North of Broom Lane, Marsh Farm Quarry
- East of A46, Broom, Marsh Farm Quarry
- Land at Millers Bank, Marsh Farm Quarry

Potential Contribution to Cumulative Effects
Mineral extraction at Dunnington and Marsh Farm Quarry have the potential for cumulative impacts from traffic with any waste development at Evesham and possibly also Redditch. However the likely potential for cumulative effects is unknown at this stage, as the scale and type of any development in Redditch or Evesham are currently unknown.

Waste Core Strategy Publication Version, Gloucestershire County Council, December 2010

Strategic objectives include the following:

- To raise awareness of waste issues amongst Gloucestershire residents and businesses in order to generate collective responsibility for waste, ensure it is seen as a potential resource and to reduce the amount of waste produced, with zero-growth achieved across all waste streams by 2020.
- To make the best use of Gloucestershire's waste by ensuring that residents and businesses re-use as much of their waste as possible and that if waste cannot be re-used, it can easily be recycled or composted
- o recover the maximum amount of value including energy from any waste that cannot be re-used, recycled or composted
- To recognise the continuing role of landfill for the disposal of certain residual and hazardous wastes whilst reducing our reliance on landfill as the primary method of waste management in Gloucestershire
- To ensure the environmental and social impacts of waste management particularly climate change and risks to human health are minimised, including by managing waste close to where it arises and promoting the use of sustainable transport

In Gloucestershire there are three non-hazardous landfill sites; Hempsted at Gloucester, Wingmoor Farm (West) and Wingmoor Farm (East) near Bishop's Cleeve to the north west of Cheltenham. There is also a hazardous landfill site at Wingmoor Farm (East). Total landfill voidspace (capacity) for non-hazardous waste in March 2009 was 6,029,500 m3 and for hazardous waste 1,206,200 m3. In terms of remaining landfill lifespan, this equates to at least 10 -13 years at current throughputs for non-hazardous landfill and around 22 years for hazardous landfill. However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last for significantly longer.

Our proposed approach is to focus all permanent 'strategic' waste management facilities (>50,000 tonnes/year) including residual waste recovery facilities, within the central area of Gloucestershire, close to the main urban areas along the M5 corridor in particular Gloucester and Cheltenham but also Tewkesbury. Four strategic sites have been identified: Wingmoor Farm East; Wingmoor Farm West (Sites A & B); Javelin Park; Land at Moreton Valence. Wingmoor Farm is about 20km from Evesham and Pershore and about 15km from Upton-upon-Severn.

No provision for new landfill is made and no sites or areas of search are identified.

Potential Contribution to Cumulative Effects
None identified.

Shropshire Core Strategy Final Plan Publication, Shropshire County Council, February 2010

Sustainable waste management infrastructure will be achieved by:

- Encouraging proposals for additional capacity to divert waste away from landfill in a way consistent with the waste hierarchy and the principles and targets of national, regional and local policies and strategies, including the principle of 'equivalent self sufficiency' and an allowance for cross boundary waste flows;
- Identifying specific sites to deliver additional waste transfer, recycling and recovery facilities in accessible locations close to the main urban areas within broad locations, including in the vicinity of Ludlow and Bridgnorth.

Ten sites, amounting to up to 30 hectares of land, remain available in the 'saved' Waste Local Plan and are therefore potentially available as locations which have previously been identified as being 'suitable in principle' for waste management development.

Policy on Strategic Planning for Minerals includes the identification of broad locations' for the future working of sand and gravel, including around Bridgnorth and Ludlow and on the border with Worcestershire. Sites capable of helping to deliver the sub-regional target for sand and gravel will be allocated within these areas in the Site Allocations and Management of Development DPD.

Potential Contribution to Cumulative Effects
There is the potential for cumulative effects arising from any waste developments near Ludlow and Bridgnorth, in combination with any waste developments in Tenbury and Kidderminster respectively, in particular on air quality and biodiversity. Cumulative effects from transport are possible but unlikely.

Emerging Core Strategy Consultation, Solihull Metropolitan Borough Council, September 2010

Proposed waste policy

- Encourage waste minimisation and reuse of materials and provide for an estimated treatment gap between waste arising and capacity of facilities of 350,000 tonnes, based on technical evidence.
- Identify strategic importance of Arden Brickworks, Bickenhill as a site with potential for consolidating a range of waste management activities, the treatment facility at Meriden Quarry, and the composting facility east of Berkswell.
- Identify opportunities for co-location of appropriate waste management facilities at sand and gravel quarries at Berkswell and Meriden, particularly those associated with the production of recycled and secondary aggregates.
- Identify an area of search for residual waste facility at Berkswell and

Meriden Quarries.

