Worcestershire County Council
Minerals and Waste Development Framework

Waste Core Strategy First Draft Submission Report
Interim Sustainability Appraisal

September 2010

Waste Core Strategy First Draft Submission Report: Interim Sustainability Appraisal

CONTENTS

1 SUMMARY AND OUTCOMES

1.1 Non-technical summary

1.1.1 This report sets out details of the process and outcomes of an Interim Sustainability Appraisal (SA) of the First Draft Submission of the Worcestershire County Council Waste Core Strategy (WCS). It should be noted that this is not the full and final SA accompanying the WCS; that full SA will be produced to accompany the next stage of document preparation: the submission WCS. The WCS will provide the framework for how all the waste streams in the county will be managed between now and 2027. Having undertaken earlier work on the WCS between 2005 and 2007, WCC has recommenced the process. The First Draft Submission WCS is the latest stage in an iterative process of development of the WCS, incorporating a number of formal and informal stages. SA is an integral part of that process.

1.1.2 As with all Development Plan Documents, the Waste Core Strategy is subject to Sustainability Appraisal (SA). This is an iterative process of assessing the social, economic and environmental performance of the plan, and seeking to ensure that the most sustainable solutions are taken forward. The SA process incorporates the requirements of the Strategic Environmental Assessment directive[1], in accordance with government guidance.

1.1.3 The Statutory requirements for DPD production do not require an SA to be undertaken to accompany this stage of the Waste Core Strategy, but it is considered to be good practice to check the document's progress through undertaking an 'Interim SA'. This is that document. It is not a full SA, but seeks to ensure that the sustainability of the Waste Core Strategy is assessed before the document has progressed to a later, submission stage. The submission WCS will be accompanied by a full SA.

1.1.4 SA is carried out at various stages alongside the Waste Core Strategy to ensure that sustainable development forms an integral part of its development. By considering the policy direction of the WCS, the SA can help shape the most sustainable options. This is achieved through appraising how far each part of the WCS contributes towards the achievement of a set of 'sustainability objectives' established early in the SA process. The SA is able to make recommendations which are then taken into account in further developments of the WCS, resulting in a final Strategy that should reflect the most sustainable options.

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

[1] Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment

The WCS and its Context

1.1.6 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.

WO1	**To base our decisions on the principles of sustainable development and the need to reduce greenhouse gas emissions to mitigate climate change.**
WO2	**To protect and enhance the County's natural resources, environmental, social, cultural and economic assets and the character and amenity of the local area.**
WO3	**To do everything possible to minimise waste production and 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 address the "Capacity Gap" between how much waste management capacity we have and what we need.**
WO6	**To safeguard existing waste management facilities from incompatible development.**
WO7	**To reduce waste miles by road where possible.**
WO8	**To make communities in Worcestershire take responsibility for their own waste and involve all those affected as openly and effectively as possible.**
WO9	**To develop a waste management industry that contributes positively to the local economy.**

1.1.7 The WCS seeks to deliver against the Strategic Objectives through a series of policies. The content of these policies can be summarised as:

Identification of 'areas of search' considered most suitable for waste management facilities.

Ensuring new waste management development contributes to the aims of sustainable development through setting out environmental, social and economic considerations to be balanced.

All new development must consider the reduction, reuse and recycling of waste, including the construction, occupation and demolition stages of development.

Proposals for new waste management facilities must consider their impact on natural resources, environmental, social, cultural and economic assets and the character and amenity of the county - and how any impacts can be minimised.

Promotion of reuse and recycling of resources and recovery of energy from waste that cannot be recycled.

Reduce the amount of waste going to landfill, but to set out when landfill will be allowed and the extra criteria that planning applications for landfill will need to meet.

Safeguarding of existing waste management facilities.

1.1.8 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:

- EU Council Directive on the landfill of waste (the 'Landfill Directive'), as applied in England and Wales under the Landfill (England and Wales) Regulations 2002. The Landfill Directive includes challenging targets for a reduction in the amount of biodegradable municipal waste sent to landfill. The WCS must seek to advance this shift from landfill to more sustainable waste management methods.

- EU Council Directive on waste (the 'Waste Framework Directive') calls for implementation of the waste hierarchy, and also sets targets for the recycling of household waste and the recovery of construction and demolition waste. The WCS needs to set the strategic planning context for implementing the waste hierarchy.

- DEFRA's Waste Strategy for England 2007 confirms the importance of waste reduction/minimisation and the importance of delivering against the waste hierarchy. It also stresses the need to end the link between economic growth and commensurate increases in waste production.

- The government's Planning Policy Statements (PPSs) provide the overarching principles for the development of planning policy. There are a range of PPSs that influence the WCS, but the most significant of these are PPS1: Delivering Sustainable Development, and PPS10: Planning for Sustainable Waste Management. PPS1 requires that policy makers put sustainability at the core of plan-making, which includes taking account of reducing emissions and taking a 'spatial' approach – i.e. looking at more than just land uses. PPS10 seeks a range of measures, including ensuring planning policies move waste management up the waste hierarchy and enabling waste management facilities to meet the needs of communities.

- The Regional tier of planning has now been revoked, but the West Midlands Regional Spatial Strategy has influenced the WCS. Whilst it is recognised that the RSS no longer forms part of the development plan, it nevertheless contains a wealth of relevant technical data that remains a valid source of evidence. The WCS is informed by the supporting technical work from the former Regional Assembly.

- In Worcestershire, the Waste Core Strategy is complemented by the Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004-2034 (JMWMS). The JMWMS is a more 'operational' strategy that sets out how municipal waste will be reduced and dealt with. It should be noted that unlike the WCS, the JMWMS only considers municipal waste, not all elements of the waste streams; the collection, treatment and disposal of these is the responsibility of other agencies.

- At the local (district) level, Local Development Frameworks are being prepared. Core Strategies are being developed to guide the overall housing and employment requirements of Bromsgrove District Council, Redditch Borough Council, Wyre Forest District Council, and the three

South Worcestershire authorities, who are working jointly. The WCS has to consider the likely future direction of growth emerging in the Core Strategies.

- The Sustainable Community Strategy Second Edition 2008–2013 (SCS) prepared by the Worcestershire Partnership LSP, sets out the strategic vision for the future of Worcestershire, with the aim of improving the quality of life of people who live in, work in, or visit the county. One of the 'priority outcomes' of the SCS is 'to maximise the diversion of waste away from landfill through prevention, re-use, recycling/composting and recovery'. The WCS is a key policy tool for helping to deliver this outcome and other sustainable development outcomes within the SCS.

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

The Current state of Sustainable Development in Worcestershire

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

Key Environmental, Social and Economic Issues for Worcestershire

ISSUE	KEY FACTS
Waste	Worcestershire produced 267,587 tonnes of household waste in 2008/09, of which 41.57 percent was recycled or composted. In 2006/07, the latest year for which figures are available, Worcestershire's 32.3 percent of household waste recycled/ composted was slightly higher than the corresponding figure of 28.6 percent for the West Midlands region. 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 37.7 percent was recycled or re-used. Worcestershire produced 307,000 tonnes of commercial waste in 2002/03, of which 31.3 percent was recycled re-used.
Climate Change	In 2007, Worcestershire's CO_2 emissions were 3869Kt. These comprised: Industry and commerce: 44% Domestic sector: 33% Transport sector: 23% These figures exclude emissions from motorways.
Flooding	Approximately 10% of the county is at risk of flooding, principally from the rivers Severn, Teme, Avon and Stour.
Traffic and 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 in Worcestershire.

Growth with prosperity for all	The employment rate for working age people in Worcestershire for 2008/09 was 77.8%, which was ahead of the West Midlands (71.3%) and England (74.0%), although at lower-tier level the rates vary considerably.
Participation by all	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%.
Technology, innovation 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. This 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.
Energy generation and use	In 2007, Worcestershire consumed 16,254.2GWh of energy from all sources. This is slightly less than in 2006 (16,516GWh). Current renewable energy in the county comes from landfill gas, wood fuel, biofuel, ground source heat, solar systems and small wind turbines. Potential additional sources include solar, biogas, energy crops, wind power and hydro-electricity.
Natural Resources	There are currently 9 AQMAs either in existence or in the process of being designated in Worcestershire, due to poor air quality. Several of these have 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'. Worcestershire watercourses do not compare very favourably with watercourses in the wider area. The majority of the county's 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%.
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, geodiversity, 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 approximately 114 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. There are approximately 90 Regionally Important Geological/ Geomorphological Sites (RIGS), of which 40.2% are under appropriate management.
Health	Male life expectancy in Worcestershire at birth is below the West Midlands and UK averages, but female life expectancy is 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 (learning and skills)	Across Worcestershire, 28% of the population aged between 19 and 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 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 (antisocial 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	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.

Areas Likely to be Significantly Affected by the WCS

1.1.10 The appraisal has considered the areas likely to be significantly affected by implementation of the First Draft submission 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.

1.1.11 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 B.

1.1.12 On another level, some of the effects of the management of waste will occur in the vicinity of waste management sites. At this stage, broad 'areas of search' have been identified as acceptable in principle for waste management development. An assessment will be made of the environmental and sustainability conditions of those areas and will be published in the SA report accompanying the next stage of the WCS, the Submission document.

Existing Problems Relevant to the WCS

1.1.13 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 currently exceeds the England average for recycling municipal solid waste and landfills slightly less than average, although 52% of municipal solid waste was still landfilled in 2007/08. Commercial/industrial and construction/demolition wastes are each significantly 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 is increasing.

- 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. It is anticipated that the WCS will be informed by the Strategic Flood Risk Assessments of the six Worcestershire districts.

[2] The SEA Directive requires the report to identify relevant problems.

- 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, comprising 4 conservation areas[3]; 28 scheduled monuments; 2 registered parks & gardens; and 13 buildings listed at Grades I and II*.

- Worcestershire contains or is near to some areas which are designated as internationally important, including Special Protection Areas and Special Areas of Conservation designated pursuant to Directives 79/409/EEC[4] and 92/43/EEC[5]. The sites are all subject to pressures which are described in more detail later in the report.

Taking Account of Relevant Sustainable Development Objectives

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

1.1.15 The review identified the key sustainable development policy objectives contained in each document, and the table on pages 30-32 sets 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 First Draft Submission WCS. The review also identified any relevant targets which have been set.

1.1.16 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.

The Likely Significant Effects of the WCS

1.1.17 Various elements of the First Draft Submission WCS 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, in light of the appraisal of the vision and strategic objectives for the WCS (see Section 4), and the appraisal of the draft policies (see Section 5). The summary below sets out the results of this synthesis, and draws interim conclusions about the likely significant

[3] Comprehensive district-wide surveys of Conservation Areas at risk have yet to be completed, so the true figure could be higher.
[4] Directive 79/409/EEC on the conservation of wild birds.
[5] Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

overall effects of those elements of the WCS that have been assessed at this stage. The SA that will accompany the next stage of the WCS (the Submission document) will build on this with a more in-depth consideration of reasonable alternatives and the identified areas of search.

Summary of Likely Significant Effects

SA Objectives	Assessment	Comments
1. Manage waste in accordance with the waste hierarchy	+ / 0	Clear support is given to the waste hierarchy across much of the WCS. Targets for recycling of MSW, C&D and C&I waste are included. Reuse is promoted in the Vision. There remains an issue around the need for hazardous waste disposal arising from residual treatment of waste, including that arising from any future EfW developments; this is not considered in any detail in the WCS.
2. Reduce causes of and adapt to the impacts of climate change.	+ / ?	Climate change has a strong emphasis in the WCS, and emissions are likely to be reduced through the diversion of waste from landfill and recovery of energy. Emissions from waste transport are less certain as the location, nature and scale of facilities within the broad framework of areas of search has not been defined.
3. Avoid flood risk.	+ / ?	Policies in the WCS, particularly WCS2, will ensure development does not occur in flood risk areas and will seek a sequential test to be applied. Pressure for development on constrained land may be increased by the locational hierarchy. Of the broad areas of search, 8 areas are wholly or partly within Flood Zone 2. The WCS is being informed by district Strategic Flood Risk Assessments; it is anticipated that the results of these SFRAs will be available to inform the WCS Submission document.
4. Reduce the need to travel and promote sustainable travel.	?	The WCS requires minimisation and sustainable use of waste transport, but by increasing recycling and recovery it may increase the need for waste transport by requiring multiple handling of waste streams. However, the significance of effects depends on where facilities are located which is not known at this stage. A solution based on centralised, larger facilities may not minimise waste transport distances compared to a more dispersed pattern of development. The locational hierarchy has been applied in arriving at the areas of search, but the WCS is very limited in directing particular types or sizes of development to these areas. Further consideration should be given to the need for hazardous waste disposal arising from residual treatment of waste.
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. The benefits of industrial symbiosis and co-location are promoted.
6. Encourage participation and responsibility	+ / -	The WCS increases opportunities to recycle, thereby promoting greater responsibility among the public for waste. A dispersed pattern of waste developments would spread responsibility for waste management more widely than a solution which focussed on larger, centralised facilities, but the exact type, size and location of different facilities remains unclear.
7. Promote new technologies.	+	By facilitating the development of sites to divert waste from landfill and allowing flexibility to respond to new technologies, the WCS will help to support the development of new technologies for managing waste. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.