Proposed minerals policy

Provide for 9.775 million tonnes of sand and gravel, including a 7 year landbank. Extensions already granted planning permission to provide 4.5 million tonnes. Areas of search and preferred area for sand and gravel extraction to contribute toward remaining requirement. Preferred Area: Marsh House Farm extension to Berkswell Quarry 2 million tonnes.

Housing and employment land

The Emerging Core Strategy identifies areas for housing development including land for 150 dwellings at Dickens Heath. It also identifies employment sites including three sites near the A34 between Shirley and the M42. It will support the continued success of key regional economic assets including Blythe Valley Business Park Regional Investment Site (B1 uses).

Potential Contribution to Cumulative Effects
Developments in the south of Solihull Metropolitan Borough (from housing and economic growth including additional growth at Blythe Valley Business Park) are likely to increase traffic on the M42, which could potentially affect any waste developments in Redditch and possibly Bromsgrove. There is also the potential for this growth to give rise to cumulative effects with waste development on air quality and possibly also on biodiversity. However, the nearest WCS areas of search are at Redditch which are about 10km from the developments proposed in the Emerging Core Strategy and therefore cumulative effects are unlikely.

Local Development Framework Directions for Stratford-on-Avon District Consultation Core Strategy, Stratford-on-Avon District Council, February 2010

The location and scale of development should provide for the primary focus of development on Stratford-upon-Avon and secondary focus of development on the Main Rural Centres including Alcester, Bidford-on-Avon, Henley-in-Arden and Studley. A significant proportion of development in the District will be provided within and adjacent to the Stratford urban area.

The following specific provisions are made for land adjacent to Redditch:

- 12ha of land at Winyates Green Triangle is allocated for employment development to meet the needs of Redditch;
- an Area of Development Restraint, as defined on the Proposals Map, will be maintained between the A435 and the boundary with Redditch Borough for possible future development;
- the openness of the sensitive gap between Studley and Redditch will be maintained.

Provision will be made for the following amount of development during the period 2006-2026:

- 7,500 net additional dwellings;
- 68 hectares of employment land, with a minimum of 17 hectares being readily available during any five year period;
- between 25,000 and 35,000 square metres (gross) of comparison retail floorspace within or on the edge of Stratford-upon-Avon town centre;
- 20,000 square metres (gross) of office floorspace within or on the edge of Stratford-upon-Avon town centre.

From 2011 to 2026, 2110 additional dwellings will be provided in Stratford, 375 in Alcester, 250 in Bidford-on-Avon, 45 in Henley-in-Arden and 75 in Studley.

The following areas of land are identified for various forms of development:

- 37.8 ha in Alcester;
- 14.9 ha in Bidford-on-Avon;
- 6.3 ha in Henley-in-Arden;
- 9 ha in Studley.

The principle of providing a foodstore of up to 2,500 square metres (gross) in the town centre of Alcester is supported.

Previously developed sites and an airfield are identified for development at the following sites:

- Long Marston;
- Great Alne;
- Kings Coughton;
- Sambourne;
- Studley;
- Long Marston Airfield.

Potential Contribution to Cumulative Effects
Housing developments at Alcester, Studley and Bidford-on-Avon could potentially give rise to cumulative effects from traffic growth on the A46 in combination with any waste developments in or near Evesham or Redditch, also potentially affecting air quality and biodiversity. Areas of search have been identified in Redditch and Evesham by the WCS. However, the likelihood of effects is currently uncertain, as the type and scale of any waste developments are unknown. Employment growth to the south and east of Redditch could similarly give rise to cumulative effects on traffic in combination with any waste developments in or near to Redditch, although the likelihood of effects is also unknown for the same reason.

Annex F

Appraisal of Areas of Search

Key:

Impacts	Significance	Probability of effects	Direct or indirect effects	Reversibility
+ positive impact - negative impact 0 no significant impact ? impact unknown Ø not relevant Multiple symbols are used to indicate differential scale of effects	Low significance Medium significance High significance	L low probability M medium probability H high probability	D direct effect I indirect effect	✓ reversible effect × not reversible ie permanent effect

Table F.1 Significant Impacts of Waste Development Within Areas of Search

Area of Search	1. Waste hierarchy	2. Climate change	3. Flood risk	4. Travel (distance/mode)	5. Economy	6. Responsibility	7. Technology	8. Energy	9. Water, soil, air	10. Access	11. Landscape	12. Biodiversity, geodiversity	13. Health	14. Housing	15. Skills	16. Heritage	17. Crime	18. Land use	Comments
1. Shire Business Park	+	+	0	+/+	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
2. Berkeley Business Park	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Residential area on other side of main road
3. Great Western Business Park	+	+	0	+/+	+	+	+	?	?	0	0	-	0	-	0	0	0	?	Houses 20m away. Some undeveloped land. SWS <10m. Possible adverse effects on Lowesmoor & Rainbow Hill AQMA.
4. Buckholt Business Centre	+	+	0	+/0	+	+	+	?	0	0	0	-	0	0	0	0	0	+	SWS <10m.
5. Warndon Business Park	+	+	?	+/0	+	+	+	?	0	0	0	-	0	?	0	0	0	+	Houses <500m. FZ2. SWS <10m.
6. Newtown Road Industrial Estate	+	+	0	+/0	+	+	+	?	?	0	0	0	0	-	0	0	0	+	Residential within 15m. Possible adverse effects on Lowesmoor & Rainbow Hill and Newtown Rd AQMAs.
7. Shrub Hill Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Housing within 500m.

Area of Search	1. Waste hierarchy	2. Climate change	3. Flood risk	4. Travel (distance/mode)	5. Economy	6. Responsibility	7. Technology	8. Energy	9. Water, soil, air	10. Access	11. Landscape	12. Biodiversity, geodiversity	13. Health	14. Housing	15. Skills	16. Heritage	17. Crime	18. Land use	Comments
																			Possible adverse effects on Lowesmoor & Rainbow Hill and Newtown Rd AQMAs.
8. Sherriff Street Industrial Estate	+	+	0	+/0	+	+	+	?	?	0	0	0	0	0	0	0	0	+	Possible adverse effects on Lowesmoor & Rainbow Hill and Newtown Rd AQMAs.
9. Diglis Industrial Estate	+	+	?	+/+	+	+	+	?	?	0	0	0	0	?	0	?	0	+	Residential and recreational receptors. FZ2. Adjacent battlefield.
10. Venture Business Park	+	+	0	0/0	+	+	+	?	?	0	0	0	0	?	0	0	0	-	Houses <50m
11. Weir Lane Industrial Estate	+	+	0	0/0	+	+	+	?	0	0	?	0	0	?	0	?	0	+	House <50m. Within Conservation Area. Battlefield to south.
12. Ball Mill Top Business Centre	+	+	0	0/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Houses overlooking site.
13. Top Barn Business Centre	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
15. Hartlebury Trading Estate	+	+	0	0/+	+	+	+	?	0	0	0	0	0	0	0	?	0	?	SAM <300m. Green belt, but site already developed.
17. Gemini Business Park	+	+	0	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
18. Oldington Trading Estate	+	+	0	+/0	+	+	+	?	?	0	0	0	0	?	0	0	0	+	House to the west. SPZ3.
19. Birchen Coppice Trading Estate	+	+	0	+/0	+	+	+	?	?	0	0	-	0	0	0	0	0	+	SPZ3. SWS < 10m.
20. Foley Business Park	+	+	0	+/0	+	+	+	?	?	0	0	0	0	0	0	0	0	?	Some plots are undeveloped.
21. Hoo Farm Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Residential areas adjacent.
22. Foley Industrial Estate	+	+	0	+/+	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Residential uses at site

Area of Search	1. Waste hierarchy	2. Climate change	3. Flood risk	4. Travel (distance/mode)	5. Economy	6. Responsibility	7. Technology	8. Energy	9. Water, soil, air	10. Access	11. Landscape	12. Biodiversity, geodiversity	13. Health	14. Housing	15. Skills	16. Heritage	17. Crime	18. Land use	Comments
																			entrance.
23. Former British Sugar Site	+	+	?	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	FZ2.
24. Vale Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Housing to the east.
25. Greenhill Industrial Estate	+	+	0	+/0	+	+	+	?	?	0	0	0	0	-	0	0	0	+	Residential uses <10m. SPZ3. Possible effects on Kidderminster AQMA.
26. Ikon Trading Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	?	0	0	0	?	Houses opposite site entrance. Green belt, but site already developed.
28. East Moons Moat	+	+	0	+/0	+	+	+	?	0	0	0	0	0	0	0	?	0	+	SAM <100m
29. Park Farm Industrial Estate	+	+	?	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Housing to the west. FZ2.
30. Pipers Road Park Farm	+	+	?	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	FZ2.
31. Washford Industrial Estate	+	+	?	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Housing on surrounding land. FZ2.
32. Kingfisher Enterprise Park	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Houses overlooking the site.
33. Lakeside Industrial Estate	+	+	?	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	FZ2.
34. Weights Farm Business Park	+	+	0	0/0	+	+	+	?	0	0	0	0	0	?	0	0	0	?	Residential land at site entrance. Green belt, but site already developed.
35. Ravensbank Business Park	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	?	Green belt, but site already developed.
36. Buntsford Hill Industrial Estate	+	+	0	0/0	+	+	+	?	?	0	0	0	0	0	0	0	0	+	SPZ2. Possible adverse effects on Stoke Heath AQMA.
37. Buntsford Gate Business Park	+	+	0	0/0	+	+	+	?	?	0	0	0	0	0	0	0	0	+	Part of site SPZ2. Possible adverse effects on Stoke Heath