8. Promote energy efficiency and renewable/low carbon generation.	+ / ?	The WCS emphasises energy efficiency and energy generation, including renewable generation. Use of CHP is positively promoted in support of the Energy from Waste policy. The effect of transport on energy consumption is uncertain as the WCS has not allocated specific sites for specific developments.
9. Protect and enhance water, soil and air.	+ / ?	The WCS requires the avoidance of adverse impacts on air, water and soil, although the likelihood and significance of impacts depends largely on sensitivities at individual locations. A more in-depth consideration of the likely impacts within the identified areas of search will be provided in the SA accompanying the next stage of the WCS.
10. Improve quality and access to services.	+	The WCS aims to improve access to services where this is within its scope to achieve, including through requiring recycling facilities within new non-waste developments.
11. Safeguard and strengthen landscape quality.	+	Landscape character is explicitly protected and significant adverse effects are unlikely. However, the significance of landscape impacts depends primarily on individual sites and types of facilities proposed. Beyond the broad framework of areas of search, it remains unclear what type and scale of development will be located where, and so it is not yet possible to determine landscape impacts at the site-specific level.
12. Conserve and enhance biodiversity and geodiversity.	+	By requiring compliance with national, regional and local policy, and account to be taken of designated sites and action plans, adverse effects on biodiversity and geodiversity should be avoided. However, the likelihood of this will depend on the specific locations of development sites and on the results of a more detailed Strategic Flood Risk Assessment and the completion of the Habitats Regulations Assessment.
13. Improve health and well being.	0	By requiring compliance with national, regional and local policy, adverse effects on health and amenity are unlikely.
14. Provide decent affordable housing for all.	+	The WCS promotes the adoption of sustainable construction methods and good design for waste facilities.
15. Raise skills levels.	+	Diverting increased quantities of waste from landfill will support new enterprises in Worcestershire which will require more skilled labour, although the number of jobs is likely to be small compared to the overall labour market in the county.
16. Conserve and enhance the historic and built environment.	+	The WCS requires protection of assets, therefore adverse effects on the built and historic environment should be avoided. In addition, good design and sustainable construction are promoted for waste developments.
17. Reduce crime/antisocial behaviour.	Ø	Not relevant to the scope of the WCS.
18. Ensure efficient use of land.	+ / ?	By promoting waste minimisation, recycling and reuse and the adoption of sustainable construction standards, the WCS will help to reduce demand for virgin mineral resources. The WCS's targets will help to incentives recycling of C&D waste. By giving priority to locating development in the main towns/city and to previously-developed land, the WCS increases the focus on the use of previously-developed land. However, it may also increase the pressure for development in the green belt, including within the 8 identified areas of search that fall within the green belt. The WCS requires any green belt development to demonstrate very special circumstances.

Selecting Alternatives

1.1.18 In developing the First Draft Submission WCS, many of the alternative policy directions put forward at Emerging Preferred Options stage have been refined, with preferred options identified in the form of the draft policies. This refinement has been informed by previous consultation stages and also by the findings of the previous SA of the Emerging Preferred Options.

Whilst a more in-depth consideration of alternatives will be presented in the SA accompanying the next stage of the WCS, the interim findings from the alternative issues that have been reconciled in the First Draft Submission SA are as follows:

Urban or Rural Locations

The First Draft Submission SA has resolved the rural/urban issue through policy *WCS 1: Location of waste management development*. This policy is informed by a number of factors, including a geographic hierarchy which seeks to reflect resource demand and waste arisings. It is unfortunate that the identified areas of search do not exactly match the aspirational distribution, but this is a necessity arising from the availability of land. The broad pattern of development shows a strong adherence to urban locations in favour of rural. Indeed, almost all of the identified areas of search are in urban areas (including small towns); the 8 areas of search that are peri-urban/rural have been identified as they satisfy other defined criteria (e.g. former quarry sites). Sites coming forward outwith the identified areas of search will be assessed as they are brought forward. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Centralised or Dispersed Facilities

This issue has been taken forward in the background and policy of *WCS1: Location of waste management development.* The WCS has sought to reflect the need for waste facilities to be located close to the source of waste arisings, and this has formed part of the methodology to identify 58 areas of search. The WCS is not prescriptive in requiring what development must be located on specific areas of search; this has been left open to ensure flexible delivery. The areas of search should help to foster responsibility for waste, as they are generally located close to populated areas and are therefore accessible to communities. No rural areas have been identified, but this is necessary to avoid unnecessary transport distances and helps to foster symbiosis through locating development on industrial sites with potentially complimentary uses in close proximity. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Small or Large Facilities

This issue has been considered in developing policy *WCS1: Location of waste management development*. The policy calls for development to be located within 58 identified areas of search in the first instance, and for other proposals to be assessed according to the WCS methodology. Whilst the WCS identifies the volumes of waste management capacity required in the county, and broad areas are indicated for development, the precise size of facilities in certain locations is not detailed (although 5 areas of search have been identified as being capable of accommodating

larger waste facilities). This provides for greater flexibility, but means that the sustainability implications cannot be fully known until specific proposals come forward through the planning system. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Approach to Green Belt

The areas of search identified in *WCS1: Location of waste management development* have taken account of green belt as a secondary constraint. Policy *WCS 4: Managing the impact of new waste management development* explicitly requires the demonstration of special circumstances for development in the green belt. This is in accordance with national green belt policy in PPG2. This has ensured that the concerns of the previous SA have been taken into account and that waste development in general is not considered to have special circumstances, whilst recognising that specific developments could be appropriate. A full assessment of the sustainability of policies WCS1 and WCS4 can be found in Annex 1.

Locational Strategy for MSW, C&I, C&D

The locational strategy has been developed and forms part of the background to policy *WCS1: Location of waste management development*. This policy directs development, in the first instance, towards 58 identified areas of search, suitable for a variety of waste management development. The proportions of areas within/around different towns has shifted slightly away from Worcester (17% of distribution) and Redditch (14%), in favour of Kidderminster, Stourport and Bewdley (27%). Fears over flooding are allayed by none of the areas being located in Flood Zone 3 (although 9 areas of search are wholly or partly within Flood Zone 2). The WCS seeks to ensure sites will not contribute to flood risk, and that sites will be located in Flood Zone 1, unless justified elsewhere through an exceptions test. This is explicit in policy *WCS 2: Ensuring Sustainable Waste Management Development*. A full assessment of the sustainability of policies WCS1 and WCS2 can be found in Annex 1.

Allocating facilities to Locational Hierarchy

The WCS has used a series of stages to arrive at 58 areas of search. This has led to a list of areas that are, in principle, suitable for development of waste facilities. The nature of the waste facilities that could be accommodated within each area is not specified; instead, the WCS adopts a flexible approach and does not seek to restrict development. Five of the identified areas of search have been considered capable of accommodating larger facilities. These facilities might include: large scale anaerobic digestion; material recovery facilities; mechanical biological treatment; metal recycling and end of life vehicle facilities; physical treatment; thermal treatment; and waste transfer and bulking stations. Each of the 5 identified areas has been assessed for accessibility and constraints, and the sieving process has ensured that sustainable transport of waste materials is a key factor influencing location. A full assessment of the sustainability of policies WCS1 can be found in Annex 1.

MSW Capacity Needs

The First Draft Submission WCS has been influenced by the previous SA and now includes a target for recycling. For MSW waste, the target for

recycling, composting and recovery is 75%. This target does not actually form part of any policy within the WCS, but the policies are designed to support the achievement of the target (together with the targets for other elements of the waste stream). Inclusion of recovery within the target should help to foster generation of energy from waste where appropriate, but conversely could lead to a reduction of waste treatment at the higher end of the waste hierarchy, as these options are not sub-divided into specific targets.

C&I Capacity Needs

The First Draft Submission WCS has been influenced by the previous SA and now includes a target for recycling. For C&I waste, the target for recycling, composting and recovery is 75%. This target does not actually form part of any policy within the WCS, but the policies are designed to support the achievement of the target (together with the targets for other elements of the waste stream). Inclusion of recovery within the target should help to foster generation of energy from waste where appropriate, but conversely could lead to a reduction of waste treatment at the higher end of the waste hierarchy, as these options are not sub-divided into specific targets.

C&D Capacity Needs

The First Draft Submission WCS has been influenced by the previous SA and now includes a target for recycling. For C&D waste, the target for recycling, composting and recovery is 75%. This target does not actually form part of any policy within the WCS, but the policies are designed to support the achievement of the target (together with the targets for other elements of the waste stream).

Hazardous Waste Capacity

A requirement for additional hazardous waste capacity over the life of the strategy has not been identified in the First Draft Submission WCS, as there is already a surplus of capacity (although this surplus is within the region and not within Worcestershire). The WCS makes no assumption on potential volumes of hazardous waste that could be generated as a result of future EfW developments, and it is unclear whether this would significantly impact upon capacity requirements. However, the current hazardous waste arisings in Worcestershire are approximately 46,464 tonnes per annum, and the estimated 6,300 tonnes per annum of additional hazardous waste that could result from an EfW facility[6] therefore has the potential to be a significant additional burden. Further information on the exact scale of the surplus capacity would be needed before any judgement could be made.

Mitigation of Effects

1.1.19 The following recommendations are made for amendments to the emerging WCS in order to mitigate the predicted adverse effects or to maximise opportunities to capture benefits. It is likely that further

[6] From modelling work undertaken by ERM in 2009 of residual treatment options for Joint Municipal Waste Management Strategy.

recommendations will be made in the final SA report accompanying the Submission WCS.

- Supporting statement 4 to the Vision should be amended to state that: "*There will be very little material that cannot be reused or recycled*".
- Policy WCS2 could promote the importance of linked networks of habitats as part of a green infrastructure approach.
- Policy WCS4 should recognise the value of all biodiversity, not just that designated at European/national/local level.
- The need to ensure opportunities for CHP are considered in any Energy from Waste proposal should be included within Policy WCS5, rather than only appearing in the supporting text to within the policy itself.
- WCS6 should explicitly refer to the waste hierarchy to clarify the need to ensure waste should be managed at a higher level of the waste hierarchy than disposal to landfill where possible. The reference in Policy WCS6 to 'locally important characteristics' is very broad and would benefit from greater specificity.

Monitoring Recommendations

1.1.20 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

1.2.1 As part of the SA process, an appraisal of the Emerging Preferred Options WCS was published in November 2009. A number of recommendations were made in the SA Report which indicated how the sustainability of the WCS could be increased in carrying forward its development in subsequent stages. A number of these recommendations have been followed by WCC, and the First Draft Submission WCS incorporates the following as a result:

- Tables in the Spatial Portrait now set out capacity requirements, with recycling targets for C&D and C&I waste and review triggers set out in the monitoring framework.

- The vision statement now requires waste to be managed, so far as possible, in accordance with the principles of sustainable development and the waste hierarchy. It stresses the importance of reuse.

- Identification of areas of search addresses the need to apply the locational hierarchy, whilst remaining flexible and technology-neutral. It does not consider size to any great extent, but does identify that sites of different scale may fall into different categories.

- CHP is encouraged in the supporting text to the Energy from Waste policy, including through consideration of potential users of the CHP. The WCS now clarifies that only where it is demonstrated that CHP is either not practicable or would not provide the greatest energy recovery, will heat or power as single energy recovery methods be considered appropriate.

- The 'Energy from Waste' policy requires all energy from waste proposals (including those that involve thermal treatment) to outline how residues will be dealt with.

- The identified areas of search have been informed, in part, through consideration of potential transport impacts, including proximity to waste arisings and resource demand for organics, recyclables and energy. Policy WCS4 also requires assessment and minimisation of effects of development on congestion and air quality.

- Stage 3 of the methodology for identifying *Areas of Search* and for assessing sites outside of areas of search considers flood risk impacts. In the interests of resource efficiency, WCC intend to make use of the SFRAs undertaken at district level to inform the WCS. At the time of First Draft Submission consultation, all Worcestershire districts have undertaken level 1 and 2 SFRAs, with the exception of Bromsgrove and Redditch, who have so far completed only level 1 SFRAs. WCC are awaiting confirmation of this approach from the Environment Agency.

- Green belt has been considered as a secondary constraint when identifying areas of search. Policy WCS4 strengthens protection of the green belt by requiring development to demonstrate that where it would constitute inappropriate development in the green belt, a clear need and very special circumstances exist. This ensures closer accordance with national policy.

- The issue of landfill mining is now covered in the text preceding Policy WCS6. Landfill gas is considered specifically in the policy.

1.3 How to comment on the report

Comments on any aspect of the Emerging Preferred Options for the WCS, or on this SA Report can be made by:

- Emailing to wcs@worcestershire.gov.uk
- Writing to: Nicholas Dean, Directorate of Planning, Economy and Performance, Worcestershire County Council, County Hall, Spetchley Road, Worcester, WR5 2NP

2 INTRODUCTION

2.1 Background

2.1.1 The Worcestershire Waste Core Strategy will set out how all the waste produced in Worcestershire up to 2027 will be managed. It will be a statutory "Development Plan Document" and form part of the Development Plan for Worcestershire as an essential part of the Worcestershire Waste Development Framework. It will apply to the whole county and will supersede the Worcestershire Structure Plan policies for waste.

2.1.2 Following a number of previous stages, the Core Strategy has now reached the 'First Draft Submission Report' stage. This is effectively a 'Preferred Options' report and is the last stage in the process before the document is finalised and submitted for independent examination.

2.1.3 As with all Development Plan Documents, the Waste Core Strategy is subject to Sustainability Appraisal (SA). This is an iterative process of assessing the social, economic and environmental performance of the plan, and seeking to ensure that the most sustainable solutions are taken forward. The SA process incorporates the requirements of the Strategic Environmental Assessment directive[7], in accordance with government guidance.

2.1.4 The Statutory requirements for DPD production do not require an SA to be undertaken to accompany this stage of the Waste Core Strategy, but it is considered to be good practice to check the document's progress through undertaking an 'interim SA'. This document is therefore not a full SA, but seeks to ensure that the sustainability of the Waste Core Strategy is assessed before the document has progressed to a later, submission stage.

2.1.5 The first stage of the SA process was the production of an SA Scoping Report. This was consulted upon from September 2008. The purpose of the Scoping Report was to outline the scope and level of detail against which the WCS would subsequently be assessed. The Scoping Report collated a large amount of background data in order to understand the particular sustainability issues within the county. Following consideration of a range of baseline data and other relevant plans, policies and programmes, the Scoping Report proposed a series of sustainability objectives against which the sustainability performance of the WCS could be measured. Three comments were received as a result of consultation on the Scoping Report. These comments were from the three statutory agencies (the Environment Agency, English Heritage and Natural England). Most of the consultation responses concerned additional data consultees felt should be included within the scope, together with additional plans, policies and programmes they felt should be considered. Particular concerns related to flood risk, water quality, biodiversity, heritage and landscape. There was also a request to note water as a significant issue for waste management in Worcestershire, and requests

[7] Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment

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 have been taken on board and further scoping work has been undertaken to ensure that the relevant key issues and policies are reflected in the framework. On the specific issue of Strategic Flood Risk Assessment, WCC intend to make use of the SFRAs undertaken at district level to inform the WCS. At the time of First Draft Submission consultation, all Worcestershire districts have undertaken Level 1 and 2 SFRAs with the exception of Bromsgrove and Redditch, who have so far completed only level 1 SFRAs. WCC are awaiting confirmation of this approach from the Environment Agency.

2.1.6 As well as 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.

2.1.7 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 has also been informed by:

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

2.1.8 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.

2.1.9 The objectives and decision-making criteria, as amended following the Scoping Report consultation, are set out in the table on pages 30-32. This is the appraisal framework which has been used to appraise both the Refreshed Issues and Options, Emerging Preferred Options, and the First Draft Submission WCS.

2.2 Methodology

2.2.1 The appraisal considered – where possible - the effects likely to arise as a result of the First Draft Submission WCS. The methodology specifies that each element of the First Draft Submission WCS is assessed against each of the SA objectives, by applying decision-making criteria (established at Scoping Report stage). This results in an assessment that is mostly qualitative.

2.2.2 A series of symbols are used to indicate the likely effects arising from each element of the WCS, as follows:

+ Effect likely to be positive
- Effect likely to be negative
0 No significant effect
? Effect unknown
ø Not relevant

2.2.3 A 'significance' rating has also been applied to the different elements of the WCS in terms of their sustainability. A 'high', 'medium' or 'low' rating was accorded to each element, depending on how significant it was in satisfying each SA objective. The significance ratings have been arrived at through consideration of:

- Likely scale of effects or the degree to which the effects are likely to contribute to the achievement of the SA objective in the county overall;
- Certainty or probability that the effect is likely to occur as a consequence of the options;
- Whether the effects would be permanent or reversible;
- Whether the effect will occur as a direct result of the option or not, in other words whether the options are key for achieving or controlling effects;
- Whether the effect is more strongly dependent on other interventions or other factors;
- How important the objective is in differentiating between the options.

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

	Not relevant
	No/low significance
	Medium significance
	High significance

2.3 The SA Process so far

2.3.1 Following the Scoping Report, an 'Interim SA' was undertaken to accompany the WCS Issues and Options report. The interim SA was consulted on from March 2009. The findings of the interim SA helped to inform development of the WCS and the SA's recommendations were taken into account for the next stage of the WCS, the Emerging Preferred Options.

2.3.2 The Emerging Preferred Options WCS was accompanied by a further SA report that was published in November 2009. This SA is available on the council's website at: http://www.worcestershire.gov.uk/cms/pdf/WCS%20Emerging%20Preferred%20Options%20SA%20Report%20final%2017%2011%2009.pdf

2.3.4 The previous SA concluded that for most issues, the WCS adopted an approach that was generally in accordance with sustainable development principles, but with certain specific recommendations that would improve sustainability in a number of key areas. The previous SA was limited in assessing some aspects of the WCS where policy was still being developed. This included where specific details (for example on potential site types and locations), were unavailable.

2.3.5 The sustainability implications of many of the undefined policy directions in the Emerging Preferred Options could not be assessed in any detail in the previous SA, as exact site locations and uses had not been determined. To a certain extent this remains the case; although 'areas of search' and a broad hierarchy of the types of facilities have now been established, the specific details of what type of development will go on what site remains unknown. This means that some conclusions in this SA are necessarily general in nature and the exact sustainability effects will depend on implementation at site level.

2.3.6 The findings and recommendations of the Emerging Preferred Options SA have been taken into account in developing the WCS First Draft Submission Report. A summary of how SA issues raised at Emerging Preferred Options stage have been dealt with is provided below:

ISSUE	MITIGATION RECOMMENDATIONS FROM PREVIOUS SA	RESPONSE IN FIRST DRAFT SUBMISSION REPORT
Recycling C&D and C&I waste	The WCS should give stronger incentives to increase recycling of C&D and C&I waste, for example through setting targets and capacity requirements for recycling facilities.	Tables in the Spatial Portrait now set out capacity requirements, with recycling targets and review triggers set out in the monitoring framework.

ISSUE	MITIGATION RECOMMENDATIONS FROM PREVIOUS SA	RESPONSE IN FIRST DRAFT SUBMISSION REPORT
Content of Vision	Reuse of waste should be promoted in the vision.	The vision statement now includes "So far as possible this resource will be managed… **in accordance with the principles of** sustainable development and **the waste hierarchy**". The supporting statements to the vision include: • "Waste minimisation will be our priority. The issue is no longer one of waste disposal but of resource management, and the management of waste as a way of saving scarce resources will be encouraged in all new developments." • "There will be very little material that cannot be reused or recycled."
Locational hierarchy	The locational hierarchy should be applied taking account of both the size and broad type of facility to be developed.	The approach we have taken to Category 1, 2 and 3 sites is aimed at addressing these concerns, whilst remaining flexible and technology-neutral (see section 4 'location of waste management development'). It does not consider size to any great extent but does identify that sites of different scale may fall into different categories.
CHP	The use of CHP wherever practicable should be promoted.	Energy from waste policy – supporting text states "Energy recovery must be maximised. This should be in the form of Combined Heat and Power (CHP) and the location of facilities should consider the potential users of the CHP. The ability to serve local users should be considered in the first instance. Where this is not possible grid connections should be considered. Only where it is demonstrated that CHP is either not practicable or would not provide the greatest energy recovery will heat or power as single energy recovery methods be considered appropriate."
Hazardous waste	Further consideration should be given to the need for management of hazardous waste arising from treatment of residual waste.	The 'Energy from Waste' policy requires all energy from waste proposals (including those that involve thermal treatment) to outline how residues will be dealt with.

ISSUE	MITIGATION RECOMMENDATIONS FROM PREVIOUS SA	RESPONSE IN FIRST DRAFT SUBMISSION REPORT
Historic Environment	Ensure that policy in relation to permitted development rights and local collection points considers potential impacts on the historic environment.	We have not developed a policy on permitted development rights.
Transport	Transport impacts should be assessed in more detail when more information is available on broad locations or specific sites, including the effects of a preferred option based on centralised, larger facilities compared to a more dispersed pattern of development.	Stage 3 of the methodology for identifying *Areas of Search* and for assessing sites outside of areas of search considers transport impacts. Stage 4 looks at proximity to waste arisings and resource demand for organics, recyclables and energy.
Flooding	Flood risk impacts should be assessed in more detail when more information is available on development locations and from a detailed Strategic flood Risk Assessment.	Stage 3 of the methodology for identifying *Areas of Search* and for assessing sites outside of areas of search considers flood risk impacts. In the interests of resource efficiency, WCC intend to make use of the SFRAs undertaken at district level to inform the WCS. At the time of First Draft Submission consultation, all districts will have undertaken level 1 and 2 SFRA with the exception of Bromsgrove and Redditch, which have so far completed only level 1 SFRAs. WCC are awaiting confirmation of this approach form the Environment Agency.
Green Belt	The need for any derogation from national green belt policy should be assessed in more detail when further information is available about locations for development.	The green belt is considered to be a secondary constraint when identifying preferred areas. Policy "Managing the impact of new waste management development" sets out that "All proposals for new waste management development must demonstrate that…Where they constitute inappropriate development in locations designated as green belt, they have very special circumstances and show that a clear need exists. Proposals will not be permitted unless the purposes of including land in greenbelt would not be compromised." This is in accordance with national policy.

ISSUE	MITIGATION RECOMMENDATIONS FROM PREVIOUS SA	RESPONSE IN FIRST DRAFT SUBMISSION REPORT
DC policies	Development management policy in the WCS should ensure that applications are required to assess and avoid or minimise impacts on transport networks, particularly in relation to congestion and air quality.	WCS4 now considers this.
Biodiversity	Further assessment of effects on biodiversity should be undertaken when more info is known about expected waste developments, & is also dependent on completion of the Habitats Regulations Assessment.	The HRA is being undertaken and will help to inform the final Submission WCS.
Potential policy areas relating to 'other matters of concern'	Policy on restoration and aftercare should include a requirement to recover and use landfill gas for energy generation.	We have not developed a designated restoration policy but have considered it in "Managing the impact of new waste management development" and "Landfill" policies. Landfill gas is considered specifically in the landfill policy.
	Permitted development rights policy should require information to assist in controlling effects on flood risk, soil & water quality, landscape, bio- & Geo-diversity, & historic assets.	We have not developed a policy on permitted development rights.
	Landfill mining should specifically seek to control the risk of detrimental effects on water quality, landscape and biodiversity.	We have decided not to develop a specific policy but to include the note that "It is possible that during the life of the strategy, proposals may be put forward to recover resources from historic landfill sites (landfill mining). Any proposals for landfill mining would need to be assessed in accordance with the development plan and would be considered in consultation with the Environmental Agency or any other relevant body." The policies in the WCS cover issues including water quality, landscape and biodiversity.
	Policy on control of recyclable collection points should seek to reduce risk of adverse impacts on cultural, built or historic assets.	WCS4 will need to be used in considering such sites and includes sections on cultural, built or historic assets.

2.4 Purpose of Sustainability Appraisal

2.4.1 Sustainability Appraisal is an iterative process designed to ensure that beneficial environmental, economic and social effects of planning policies are maximised, whilst reducing any negative effects. SA is carried out at various stages alongside the Waste Core Strategy to ensure that sustainable development forms an integral part of its development. By considering the policy direction of the WCS, the SA can help shape the most sustainable options. This is achieved through appraising how far each part of the WCS contributes towards the achievement of a set of sustainability objectives established early in the SA process. The SA is able to make recommendations which are then taken into account in further developments of the WCS, resulting in a final Strategy that should reflect the most sustainable options.

2.5 Outline

2.5.1 The Waste Core Strategy (WCS) is a statutory Development Plan Document that will form part of the Development Plan for Worcestershire, superseding saved Worcestershire County Structure Plan policies for Waste. The WCS will be used to determine applications for 'county matters', which include applications for waste handling, treatment and disposal. Some elements of the Waste Core Strategy will also be relevant to City, District and Borough Councils' decisions when determining planning applications for all types of development. The Waste Core Strategy will apply until 2027.

2.6 Scope

2.6.1 The Waste Core Strategy applies to the whole of Worcestershire and is designed to make sure that there are enough opportunities for new waste management facilities in Worcestershire to be able to deal with the county's waste. It aims to foster the waste hierarchy through helping to ensure that Worcestershire has the right type of waste management facilities in the right place at the right time to allow for reuse, recycling or recovery of energy from waste to turn it into a resource. It sets out how all the different kinds of waste produced by everyone who lives, works, or visits the county will be managed. It will inform and guide waste management development by the private and public sector and encourage and stimulate businesses involved in the recycling and re-use of resources. It provides for the following kinds of waste produced in, or imported into, Worcestershire: Municipal Solid Waste (MSW); Commercial and Industrial (C and I) Waste; Hazardous Waste; and Construction and Demolition (C and D) Waste.

2.7 Contents & Objectives

2.7.1 The Strategy predicts how much waste is likely to arise over the period up to 2027 and how much capacity will be needed to manage it, where it will be located and when. These predictions, the nature and source of the wastes produced and the technologies to manage them are all likely to change, so the Strategy is designed to be flexible. It identifies a range of

suitable locations, and criteria to assess other locations which are put forward, and enables different technologies to deal with all types of waste.

2.7.2 Nine Strategic Objectives have been developed to provide the overarching direction for the WCS's approach:

WO1 **To base our decisions on the principles of sustainable development and the need to reduce greenhouse gas emissions to mitigate climate change.**

WO2 **To protect and enhance the County's natural resources, environmental, social, cultural and economic assets and the character and amenity of the local area.**

WO3 **To do everything possible to minimise waste production and 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 address the "Capacity Gap" between how much waste management capacity we have and what we need.**

WO6 **To safeguard existing waste management facilities from incompatible development.**

WO7 **To reduce waste miles by road where possible.**

WO8 **To make communities in Worcestershire take responsibility for their own waste and involve all those affected as openly and effectively as possible.**

WO9 **To develop a waste management industry that contributes positively to the local economy.**

2.7.3 The WCS seeks to deliver against the Strategic Objectives through a series of policies. The content of these policies can be summarised as:

Identification of 'areas of search' considered most suitable for waste management facilities.