Area of Search	1. Waste hierarchy	2. Climate change	3. Flood risk	4. Travel (distance/mode)	5. Economy	6. Responsibility	7. Technology	8. Energy	9. Water, soil, air	10. Access	11. Landscape	12. Biodiversity, geodiversity	13. Health	14. Housing	15. Skills	16. Heritage	17. Crime	18. Land use	Comments
																			AQMA.
38. Silver Birches Business Park	+	+	0	+/0	+	+	+	?	?	0	0	0	0	0	0	0	0	+	SPZ2. Possible adverse effects on Stoke Heath AQMA.
39. Bromsgrove Technology Park	+	+	0	+/0	+	+	+	?	?	0	0	0	0	?	0	0	0	-	SPZ2. Close proximity to housing. Currently undeveloped. Possible adverse effects on Stoke Heath AQMA.
42. Berry Hill Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Residences <100m
44. Stonebridge Cross Business Park	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
45. Hampton Lovett Industrial Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
46. Enigma Business Park	+	+	0	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
47. Spring Lane Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	-	0	0	0	+	Houses <20m.
48. Link Business Centre	+	+	0	+/0	+	+	+	?	0	0	0	0	0	-	0	0	0	+	Houses <10m on 3 sides
49. Blackmore Business and Technology Park	+	+	0	0/0	+	+	+	?	?	0	0	0	0	0	0	0	0	?	Some land as yet undeveloped.
50. Merebrook Industrial Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	?	0	0	0	+	Houses nearby.
51. Vale Business Park	+	+	0	+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
52. Four Pools Industrial Estate	+	+	0	+/0	+	+	+	?	0	0	0	0	0	-	0	0	0	+	Housing very close to site.
53. Keytec7 Business Park	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
54. Racecourse Road Trading Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
55. Pershore Trading Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
58. Tenbury Business Park	+	+	0	0/0	+	+	+	?	?	0	0	0	0	0	0	0	0	?	There appear to be some empty plots.
59. Cursley Distribution Park	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	?	Green belt, but site

Area of Search	1. Waste hierarchy	2. Climate change	3. Flood risk	4. Travel (distance/mode)	5. Economy	6. Responsibility	7. Technology	8. Energy	9. Water, soil, air	10. Access	11. Landscape	12. Biodiversity, geodiversity	13. Health	14. Housing	15. Skills	16. Heritage	17. Crime	18. Land use	Comments
																			already developed.
60. Finepoint Business Park	+	+	0	0/0	+	+	+	0	?	0	0	0	0	0	0	0	0	+	SPZ3
61. Area 7 Industrial Estate	+	+	0	+/+	+	+	+	0	0	0	0	0	0	0	0	0	0	+	Surrounding residential uses. Most of site is agricultural land.
62. North Street Industrial Estate	+	+		+/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
63. Rushock Industrial Estate	+	+	0	0/0	+	+	+	?	0	0	0	0	0	?	0	0	0	?	Surrounding residential uses. Green belt but site already developed.
64. Bennetts Hill Business Park	+	+	0	0/0	+	+	+	+	0	0	0	-	0	?	0	0	0	+	Residences at entrance. SWS <10m
65. Upton Business Centre	+	+	0	0/0	+	+	+	?	0	0	0	0	0	0	0	0	0	+	
Probability of effects	M	H	H	L	M	H	M	M	H/L		H	M	H	L/M	L	M		H	
Direct or indirect	D	D	D	D	I	I	I	I	D		D	D	I	I	I	D		D	
Reversibility	×	×	×	×	×	×	×	×	×		×	×	×	×	×	×		×	