Ensuring new waste management development contributes to the aims of sustainable development through setting out environmental, social and economic considerations to be balanced.

All new development must consider the reduction, reuse and recycling of waste, including the construction, occupation and demolition stages of development.

Proposals for new waste management facilities must consider their impact on natural resources, environmental, social, cultural and economic assets and the character and amenity of the county - and how any impacts can be minimised.

Promotion of reuse and recycling of resources and recovery of energy from waste that cannot be recycled.

Reduce the amount of waste going to landfill, but to set out when landfill will be allowed and the extra criteria that planning applications for landfill will need to meet.

Safeguarding of existing waste management facilities.

2.8 Policy Context of the Waste Core Strategy

2.8.1 The Waste Core Strategy has been developed within the context of a broad range of relevant policy at European, national, regional and local level. This includes legislation, other planning policy and best practice. The SA includes a full appraisal of relevant policies, plans and programmes, and these have helped to shape the sustainability objectives against which the WCS has been appraised.

2.8.2 As with the baseline data, the range of policies, plans and programmes which could influence the SA continues to evolve. There are particular issues and subtleties arising from new data that has emerged since the Emerging Preferred Options SA. Undoubtedly the most significant change to the plans, policies and programmes influencing the WCS is the revocation of the Regional Strategy (formerly known as the RSS). The loss of the RSS evidently has a key bearing on the growth of the West Midlands, in terms of levels of development, locations, and policy approaches. The RSS previously provided the overall housing and employment land targets for Worcestershire and its districts, as well as policies and targets for waste management. Whilst revocation means the figures and targets within the RSS no longer have to be adhered to, in the absence of any more up-to-date and locally-derived alternatives, ministerial statements have clarified that data and information within the RSS and related revision documents 'will continue to assist' waste planning authorities. This includes the data and research agreed by the Regional Waste Technical Advisory Bodies. Some of the RSS background evidence has informed the development of the WCS, and the WCS states that it is not anticipated that the revocation of the RSS will require significant changes to be made.

2.8.3 Much of the SA commentary at Emerging Preferred Options stage referred either directly or indirectly to policy within the RSS. Key examples of this include the summaries at Annex E: 'Effects Arising from other Plans and Strategies', which outlines the provisions of Core Strategies within and adjoining Worcestershire. Whilst the Core Strategies had been prepared to respond to RSS growth levels, the revocation of the RSS means that many of the local-level policies may be revisited. It is not possible at this stage to anticipate the scale and nature of these changes, and how they might affect timetables of any Core Strategies - which could be substantially recast to reflect more locally-determined aspirations.

2.8.4 Key drivers/influences for the WCS include:

- EU Council Directive on the landfill of waste (the 'Landfill Directive'), as applied in England and Wales under the Landfill (England and Wales) Regulations 2002. The Landfill Directive includes challenging targets for a reduction in the amount of biodegradable municipal waste sent to landfill. The WCS must seek to advance this shift from landfill to more sustainable waste management methods.

- EU Council Directive on waste (the 'Waste Framework Directive') calls for implementation of the waste hierarchy, and also sets targets for the recycling of household waste and the recovery of construction and demolition waste. The WCS needs to set the strategic planning context for implementing the waste hierarchy.

- DEFRA's Waste Strategy for England 2007 confirms the importance of waste reduction/minimisation and the importance of delivering against the waste hierarchy. It also stresses the need to end the link between economic growth and commensurate increases in waste production.

- The government's Planning Policy Statements (PPSs) provide the overarching principles for the development of planning policy. There are a range of PPSs that influence the WCS, but the most significant of these are PPS1: Delivering Sustainable Development, and PPS10: Planning for Sustainable Waste Management. PPS1 requires that policy makers put sustainability at the core of plan-making, which includes taking account of reducing emissions and taking a 'spatial' approach – i.e. looking at more than just land uses. PPS10 seeks a range of measures, including ensuring planning policies move waste management up the waste hierarchy and enabling waste management facilities to meet the needs of communities.

- The Regional tier of planning has now been revoked, but the West Midlands Regional Spatial Strategy has influenced the WCS. Whilst it is recognised that the RSS no longer forms part of the development plan, it nevertheless contains a wealth of relevant technical data that cannot be discounted. The WCS can be informed by the technical support of the former Regional Assembly.

- In Worcestershire, the Waste Core Strategy is complemented by the Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004-2034 (JMWMS). The JMWMS is a more 'operational' strategy that sets out how municipal waste will be reduced and dealt with. It should be noted that unlike the WCS, the JMWMS only considers municipal waste and not all elements of the waste streams, as the collection, treatment and disposal of these is the responsibility of other agencies.

- At the local (district) level, Local Development Frameworks are being prepared. Core Strategies are being developed to guide the overall housing and employment requirements by Bromsgrove District Council, Redditch Borough Council, Wyre Forest District Councils, and the three South Worcestershire authorities who are working jointly. The WCS has to consider the likely future direction of growth emerging in the Core Strategies.

- The Sustainable Community Strategy Second Edition 2008–2013 (SCS) prepared by the Worcestershire Partnership LSP, sets out the strategic vision for the future of Worcestershire, with the aim of improving the quality of life of people who visit, work or live in the county. One of the 'priority outcomes' of the SCS is 'to maximise the diversion of waste away from landfill through prevention, re-use, recycling/composting and recovery'. The WCS is a key policy tool for helping to deliver this outcome and other sustainable development outcomes within the SCS.

2.8.5 The key issues that have arisen as a result of the review of plans, policies and programmes are as follows:

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 80% reduction in carbon dioxide emissions by 2050.
- Improving energy efficiency; increasing the use of renewable energy: 15% of UK energy should be coming from renewable energy sources by 2020.
- Development should be focussed 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 median earnings below regional and national comparators.
- Significant proportion of workforce employed in public administration, education and health.

Sustainability Appraisal Objectives and Decision-Making Criteria used to appraise the First Draft Submission WCS.

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 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?

Theme	Objective	Decision-Making Criteria
8. Energy generation and use	Promote energy efficiency and energy generated from renewable 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	Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	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 pan 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?

Theme	Objective	Decision-Making Criteria
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 or recreational and amenity value? 18e. Does your plan provide opportunities for sustainable construction? 18f. Will your plan maximise the use of previously-developed land?

2.9 The Sustainability Appraisal and Strategic Environmental Assessment

2.9.1 Sustainability Appraisal of Development Plan Documents is intended to satisfy the legal requirements of EU Directive 2001/42/EC (The Strategic Environmental Assessment or SEA directive). Government guidance suggests it is appropriate to combine the SEA with the wider economic and social considerations of an SA.

2.9.2 There are a number of specific requirements within the SEA Directive that must be satisfied in producing an SA. This Interim SA works towards incorporating these requirements, but it should be recognised that they will be covered more fully in the SA accompanying the Submission WCS. Because SA seeks to incorporate SEA requirements, all references to the SA should therefore be taken to also include SEA.

SEA Requirements	Location in SA report
An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	**Sections 2.5; 2.6; 2.7; & 2.8; Annex A**
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	**Section 3.4; Annex B**
The environmental characteristics of areas likely to be significantly affected;	**Section 3.5; Annex B**
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 3.4 & 3.5; Annex B**
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 2.8; Annex A**
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 4.1; 4.2; 4.3; 4.4; 5.2; 5.3; 5.5; 6.4; Annex C; Annex D**
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;	**Section 7.2; 7.4**
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;	**Section 6.1; 6.2; 6.3; 6.4 Section 2.2 Section 7.5**
A description of measures envisaged concerning monitoring in accordance with Art. 10;	**Section 8.1**
A non-technical summary of the information provided under the above headings	**Section 1.1**

3 BASELINE DATA

3.1 Purpose of Baseline Data

3.1.1 The SA process requires the collation and evaluation of baseline data. The purpose of the baseline data is to establish the sustainability characteristics of the area under consideration. Baseline data covers more than just the environmental issues required under the SEA directive; social and economic information must also be collected. The purpose of collating baseline data is to find out what the current state of Worcestershire's environment, economy and communities are. The data can be used to highlight particular areas of concern that could potentially be influenced – both positively and negatively – by the WCS. The baseline data also helps to inform the sustainability objectives used to appraise the WCS.

3.2 Baseline Update

3.2.1 Sources of baseline data can be wide-ranging and include contextual reports, maps, and statistics, from a variety of sources. The baseline data collected for this SA are included as Annex B. It is recognised that baseline data can and does change; data used to inform the earlier stages of SA may not necessarily remain the same as the latest version and the sustainability implications may change. This means that it is important to revisit the baseline and ensure the most up-to-date data is available.

3.2.2 The potential range of baseline data that could be collected is huge; the SA process means it is necessary to be selective and to collect only those datasets that are relevant and useful to the purposes of SA and SEA. Where possible, Worcestershire County Council's Research and Intelligence Unit have been able to provide more up-to-date analysis. The Worcestershire Partnership's State of the Environment Report is also a useful source of environmental information.

3.2.3 Between publication of the previous SA in November 2009 and this Interim SA, additional or updated baseline data has become available to inform many of the sustainability issues within the SA. An assessment has been made of the effect of the updated data on each of the sustainability issues. It is considered that there are no issues for which the updated baseline fundamentally alters the approach to be taken in the SA, or leads to any shift in emphasis within individual issues.

3.3 Problems encountered in collecting baseline data

3.3.1 There are a wide variety of SA topics on which it is desirable to have baseline data. For the most part, there are relevant county-level datasets available to populate these categories, but there are instances where the data are not provided at a county-level, or may be some years out of date. Census data is a key example of this; whilst the census is an important source of social data, due to the infrequency of publication the results are now becoming dated. There are also some datasets which exist but have not yet been populated. Where these are considered valuable indicators to

inform the SA and monitoring, they have been noted in the baseline data review at Annex B.

3.4 Significant issues arising from Baseline Data review

Issue	Summary of Key Findings
Waste	Worcestershire produced 267,587 tonnes of household waste in 2008/09 of which 41.57 percent was recycled or composted. In 2006/07, the latest year for which figures are available, Worcestershire's 32.3 percent of household waste recycled/composted was slightly higher than the corresponding figure of 28.6 percent for the West Midlands region. 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 37.7 percent was recycled or re-used. Worcestershire produced 307,000 tonnes of commercial waste in 2002/03 of which 31.3 percent was recycled re-used.
Climate Change	In 2007, Worcestershire's CO_2 emissions were 3869Kt. These comprised: Industry and commerce: 44% Domestic sector: 33% Transport sector: 23% These figures exclude emissions from motorways.
Flooding	Approximately 10% of the county is at risk of flooding, principally from the rivers Severn, Teme, Avon and Stour.
Traffic and 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 in Worcestershire.
Growth with prosperity for all	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%), although at lower tier level the rates vary considerably.
Participation by all	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%.
Technology, innovation 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.

Energy generation and use	In 2007, Worcestershire consumed 16,254.2GWh of energy from all sources. This is slightly less than in 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	There are currently 9 AQMAs either in existence or in the process of being designated 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'. Worcestershire 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%.
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, geodiversity, flora and fauna	Worcestershire contains two Special Areas of Conservation, 11 National Nature Reserves, 25 Local Nature Reserves, 5,848ha of ancient semi-natural woodland. There are approximately 114 Sites of Special Scientific Interest (SSSIs) in Worcestershire, of 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. There are approximately 90 Regionally Important Geological/ Geomorphological Sites (RIGS), of which 40.2% are under appropriate management.
Health	Male life expectancy in Worcestershire at birth is below the West Midlands and UK averages, but female life expectancy is 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 (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 (antisocial 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	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.

3.5 Areas Likely to be Significantly Affected by the WCS

3.5.1 The appraisal has considered the areas likely to be significantly affected by implementation of the First Draft submission 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.

3.5.2 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 B.

3.5.3 On another level, some of the effects of the management of waste will occur in the vicinity of waste management sites. At this stage, broad 'areas of search' have been identified as acceptable in principle for waste management development. An assessment will be made of the environmental and sustainability conditions of those areas and will be published in the SA report accompanying the next stage of the WCS, the Submission document.

3.6 European Sites in or near to Worcestershire

European Site	Key Sensitivities
Ponds and pools: • Lyppard Grange Ponds SAC • Fens Pool SAC	Water quality – eutrophication is a threat, particularly from point source pollution (e.g. sewage outfalls) but also from surface runoff or groundwater pollution and atmospheric deposition. Water levels – a high and stable water table is fundamental. Siltation (e.g. excessive poaching of lake margins by stock, suspended sediments leading to transport of nutrients). Scrub or tree encroachment (leading to shading, nutrient and hydrological effects). Maintenance of appropriate grazing regime. Spread of introduced non-native species. Recreational pressure/disturbance (particularly on-water activities with potential to disturb sediment and increase turbidity in lakes). Development pressure. Diffuse air pollution from traffic and agriculture.
Woodland: • Dixton Wood SAC • Bredon Hill SAC	Water quality – e.g. pollution through groundwater and surface run-off sources. Water level – maintenance of water table essential e.g. restrict new drainage ditches around wet woodlands. Maintenance of appropriate grazing regime. Heavy recreational pressure. Spread of non-native/invasive species. Scrub encroachment. Atmospheric pollution (nutrient deposition and acidification). Development pressure.
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 e.g. soil degredation around stock feeding points. Inappropriate dredging. Recreational pressure and disturbance – can lead to disturbance, damage and increases in suspended sediment e.g. 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 run-off and sedimentation. Illegal fish poaching. Spread of introduced non-native species. Artificial barriers to fish migration.
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 e.g. nitrous oxides from vehicle exhausts.
Estuarine habitat: • Severn Estuary SAC/SPA/ Ramsar	Water quality – pollution. Recreational disturbance. Development, e.g. 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).

Source: Habitats Regulations Assessment of the Worcestershire Waste Core Strategy, Final Draft, ERM, June 2009.

3.5.1 A Habitats Regulations Assessment (HRA) is being undertaken by ERM on behalf of Worcestershire County Council. The HRA Screening Assessment concluded that there may be adverse effects on European nature conservation sites arising from implementation of the WCS.

3.5.2 Further assessment is currently being undertaken as more details are available on potential areas of search within the First Draft Submission WCS. Further information on the results of the HRA will be published alongside the Submission document.

4 APPRAISAL OF THE VISION AND OBJECTIVES

4.1 WCS Vision

4.1.1 The revised Vision of the Emerging Preferred Options has been assessed against the existing SA methodology (refer to Annex C for full assessment). The Vision retains promotion of the waste hierarchy and community responsibility, and reuse of waste is now included. By promoting the waste hierarchy and resource efficiency, the Vision will support the reduction of greenhouse gas emissions and reduced use of energy and water. The Vision supports the economic contribution of waste management and the development of new technologies, and links economic opportunities to a move towards a low carbon economy. The Vision helps to ensure protection of air, water, soil, landscape, biodiversity and the built and historic environment, including through the design of new facilities to complement their surroundings. The need for waste transport to be minimised is addressed, with the potential of water and rail (rather than road transport) being included. Land use issues and the spatial distribution of facilities are broadly covered, but the Vision remains silent on the issue of waste development in the Green Belt.

4.2 WCS Strategic Objectives

4.2.1 The Waste core Strategy includes 9 Strategic Objectives which set out the broad 'guiding principles' that the Strategy needs to take into account. The objectives have been refined since Emerging Preferred Options stage; Objective WO1 is now more focussed, specifying a reduction in greenhouse gas emissions instead of the previous "causes of climate change". Objective WO2 is a wholly new objective seeking high-level protection of natural resources. WO7 is a revised version of former objective WO6, including a minor change of replacing 'transportation of waste' with 'waste miles'. WO9 is a wholly new economic objective. Former objective WO10 on monitoring of the Waste Core Strategy has not been progressed, as monitoring is a statutory requirement that will be undertaken as a standard part of the planning process.

4.2.2 Strategic Objectives of the First Draft Submission WCS:

WO1	**To base our decisions on the principles of sustainable development and the need to reduce greenhouse gas emissions to mitigate climate change.**
WO2	**To protect and enhance the County's natural resources, environmental, social, cultural and economic assets and the character and amenity of the local area.**
WO3	**To do everything possible to minimise waste production and 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 address the "Capacity Gap" between how much waste management capacity we have and what we need.**

WO6	**To safeguard existing waste management facilities from incompatible development.**
WO7	**To reduce waste miles by road where possible.**
WO8	**To make communities in Worcestershire take responsibility for their own waste and involve all those affected as openly and effectively as possible.**
WO9	**To develop a waste management industry that contributes positively to the local economy.**

4.2.3 An assessment has been undertaken of the sustainability of the Strategic Objectives by assessing their impacts on the SA objectives. The results of this assessment are presented in the matrix below.

4.3 Assessment of Sustainability Implications of Strategic Objectives.

SA Objective	Impact of revised WCS Strategic Objectives									Comments on new or revised Strategic Objectives
	WO1	WO2	WO3	WO4	WO5	WO6	WO7	WO8	WO9	
1 Waste	✓	✓	✓	✓	✓	0	?	0	✓	Managing waste according to the waste hierarchy could provide valuable economic opportunities for Worcestershire.
2 Climate Change	✓	✓	✓	✓	✓	0	✓	?	?	Local economic development may include road haulage which has the potential to increase emissions.
3 Flooding	✓	✓	0	0	0	0	?	?	0	It is unclear whether greater development will be placed n flood-risk areas.
4 Traffic and Transport	✓	✓	✓	0	0	0	✓	✓	?	The need for waste transport should be reduced by providing facilities close to the source of arisings.
5 Growth & prosperity	0	?	✓	0	✓	0	0	0	✓	New objective WO9 greatly increases the economic potential of the WCS to help create the conditions for investment in the local economy, including through new and low-carbon technologies.
6 Participation by all	0	0	0	0	0	0	0	✓	0	The new/revised Strategic Objectives are unlikely to strongly impact upon participation levels.
7 Technology, Innovation etc.	✓	?	✓	0	✓	0	0	0	✓	New objective WO9 greatly increases the economic potential of the WCS to help create the conditions for investment in the local economy, including through new and low-carbon technologies.
8 Energy	✓	?	✓	0	0	0	✓	0	✓	New objective WO9 supports an expansion in low-carbon and renewable technologies.
9 Natural Resources	✓	✓	✓	0	0	0	✓	0	?	Local economic development may include road haulage and large-scale industrial development with the potential to impact negatively on natural resources, depending on the type/location of development.

10 Access to Services	✓	?	✓	0	0	0	0	0	0	The new/revised Strategic Objectives are unlikely to strongly impact upon accessibility.
11 Landscape	✓	✓	0	0	0	0	?	?	?	Local economic development may include large-scale industrial development which may be located in the countryside and could impact negatively upon landscape character, depending on the type/location of development.
12 Bio/geo - diversity, etc	✓	✓	0	0	0	0	?	?	?	Local economic development may include road haulage and large-scale industrial development with the potential to impact negatively on biodiversity, geodiversity, flora & fauna, depending on the type/location of development.
13 Health	✓	✓	0	0	0	0	✓	0	0	The new/revised Strategic Objectives are unlikely to strongly impact upon health.
14 Provision of Housing	0	?	0	✓	0	✓	0	0	0	The new/revised Strategic Objectives are unlikely to strongly impact upon provision of housing.
15 Population (learning/skills)	0	0	0	0	0	0	0	0	✓	Local economic development can foster development of a skilled workforce and may increase the opportunities in Worcestershire to attract and retain skilled workers, including graduates.
16 Cultural heritage, etc.	✓	✓	0	✓	0	✓	0	0	?	Local economic development may include road haulage and large-scale industrial development with the potential to impact negatively on biodiversity, geodiversity, flora and fauna, depending on the type/location of development.
17 Population (crime)	0	0	0	0	0	0	0	0	0	The new/revised Strategic Objectives are unlikely to strongly impact upon anti-social behaviour, crime, litter or graffiti.
18 Material assets	✓	✓	✓	✓	✓	0	?	?	?	Local economic development has the potential to increase pressure upon the county's resources of agricultural and green belt land, depending on the location of development.

4.4 Assessment of Internal Compatibility of Strategic Objectives

4.4.1 It is good practice to compare each Strategic Objective against the other Strategic Objectives, to ensure there are no contradictory objectives.

4.4.2 The following matrix illustrates the compatibility of the WCS Strategic Objectives. There are no instances of objectives directly conflicting with each other to cause a difficulty in compatibility terms, but where uncertainties remain these have been recorded.

WCS Objective	2	3	4	5	6	7	8	9	Comments
1	✓	✓	✓	✓	**0**	✓	✓	**?**	The effects of supporting the local economy depend on the type and location of development.
2		✓	✓	**?**	**0**	**?**	**0**	**?**	Fewer waste miles could impact on amenity/natural resources through greater no. of local waste facilities.
3			✓	✓	✓	**✓/?**	✓	**0**	A reduction in waste miles may not be achieved if the hierarchy demand greater transport to certain facilities.
4				**0**	**0**	**?**	✓	**0**	
5					✓	**?**	✓	✓	Addressing the capacity gap could provide opportunities for local businesses to meet demand.
6						**0**	✓	**0**	
7							✓	**?**	Supporting the local economy may not achieve reduced waste miles, depending on development.
8								**0**	

4.4.3 The SA undertaken to accompany the Emerging Preferred Options WCS concluded that there were a number of uncertainties regarding the sustainability effects of the Strategic Objectives. At EPO stage it was considered that many of these uncertainties could be overcome through including 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*". Such an additional Strategic Objective has not been proposed in the First Draft Submission WCS, which means that, to a certain extent, the uncertainties remain.

5 APPRAISAL OF DRAFT POLICIES

5.1 Introduction

5.1.1 The Strategic Objectives of the WCS will be delivered through the WCS policies. The WCS has seen a reduction in the overall number of policies from Emerging Preferred Options stage, through a re-ordering of issues and through the combining of former policy directions into single policies. There are 7 Policies within the First Draft Submission WCS that, combined, seek to provide for a comprehensive approach to providing for waste management in Worcestershire.

5.2 Summary of WCS Policies:

WCS 1 - Location of Waste Management Development

To make sure that the right type of development happens in the right place the Waste Core Strategy identifies areas of search for waste management development. A total of 58 areas of search have been identified as locations considered most suitable for waste management facilities, including 5 locations suitable for larger facilities.

WCS1 emerged from Emerging Preferred Options *draft policy direction WCS3: Future Waste Site Allocations* and other elements of the Emerging Preferred Option.

WCS 2 - Ensuring sustainable waste management development

Sets out the environmental, social and economic considerations that need to be balanced to make sure that new waste management development contributes towards the aims of sustainable development.

WCS2 emerged from Emerging Preferred Options *draft policy direction WCS1* but includes more detail on all issues and in addition considers flood risk, the economy and local community involvement. Restoration was previously considered in *draft policy direction WCS1* but is now considered in Policy WCS4 and WCS6.

WCS 3 - Managing waste from new development

Sets out how all new development must consider the reduction, reuse and recycling of waste. It looks at the construction, occupation and demolition stages of all developments.

WCS3 emerged from *draft policy direction WCS7*. WCS3 takes a less prescriptive approach than the Emerging Preferred Option and removes the requirement for 'waste audits'. Now includes reference to 'once occupied' rather than just construction phase.

WCS 4 - Managing the impact of new waste management development

Sets out how proposals for new waste management facilities must consider the ways that their operations might affect natural resources, environmental, social, cultural and economic assets and the character and amenity of the county and how any impacts can be minimised.

WCS4 emerged from Emerging Preferred Options *draft policy direction WCS11 Managing the impact of waste management related development*. All issues have been developed further, with issues added on Protection of European species and habitats; Design taking into account built and historic environment; Infrastructure and transport; Use of previously

developed land; and Green belt. Air quality and amenity issues have been expanded since Emerging Preferred Options.

WCS 5 - Recovering energy from waste material
The Waste Core Strategy promotes the reuse and recycling of resources. Where this is not possible the recovery of energy from residual waste will be expected. Recovering energy from the remaining waste that cannot be recycled is an important part of the waste hierarchy.
WCS5 emerged from Emerging Preferred Options *Draft Policy Direction WCS10*.

WCS6 – Landfill
The Waste Core Strategy aims to reduce the amount of waste going to landfill, but there will still be a small amount of waste that needs to be disposed of. This policy sets out when this will be allowed and the extra criteria that planning applications for landfill will need to meet.
WCS6 was Emerging Preferred Options *draft policy direction WCS9*. WCS6 covers the same issues, but with more detail on landfill gas management, and also considers restoration.

WCS 7 - Managing the impact of surrounding uses
This policy looks at safeguarding existing waste management facilities.
WCS7 emerged from Emerging Preferred Options *draft policy direction WCS6 Safeguarding*. WCS7 no longer refers to unimplemented permission, only existing uses. WCS7 also introduces a buffer/consultation zone and more details for consideration.

5.3 Appraisal Results

5.3.1 The Sustainability Appraisal of the First Draft Submission WCS draft policies follows the methodology established in the SA Scoping Report. For much of the WCS, the conclusions of the previous SA undertaken at Emerging Preferred Options stage remain applicable, as changes to policies have been limited and specific. The 'open-ended' nature of many of the draft policy directions of the Emerging Preferred Options remains, to an extent, as the First Draft Submission WCS seeks to provide a strategic framework without necessarily being overly prescriptive or being restricted through very detailed policies (for example it does not specific exactly what development, and where, should be developed in a given area of search).

5.3.2 The results of the policy appraisal are provided in Annex C, but an outline of the broad performance of the policies against the established SA Objectives, together with the key issues emerging from the appraisal, is provided below:

WCS 1 - Location of Waste Management Development
Whilst the areas of search have been determined taking into account the potential for multi-modal transportation, very few areas have been identified which could benefit from non-road transport. Transport performance has the potential to be positive, but the draft policy has been constrained by the practical difficulties of reconciling the need to locate waste development close to the source of arisings. The scarcity of areas with the potential to exploit multi-modal transport, together with actual

sites for specific developments not being allocated, has resulted in an uncertain sustainability rating for this issue.

WCS 2 - Ensuring sustainable waste management development

Whilst this policy does seek to ensure that landscape and biodiversity are taken into account, it could promote the importance of linked networks of habitats as part of a green infrastructure approach.

WCS 3 - Managing waste from new development

Through the increased sorting of wastes (e.g. wood wastes), there is potential (albeit limited) for greater generation from renewable sources, and therefore a positive impact on 'Energy generation and use'.

This SA update has assessed policy WCS3's performance against 'Provision of housing' as positive, albeit to a minor degree.

WCS 4 - Managing the impact of new waste management development

Whilst this policy seeks protection and enhancement of biodiversity, it could promote the importance of linked networks of habitats as part of a green infrastructure approach.

The policy does not seek to avoid detrimental impact to high-quality agricultural land when assessed against the 'Material assets' SA objective. Whilst the importance of agricultural land is recognised in the supporting text, it does not appear to feature in any policy.

WCS 5 - Recovering energy from waste material

Whilst the policy does require energy recovery to be maximised, it does not explicitly call for CHP to be considered, which could be a missed opportunity. The need to ensure opportunities for CHP are considered in any Energy from Waste proposal should be included within the policy, rather than only appearing in the supporting text to within the policy itself.

WCS6 – Landfill

Policy WCS6 could perform better in relation to the 'Waste' objective through including explicit reference to the need to ensure waste is managed at a higher level of the waste hierarchy than disposal to landfill.

The potential impact on flooding resulting from landfill is unclear. However, it is recognised that flooding issues are covered elsewhere in the WCS, including in policy WCS2.

The policy's reference to 'locally important characteristics' is very broad and would benefit from greater specificity.

WCS 7 - Managing the impact of surrounding uses

WCS7's restrictive nature could, in some circumstances, potentially limit opportunities for waste development. This has resulted in an unclear outcome against the 'Growth with prosperity for all', 'Technology, innovation and inward investment', and 'Energy generation and use' SA objectives.

WCS7 is rated positively against the 'Health' SA objective, as it is considered that the policy's provisions will help to ensure that potential negative health effects from waste operations (e.g. noise, etc) will not cause harm to neighbouring occupiers.

5.3.3 The overall summary of sustainability effects arising from the First Draft Submission WCS Policies is provided in the matrix on pages 49-56

5.4 Overall Summary of Sustainability Effects Arising from the First Draft Submission WCS Policies

WCS Policies ⇨ ⇩ SA Objectives	WCS1	WCS2	WCS3	WCS4	WCS5	WCS6	WCS7	Comments
Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal	+	+	+	Ø	0	0	+	Clear support is given to the waste hierarchy across many of the policies where relevant. Targets are included for recycling of MSW, C&D and C&I waste.
Climate Change Reduce causes of and adapt to the impact of climate change	+	+	+	0	+	+	0	Policies will promote the reduction of greenhouse gas emissions through the facilitation of new developments to divert waste from landfill and recovery of landfill gases. Emissions from waste transport should also be reduced as the areas of search are focussed on the main towns/city, thereby reducing waste transport. The exact nature of emissions will depend on the specific type, size and location of sites which will not be specified in the WCS.

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**	**+**	**Ø**	**+**	**Ø**	**?**	**0**	Development management policy should ensure flood risk is not increased. However, the likelihood of this will depend on the specific locations of development sites and on results from the districts' Strategic Flood Risk Assessments which are informing the WCS.
Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns	**?**	**+**	**+**	**?**	**?**	**?**	**?**	By increasing recycling and recovery, the policies may increase the need for waste transport by requiring multiple handling of waste streams. However, the significance of effects depends on the nature, size and location of specific facilities, which will not be specified in the WCS. An appraisal of the sustainability of the 'areas of search' is being undertaken and will inform the final SA accompanying the Submission WCS. Policies specifically require the minimisation of waste transport and sustainable transport modes and methods to be implemented and comparison of alternative sites to be made.

Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	**Ø**	**+**	**Ø**	**Ø**	**0**	**Ø**	**?**	The policies support the development of waste management facilities, encouraging the growth and development of the waste sector in Worcestershire and increasing its economic contribution.
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.	**Ø**	**+**	**+**	**Ø**	**Ø**	**Ø**	**Ø**	The location of waste facilities in urban areas means they will be accessible to the greatest proportion of people.
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.	**Ø**	**+**	**+**	**Ø**	**+**	**+**	**?**	By facilitating the development of sites to divert waste from landfill and allowing flexibility to respond to new technologies, the policies will help to support the development of new technologies for managing waste. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.

Energy generation and use Promote energy efficiency and energy generated from renewable and low carbon sources.	+	+	0	Ø	+	+	?	The policies give a strong emphasis on increasing energy efficiency by promoting energy recovery and renewable energy generation from landfill gas and anaerobic digestion. The use of CHP is also encouraged where practicable. Policies also promote the generation of renewable energy and energy efficiency within waste developments. By aiming to locate facilities near to the main towns/city, the policies may help to reduce the use of energy for waste transport. However, this depends on the exact nature, size and location of facilities, which will not be specified in the WCS. An appraisal of the sustainability of the 'areas of search' is being undertaken and will inform the final SA accompanying the Submission WCS.

Natural Resources Protect and enhance the quality of water, soil and air.	?	+	0	+	+	+	0	Policies require the avoidance of adverse impacts on air, water and soil, although the likelihood and significance of impacts depends largely on sensitivities at individual locations. An appraisal of the sustainability of the 'areas of search' is being undertaken and will inform the final SA accompanying the Submission WCS.
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.	+	Ø	+	Ø	Ø	Ø	0	To achieve increased recycling performance the policies will indirectly require improved recycling services and better access to such services, although to some extent this will be outside the scope of the WCS. However, developers will be required to provide facilities for recycling and composting in new developments, which will help to improve access, and local collection points will be encouraged.
Landscape Safeguard and strengthen landscape character and quality.	+	+	0	+	?	?	0	Landscape character would be explicitly required to be considered by developers, therefore significant adverse effects should be unlikely.

Biodiversity, geodiversity, flora and fauna Conserve and enhance Worcestershire's biodiversity and geodiversity and ensure networks of habitats are conserved and enhanced.	?	+	0	+	Ø	+	0	By complying with national, regional and local policy, and account to be taken of designated sites and action plans, adverse effects on biodiversity and geodiversity should be avoided. Benefits may be secured through restoration conditions, but landfill mining in particular risks adverse effects. Effects on European nature conservation sites are still to be assessed through the Habitats Regulations Assessment.
Health Improve the health and well being of the population and reduce inequalities in health.	0	Ø	Ø	+	0	0	+	Health impacts are unlikely if facilities are operated in accordance with good practice standards, and by requiring compliance with national, regional and local policy, adverse effects on health and amenity should be avoided.
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.	Ø	Ø	+	Ø	Ø	Ø	0	Policies will promote the adoption of sustainable construction methods in waste management, and support better designed developments by requiring the provision of recycling facilities for occupiers.

Population (learning and skills) Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Ø	Ø	Ø	Ø	The WCS is unlikely to have significant effects on learning and skills.
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.	?	+	+	+	Ø	+	0	Policies will require protection of assets, therefore adverse effects on the built and historic environment should be avoided. In addition, sustainable construction standards are promoted, and better designed developments in relation to the provision of waste facilities. Additional benefits could be secured in relation to permitted development rights and local collection points.
Population (antisocial behaviour, crime, litter and graffiti) Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Policies will encourage greater civic responsibility by providing more opportunities for people to recycle and dispose of their waste.

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.	**?**	**+**	**+**	**+**	**Ø**	**?**	**0**	By promoting waste minimisation, recycling and reuse and the adoption of sustainable construction standards, the policies will help to reduce demand for virgin mineral resources. The WCS includes targets for the recycling of MSW, C&I and C&D waste, which should help reduce demand for primary resources (although the targets do not form part of the policies). By giving priority to locating development in the main towns/city and to previously-developed land, the policies are likely to help to increase the focus on the use of previously-developed land. However, it may also increase the pressure for development in the green belt. Policy on permitted development rights could assist in controlling any adverse effects on agricultural land.

6 ALTERNATIVES

6.1 Introduction

6.1.1 The SA process includes an assessment of reasonable alternatives to deliver the required outcomes of the WCS. The latest version of the WCS has emerged from an initial Issues and Options document, and a subsequent Emerging Preferred Options version. Over the course of this development, the Strategy has been increasingly focussed and refined, and the Sustainability Appraisal has played a key role in contributing to these refinements. The earlier stages of the WCS included various options for how waste development could best be planned for, and the SA's recommendations helped to determine which of these options went forward for further refinement. The current First Draft Submission WCS is now at a stage where these initial options have been decided and taken forward. It has taken the most appropriate alternatives from those previously put forward and framed them within a clear and consistent Strategy. For the current version of the WCS, sustainability appraisal of the potential alternative approaches is being undertaken and will be published in the SA report accompanying then next stage of the WCS, the Submission document. This SA update can, however, assess the overall sustainability performance of those chosen policies and through this continued process can seek to influence the final stages of the WCS through policy refinement.

6.2 Options at Issues and Options Stage

6.2.1 Further information on the alternatives considered and assessed as the WCS has developed can be found in the WCS Issues and Options and Emerging Preferred Options versions, and the Sustainability Appraisals undertaken at interim stage, and Emerging Preferred Options stages. All of these documents can be accessed on the Council's website at the following address:
http://www.worcestershire.gov.uk/cms/environment-and-planning/minerals-and-waste/waste-core-strategy.aspx

6.3 Options at Emerging Preferred Option Stage

6.3.1 The previous SA assessed the sustainability not only of the emerging policy directions, but also of a number of broader alternative approaches to addressing certain issues which were not (at the time of the Emerging Preferred Options) allocated to any particular policy. The sustainability performance of the alternatives has helped to inform the way in which the issues have been incorporated into the First Draft Submission WCS. The following summary outlines how each alternative has been taken forward.

6.4 Options Reconciled in the First Draft Submission Report

Urban or Rural Locations

The First Draft Submission SA has resolved the rural/urban issue through policy *WCS 1: Location of waste management development*. This policy is informed by a number of factors, including a geographic hierarchy which seeks to reflect resource demand and waste arisings. It is unfortunate that the identified areas of search do not exactly match the aspirational distribution, but this is a necessity arising from the availability of land. The broad pattern of development shows a strong adherence to urban locations in favour of rural. Indeed, almost all of the identified areas of search are in urban areas (including small towns); the 8 areas of search that are peri-urban/rural have been identified as they satisfy other defined criteria (e.g. former quarry sites). Sites coming forward outwith the identified areas of search will be assessed as they are brought forward. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Centralised or Dispersed Facilities

This issue has been taken forward in the background and policy of *WCS1: Location of waste management development.* The WCS has sought to reflect the need for waste facilities to be located close to the source of waste arisings, and this has formed part of the methodology to identify 58 areas of search. The WCS is not prescriptive in requiring what development must be located on specific areas of search; this has been left open to ensure flexible delivery. The areas of search should help to foster responsibility for waste, as they are generally located close to populated areas and are therefore accessible to communities. No rural areas have been identified, but this is necessary to avoid unnecessary transport distances and helps to foster symbiosis through locating development on industrial sites with potentially complimentary uses in close proximity. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Small or Large Facilities

This issue has been considered in developing policy *WCS1: Location of waste management development*. The policy calls for development to be located within 58 identified areas of search in the first instance, and for other proposals to be assessed according to the WCS methodology. Whilst the WCS identifies the volumes of waste management capacity required in the county, and broad areas are indicated for development, the precise size of facilities in certain locations is not detailed (although 5 areas of search have been identified as being capable of accommodating larger waste facilities). This provides for greater flexibility, but means that the sustainability implications cannot be fully known until specific proposals come forward through the planning system. A full assessment of the sustainability of policy WCS1 can be found in Annex 1.

Approach to Green Belt

The areas of search identified in *WCS1: Location of waste management development* have taken account of green belt as a secondary constraint. Policy *WCS 4: Managing the impact of new waste management development* explicitly requires the demonstration of special circumstances for development in the green belt. This is in accordance with national green belt policy in PPG2. This has ensured that the

concerns of the previous SA have been taken into account and that waste development in general is not considered to have special circumstances, whilst recognising that specific developments could be appropriate. A full assessment of the sustainability of policies WCS1 and WCS4 can be found in Annex 1.

Locational Strategy for MSW, C&I, C&D

The locational strategy has been developed and forms part of the background to policy *WCS1: Location of waste management development*. This policy directs development, in the first instance, towards 58 identified areas of search, suitable for a variety of waste management development. The proportions of areas within/around different towns has shifted slightly away from Worcester (17% of distribution) and Redditch (14%), in favour of Kidderminster, Stourport and Bewdley (27%). Fears over flooding are allayed by none of the areas being located in Flood Zone 3 (although 9 areas of search are wholly or partly within Flood Zone 2). The WCS seeks to ensure sites will not contribute to flood risk, and that sites will be located in Flood Zone 1, unless justified elsewhere through an exceptions test. This is explicit in policy *WCS 2: Ensuring Sustainable Waste Management Development*. A full assessment of the sustainability of policies WCS1 and WCS2 can be found in Annex 1.

Allocating facilities to Locational Hierarchy

The WCS has used a series of stages to arrive at 58 areas of search. This has led to a list of areas that are, in principle, suitable for development of waste facilities. The nature of the waste facilities that could be accommodated within each area is not specified; instead, the WCS adopts a flexible approach and does not seek to restrict development. Five of the identified areas of search have been considered capable of accommodating larger facilities. These facilities might include: large scale anaerobic digestion; material recovery facilities; mechanical biological treatment; metal recycling and end of life vehicle facilities; physical treatment; thermal treatment; and waste transfer and bulking stations. Each of the 5 identified areas has been assessed for accessibility and constraints, and the sieving process has ensured that sustainable transport of waste materials is a key factor influencing location. A full assessment of the sustainability of policies WCS1 can be found in Annex 1.

MSW Capacity Needs

As above.

C&I Capacity Needs

The First Draft Submission WCS has been influenced by the previous SA and now includes a target for recycling. For C&I waste, the target for recycling, composting and recovery is 75%. This target does not actually form part of any policy within the WCS, but the policies are designed to support the achievement of the target (together with the targets for other elements of the waste stream). Inclusion of recovery within the target should help to foster generation of energy from waste where appropriate, but conversely could lead to a reduction of waste treatment at the higher end of the waste hierarchy, as these options are not sub-divided into specific targets.

C&D Capacity Needs

The First Draft Submission WCS has been influenced by the previous SA and now includes a target for recycling. For C&D waste, the target for recycling, composting and recovery is 75%. This target does not actually form part of any policy within the WCS, but the policies are designed to support the achievement of the target (together with the targets for other elements of the waste stream).

Hazardous Waste Capacity

A requirement for additional hazardous waste capacity over the life of the strategy has not been identified in the First Draft Submission WCS, as there is already a surplus of capacity (although this surplus is within the region and not within Worcestershire). The WCS makes no assumption on potential volumes of hazardous waste that could be generated as a result of future EfW developments, and it is unclear whether this would significantly impact upon capacity requirements. However, the current hazardous waste arisings in Worcestershire are approximately 46,464 tonnes per annum, and the estimated 6,300 tonnes per annum of additional hazardous waste that could result from an EfW facility[8] therefore has the potential to be a significant additional burden. Further information on the exact scale of the surplus capacity would be needed before any judgement could be made.

[8] From modelling work undertaken by ERM in 2009 of residual treatment options for Joint Municipal Waste Management Strategy.

7 OVERALL ASSESSMENT OF FIRST DRAFT SUBMISSION REPORT

7.1 Introduction

7.1.1 This section of the report draws together the findings and conclusions of the assessments of each of the different elements of the First Draft Submission WCS, specifically the Vision and Objectives from Section 4 and the Draft Policies from Section 5. The results of each of these appraisals are synthesised to make an assessment of the First Draft Submission WCS overall, and recommendations are provided for addressing the predicted effects.

7.2 Overall Assessment of First Draft Submission Report

7.2.1 The following table presents an assessment of the overall effects of the First Draft Submission WCS, giving an explanatory description of the predicted effects.

SA Objectives	Assessment	Comments
Manage waste in accordance with the waste hierarchy	+ / 0	Clear support is given to the waste hierarchy across much of the WCS, and targets for recycling and reuse of MSW, C&D and C&I wastes are provided in the text accompanying the Vision. Further consideration should be given to the need for hazardous waste disposal arising from the residual treatment of waste.
Reduce causes of and adapt to the impacts of climate change.	+ / ?	Climate change has a strong emphasis in the WCS, and emissions are likely to be reduced through the diversion of waste from landfill and recovery of energy. Emissions from waste transport are less certain as this is dependent on the nature and scale of facilities within the areas of search, which have not been prescribed.
Avoid flood risk	+ / ?	Although the areas of search do include 9 areas wholly or partially within flood zone 2, WCS policies will ensure flood risk is not increased through application of the sequential test. The final WCS will be informed by the combined SFRAs of the district authorities, which are not yet available.
Reduce the need to travel and promote sustainable travel.	?	The WCS requires minimisation and sustainable use of waste transport, but by increasing recycling and recovery it may increase the need for waste transport by requiring multiple handling of waste streams. However, the significance of effects depends on where specific facilities are located, which - beyond the broad areas of search - has not been defined. The areas of search have been informed by their proximity to waste arisings and the locational hierarchy has been applied. A further assessment of the potential effects arising from the areas of search will be included in the ASA accompanying the next stage of the WCS. Further consideration should be given to the need for hazardous waste disposal arising from residual treatment of waste.

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. The benefits of industrial symbiosis and co-location are promoted.
Encourage participation and responsibility	+ / -	Providing improved access to recycling facilities will encourage people to take greater responsibility for waste. As particular uses have not been allocated to particular areas of search (except in the broadest terms), it is not possible to judge whether the development delivered will be of a dispersed or concentrated nature, but the range of areas of search should facilitate the spreading of responsibility, as the areas are informed by waste arisings and respond to the greatest centres of population in the county.
Promote new technologies.	+	By facilitating the development of sites to divert waste from landfill and allowing flexibility to respond to new technologies, the WCS will help to support the development of new technologies for managing waste. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.
Promote energy efficiency and renewable/low-carbon generation	+ / ?	The WCS emphasises energy efficiency and energy generation, including renewable energy. It also promotes the use of CHP where possible (although this is not within the policies). The effect of transport on energy consumption will depend on the nature and scale of specific facilities at specific areas of search, but these are not specified. A fuller assessment of the transport implications of the areas of search will be included in the SA accompanying the next stage of the WCS.
Protect and enhance water, soil and air	+ / ?	The WCS requires the avoidance of adverse impacts on air, water and soil. The areas of search have the potential to exacerbate existing air quality problems, including at AQMAs, but the impact will depend on the nature and scale of specific developments at certain areas of search, which are not specified. The WCS is unlikely to significantly enhance water, soil or air quality, but by improving methods of managing waste, including diversion from landfill, the WCS may help to reduce the risk of water, soil and air pollution.
Improve quality and access to services	+	The WCS aims to improve access to services where this is within it scope to achieve, particularly access to recycling facilities within new non-waste developments. There could be more emphasis on the importance of HWRCs.
Safeguard and strengthen landscape quality	+	Landscape character is explicitly protected and significant adverse effects are unlikely. However, the significance of landscape impacts depends on the nature and – in particular – the scale of specific developments, which are not specified. The WCS is unlikely to significantly enhance landscape quality across the county in a strategic way.

Conserve and enhance biodiversity and geodiversity	+	By requiring compliance with national, regional and local policy, and account to be taken of designated sites and action plans, adverse effects on biodiversity and geodiversity should be avoided. Effects on European nature conservation sites are being assessed through the Habitats Regulations Assessment. The WCS is unlikely to significantly enhance biodiversity and geodiversity.
Improve health and well-being	0	By requiring compliance with national, regional and local policy, adverse effects on health and enmity are unlikely. However, the WCS is unlikely to significantly improve health and well-being.
Provide decent affordable housing for all	+	The WCS promotes the adoption of sustainable construction methods and good design for waste facilities.
Raise skills levels	+	Diverting increased quantities of waste from landfill will support new enterprises in Worcestershire which will require more skilled labour, although the number of jobs is likely to be small compared to the overall labour market in the county.
Conserve and enhance the historic and built environment	+	The WCS requires protection of assets, therefore adverse effects on the built and historic environment should be avoided. In addition, good design and sustainable construction are promoted for waste developments. The WCS is unlikely to significantly enhance the built and historic environment.
Reduce crime and antisocial behaviour	Ø	
Ensure efficient use of land	+ / ?	By promoting waste minimisation, recycling and reuse and the adoption of sustainable construction standards, the WCS will help to reduce demand for virgin material resources. Targets for the recycling and reuse of MSW, C&D and C&I waste are included in the text supporting the Vision. By giving priority to locating development in the main towns/city, the WCS is likely to help to increase the focus on the use of previously-developed land. Green belt protection should be ensured through the policy requiring very special circumstances of waste developments to be considered acceptable.

Conclusions

7.2.2 Clear 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. Targets for the recycling and reuse of MSW, C&D and C&I wastes are included to further incentivise action. CHP is encouraged where possible.

7.2.3 The effects on waste transport will depend on the specific nature and scale of facilities developed within the areas of search, which are not

specified in the WCS. Similarly, the exact nature of future development, in terms of the centralised/dispersed pattern is unknown, but the areas of search are informed by the locational hierarchy that will focus most development in or around urban locations.

7.2.4 The WCS requires the avoidance of adverse impacts on landscape, biodiversity, geodiversity, air, water, soil and historic and cultural assets. Specific site-level impacts will depend on the particular developments within areas of search, which remain unknown. However, there are some areas of search that may need extra mitigation due to the proximity to sensitive sites, including Local Biodiversity Sites. The effects on flood risk will again depend on what development is taken forward at specific locations, but the level of flood risk will be informed by the combine SFRAs of the six Worcestershire district councils. Effects on European nature conservations sites are being considered in the Habitats Regulations Assessment.

7.2.5 By giving priority to locating development in the main towns/city, the WCS is likely to help to increase the focus on the use of previously-developed land. Green belt protection should be ensured through the policy requiring very special circumstances of waste developments to be considered acceptable.

7.2.6 By facilitating the development of sites to divert waste from landfill and allowing flexibility to respond to new technologies, the WCS will help to support growth and innovation in the waste sector and increase its economic contribution. Promoting sustainable construction, higher energy and environmental standards in design and climate change adaptation will also support markets for new technologies.

7.2.7 Access to services is promoted where this is within the scope of the WCS

7.3 Cumulative Effects

7.3.1 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". 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 e.g. 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;

7.3.3 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 Annexes C and D where impacts are either direct, or indirect, i.e. secondary. Certain other attributes are common to all types of

impact: these are timescales (i.e. short, medium and long-term impacts), reversibility (i.e. 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 Annexes C and D. Cumulative impacts will be considered in greater detail in the SA report being produced to accompany the Submission WCS.

7.3.4 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.

7.3.5 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 can be 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 SA report that will accompany the Submission WCS will consider the overall effect of the WCS as a whole on each of the SA objectives. The next formal stage of SA will also consider 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.

7.4 Recommended Mitigation

7.4.1 The following recommendations are made for mitigating the predicted adverse effects of the First Draft Submission WCS.

- Supporting statement 4 to the Vision should be amended to state that: "*There will be very little material that cannot be reused or recycled*".

- Policy WCS2 could promote the importance of linked networks of habitats as part of a green infrastructure approach.

- Policy WCS4 should recognise the value of all biodiversity, not just that designated at European/national/local level.

- The need to ensure opportunities for CHP are considered in any Energy from Waste proposal should be included within Policy WCS5, rather than only appearing in the supporting text to within the policy itself.

- WCS6 should explicitly refer to the waste hierarchy to clarify the need to ensure waste should be managed at a higher level of the waste hierarchy than disposal to landfill where possible. The reference in Policy WCS6 to 'locally important characteristics' is very broad and would benefit from greater specificity.

7.4.2 In addition to the above recommendations for the content of the WCS and the process of its development, 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.

7.5 Uncertainties and Risks

7.5.1 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.

Waste Transport

The location of facilities will have a strong influence over waste transport distances, as will the methods by which waste is managed. The overall balance of impacts on transport over time is unclear, as the scale and nature of developments within specific areas of search is not being determined through the WCS. 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.

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. Whilst the First Draft Submission WCS does provide areas of search, it does not provide any detail of what type of development will go onto what site, so to a large extent the emissions remain unknown and could vary significantly depending on implementation. A further assessment of emissions will be made in the full SA accompanying the Submission WCS.

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 location, scale and nature of developments and the likely effects on nature conservation value. A Habitats Regulations Assessment is being undertaken and will be published alongside the submission WCS.

Flood Risk

The likely effects on flood risk are dependent on the specific locations of facilities. The exact type and scale of facility within each area of search remains unknown, and nine of the identified the areas of search fall either wholly or partly within Flood Zone 2. Whilst the WCS policies make provision for avoidance of flooding, including application of the PPS25 requirements, the exact effects on flooding remain uncertain. A fuller assessment is dependent on the completion of Strategic Flood Risk Assessment for Worcestershire districts, which will be used to inform the WCS.

Water Resources

Likely levels of water consumption are unknown, and dependent on particular technologies and design of facilities. Severn Trent's Water Resource Management Plan indicates that water resources are under pressure in the Severn resource zone including groundwater and surface water around Bromsgrove and Kidderminster. The final Plan shows a supply/demand shortfall in the Severn zone of around 145Ml per day by 2034/35.

8 IMPLEMENTATION

8.1 Monitoring

8.1.1 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 below.

8.1.2 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 below for monitoring potential sustainability impacts which are not expected to occur as foreseen by the appraisal.

8.1.3 An Annual Monitoring Report will be produced to monitor the implementation of the WCS, and the recommendations below for monitoring should be incorporated within this. Worcestershire County Council should report annually on the following issues and suggested indicators.

Monitoring recommendations

Tonnages and % of waste arisings reused, recycled, composted, used for energy recovery, landfilled (potential links to NI192 and NI193):

- **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/con-compliance with permit conditions:

- **Water discharges;**
- **Air emissions: NO_x; SO_2; PM10; CO_2; methane; other pollutants of public concern (dioxins and furans, PCBs) (potential links to NI194)**
- **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 HWRC;**
- **5km of a recyclable collection point.**

8.1.4 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 operators.

9 NEXT STEPS

9.1 Development of Submission Waste Core Strategy

9.1.1 The consultation comments which are received on the Waste Core Strategy First Draft Submission Report will be considered and taken into account in finalising the Submission Waste Core Strategy. WCC will also take into account the results, conclusions and recommendations set out in this report on the sustainability of the First Draft Submission Report in finalising the Submission Waste Core Strategy.

9.2 Subsequent Stages

9.2.1 Following the First Draft Submission Report stage, the WCS will be further refined before finalising for submission to the Secretary of State. The WCS Submission Version will be subject to SA and a final SA Report produced.

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

9.2.3 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

List of Policies, Plans and Programmes Reviewed

European

Landfill Directive
Water Framework Directive
WEEE Directive
ELVs Directive
Air Quality Directive
Waste Framework Directive
Habitats Directive
EU Wild Birds Directive

National

Planning Policy Statement 1: Delivering Sustainable Development
Planning Policy Statement:
Planning and Climate Change - Supplement to Planning Policy Statement 1
Planning Policy Statement 2: Green Belt
Planning Policy Statement 5: Planning for the Historic Environment
Planning Policy Statement 7: Sustainable Development in Rural Areas
Planning Policy Statement 9: Nature Conservation
Planning Policy Statement 10: Planning for Sustainable Waste Management
Planning Policy Guidance 13: Transport
Planning Policy Statement 22: Renewable Energy
Planning Policy Guidance 24: Planning and noise
Planning Policy Statement 25: Development and flood risk
Waste Strategy for England 2007
National Air Quality Strategy
National Sustainable Development Strategy
Natural Environment and Rural Communities Act 2006
Climate Change Act 2008
Planning Act 2008

Regional

England Rural Development Programme West Midlands
Regional Sustainable Development Framework

County

Worcestershire County Structure Plan
Worcestershire County Council Corporate Plan
From Here to Sustainability: The Learning and Skills Council's Strategy for Sustainable Development
Worcestershire Local Transport Plan 2
Worcestershire Landscape Character Assessment
Worcestershire Community Strategy
Worcestershire Climate Change Strategy
Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004-2034
Minerals Local Plan
An Economic Strategy for Worcestershire 2010–2020
Worcestershire Biodiversity Action Plan
Herefordshire & Worcestershire Social Enterprise Strategy

Other

AONB Management Plans (Cotswold & Malvern Hills)

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Landfill Directive	To prevent, or reduce, negative effects of waste management on the environment. For 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 states 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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.
Waste Framework Directive	Waste hierarchy established requiring: 1. Prevention or reduction of waste 2. Recovery of waste through reuse, recycling or reclamation 3. Energy recovery from waste 4. Disposal of waste to landfill	Ensure that sustainability objectives reflect these principles as appropriate.
Habitats Directive	Requires the protection of listed species. Plans and projects can only be permitted having ascertained having 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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 landscapes of the landscape to support the Natura 2000 network of which SPAs from a part.	Include an objective on conserving and enhancing biodiversity.
Planning Policy Statement 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.
Planning Policy Statement 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Policy Statement 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: — decisions are based on the nature, extent and level of that significance, investigated to a degree proportionate to the importance of the heritage asset — wherever possible, heritage assets are put to an appropriate and viable use that is consistent with their conservation — the positive contribution of such heritage assets to local character and sense of place is recognised and valued; and — 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.	Ensure that sustainability objectives reflect these principles as appropriate.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Policy Statement 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 AONBs is given great weight. Within Worcestershire there are parts of two AONBs – the Cotswolds and Malvern Hills.	To include sustainability objective relating to rural regeneration and landscape protection.
Planning Policy Statement 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 to 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Policy Statement 10: 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 given significant weight in determining whether proposals should be given planning permission; • ensure the design and layout of new development supports sustainable waste management.	Ensure that sustainability objectives reflect these principles as appropriate.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Policy Guidance 13: 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.
Planning Policy Statement 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.
Planning Policy Guidance 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Policy Statement 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 9 local air quality management areas (AQMAs) where this will be monitored.	To ensure that health and pollution objectives are covered.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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; • 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.	Ensure that issues are addressed through objectives.
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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Planning Act 2008	Creates a new system of development consent for nationally significant infrastructure projects, covering certain types of energy, transport, water, wastewater 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 the 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 plan and SA	Implications for SA
England Rural Development Programme West Midlands	Environmental, Social And Economic Goals Environmental 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.	To reflect goals where Relevant.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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 • Enhance and protect the environment • Ensure prudent and efficient use of natural resources • Develop a flourishing, diverse and stable regional economy	Ensure that sustainability objectives reflect these principles and objectives as appropriate
Worcestershire County Structure Plan	Objectives of the plan include: Seek 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.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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.	Noted.
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.	Noted.
Worcestershire Local Transport Plan 2	The Freight Strategy seeks to ensure the efficient transportation of freight within the County, so as to support a strong local economy, but not at compromise to existing or future needs of society or the environment. This is to be delivered partly through the objective of 'improving efficiencies and timing of distribution; implementing approved freight routes and interchanges where appropriate and minimising pollution and disturbance from freight movements.	Ensure objective relates to the efficient patterns of movement.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
Worcestershire Landscape Character Assessment	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 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 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 country;	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 new technologies.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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
AONB Management Plans (Cotswold & Malvern Hills)	For both AONBs the central aim is the conservation and protection of the landscape. Both AONB's have former quarries, which could be used to dispose of waste.	Include sustainability objectives that relate to landscape quality and character.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
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 main strategic components: Business, Place and People, with a fourth underpinning component: Powerful voice. Business • Seizing market opportunities • Improving competitiveness	Objective relating to the creation of employment opportunities and economic growth.

Document	Key objectives / targets / guidance relevant to the plan and SA	Implications for SA
	• Harnessing knowledge Place • Increasing Birmingham's Competitiveness • Improving infrastructure • Sustainable communities People • Sustainable living • Raising ambitions and aspirations • Achieving full potential & opportunities for all Powerful Voice • Improving the evidence base for policy • Engaging UK and International decision makers • Position the West Midlands as a global centre where people and businesses choose to connect	
Worcestershire Biodiversity Action Plan	Contains details of 19 priority habitats and 20 species occurring in the County with typically five year plans for action.	Ensure that issues are addressed through objectives.
Herefordshire & Worcestershire Social Enterprise Strategy	The strategy has five high level objectives, to • 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.	Noted.

Annex B

Baseline Data

Key Sustainability Issues and Trends

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Waste	Overall, there has been a reduction in the total amount of waste generated in Worcestershire. According to the latest available data from the Environment Agency, the total waste generated in 2002-03 was 13 percent lower than in 1998. This reduction is due in large part to the significant fall in waste generated by industry in the County during this time, a 42.6 percent reduction. Commercial waste increased by 22 percent during the same period, and municipal waste increased by 15.2 percent. According to the Environment Agency C&I Survey 2002/03, 924,000 tonnes of waste was produced in Worcestershire in 2002/03. This was spilt by source as follows: Municipal waste: 32% Industrial waste: 35% Commercial waste: 33% In terms of household waste, Worcestershire residents produced an average of 481 kg each in 2008/09 which was a reduction from 492kg in 2007/08 and showed a continued reduction on previous years. This is marginally better performance than nationally (495kg per person in 2007/08). In 2008/09, 77,494 tonnes (29.02%) of household waste was recycled in Worcestershire. In the same period, 33,503 tonnes (12.55%) of green waste was composted. Worcestershire produced 267,587 tonnes of household waste in 2008/09 of which 41.57 percent was recycled or composted. In 2006/07, the latest year for which figures are available, Worcestershire's 32.3 percent of household waste recycled/composted was slightly higher than the corresponding figure of 28.6 percent for the West Midlands region. Worcestershire produced 321,000 tonnes of industrial waste in 2002/03 of which 37.7 percent was recycled or re-used. Worcestershire produced 307,000 tonnes of commercial waste in 2002/03 of which 31.3 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 without Implementation of WCS
Climate Change	In 2007, Worcestershire's CO_2 emissions were 3869Kt. Almost half (44%) of the CO_2 emissions from Worcestershire were produced by industry and commerce, 33% from the domestic sector and 23% from transport. These figures exclude emissions from motorways. Between 2005 and 2007, CO_2 emissions from the transport sector and domestic sector have declined. Industry and commerce accounts for the largest proportion of CO_2 emissions from Worcestershire, this percentage has increased between 2005 and 2007 from 39% to 44% Worcestershire emits 0.3 tonnes per capita less than the West Midlands average (7.3 tonnes per capita) and UK average (7.3 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 and heatwaves in the future leading to increased risk of flooding, subsidence, water shortages, outdoor fires. The Vale of Evesham is among the driest areas in 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 the 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). The 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 and health & safety problems could occur or be exacerbated, e.g. increased risk of pests and disease associated with waste collection & disposal; increased fire, subsidence and instability risk on landfill. If waste facilities are all centralised, this 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 without Implementation of WCS
Flooding	Currently, 3.5% of properties in Worcestershire are at risk of a 1 in 1000 year flood event and 1.8% at risk of a 1 in 100 year flood. Figures for 2010 indicate that the number of properties at risk of flooding in Worcestershire has reduced between 2009 and 2010. Properties at risk from 1 in 100 year flood (2010): 4653 Properties at risk from 1 in 1000 year flood (2010): 9039 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 in the number of properties at risk of flooding is that the River Teme through Worcestershire's map has changed over the last 12 months as has the Barbourne Brook. These changes in the watercourses will influence the number of properties at risk from fluvial 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. 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 July 20th 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.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Traffic and 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 A4440 Carrington Bridge each day. The most problematic congestion points in the county are: east-west river crossing movements in Worcester; A456 Kidderminster Ring Road; A38 Bromsgrove-M43 Junction 7; and A4184 Evesham Town Centre. Worcestershire's roads are far safer now than in the 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 rails services and poor reliability on local rails 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 without 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 West Midlands figure was 20,750 and the England figure was 238,895. 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. Worcestershire's GVA per resident head is below both England and the West Midlands, and evidence suggests the gap is widening Total number of people employed in recycling businesses in 2003 was 103 (sic Class 37)	Minimal impact.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
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, innovation 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 may not be attracted if there is no Waste Core Strategy in place.

Sustainability Issues	Characteristics	Likely Evolution of baseline without 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 (in GWh) for each local authority area have been produced by the Department for Energy and Climate Change. In Worcestershire, the figures for 2007 are as follows: Bromsgrove: 3,199.2 (2006 figure: 3,236.1) Malvern Hills: 2,368.5 (2006 figure: 2,378.1) Redditch: 2,046.9 (2006 figure: 2,089.6) Worcester: 1,908.1 (2006 figure: 1,979.3) Wychavon: 4,664.0 (2006 figure: 4,738.0) Wyre Forest: 2,067.5 (2006 figure: 2,095.3) Worcestershire: 16,254.2 (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 the county. Work is currently being undertaken to investigate the 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 and disposal may not be energy efficient. It is likely opportunities to use renewable energy to power waste collection, recycling and 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 without Implementation of WCS
Natural Resources	**Soil Quality** The main soils occurring in the county are: Wetland; Gleyed; Clay; Mixed; Brown; Sandy; Impoverished; Shallow; Limestone. The majority of these 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) neighbouring counties are known: Warwickshire: 105; Shropshire: 10; Gloucestershire: 2,883; Herefordshire: 8,961. **Air Quality** There are currently 9 AQMAs either in existence or in the process of being designated 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	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.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS

- 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.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Access to services	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. 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. 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 their housing developments.

Sustainability Issues	Characteristics	Likely Evolution of baseline without 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 designated Areas of Outstanding Natural Beauty (AONBs), due to their recognised high landscape interest. These are the Cotswolds (to the south of the county) and the Malvern Hills (to the west). 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.	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 without Implementation of WCS
Biodiversity, geodiversity, flora and fauna	There are approximately 114 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	Degradation of wider biodiversity interests arising from direct and indirect impacts of the waste management infrastructure.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS

management systems, are being undertaken to secure the conservation of the newt population.

In 2010, there were approximately 460 Special Wildlife Sites in Worcestershire (areas of nature conservation interest which are of county importance). There are approximately 90 Regionally Important Geological/Geomorphological Sites (RIGS) in Worcestershire (areas designated for their earth science and landscape interest). Wildlife sites and geological sites are known collectively as 'Local Sites'.

Local biodiversity sites under positive management regimes

Bromsgrove	21.5%
Malvern Hills	24.6%
Redditch	36.4%
Worcester City	77.8%
Wychavon	35.8%
Wyre Forest	31.1%
Worcestershire	29.3%

Local geodiversity sites under positive management regimes

Bromsgrove	80.0%
Malvern Hills	39.7%
Redditch	0.0%
Worcester City	0.0%
Wychavon	31.3%
Wyre Forest	37.5%
Worcestershire	40.2%

Worcestershire has 11 National Nature Reserves (NNRs); 25 Local Nature Reserves (LNRs); 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.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Health	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 % District / Good / Fairly good / Not Good Worcestershire 69.7% 22.3% 8.0% Redditch 70.2% 21.9% 8.0% Wychavon 70.4% 22.2% 7.4% Malvern Hills 69.1% 22.5% 8.4% City of Worcester 69.9% 22.3% 7.8% Bromsgrove 71.1% 21.2% 7.7% Wyre Forest 67.5% 23.7% 8.9% There are approximately 177 medical and health care establishments in Worcestershire, including GP surgeries, dentists and NHS Hospitals. In the United Kingdom in 1999 there were nearly 74,000 admissions to hospital due to asthma. In 2000, annual hospital admissions rates for asthma were 48 per 10,000 children aged under 5 years and 16 per 10,000 children aged 5 to 14 years.	People's mental health may decrease if the environment they live in suffers from fly tipping due to insufficient infrastructure in place for people to dispose of rubbish.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Provision of housing	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 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.	No impact.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Population (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. **Highest qualification held by people of working age (percentage)** **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%	Without the promotion of new high technology waste management solutions, skills in this sector are unlikely to be affected.

Sustainability Issues	Characteristics	Likely Evolution of baseline without 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.

	Bromsgrove	Malvern Hills	Redditch	Worcester	Wychavon	Wyre Forest
Conservation Areas*	1	1	0	2	0	0
Scheduled Monuments	6	7	0	1	14	0
Reg. Parks & Gardens	1	0	0	0	1	0
Buildings at Risk	2	2	0	3	4	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 without Implementation of WCS
Population (antisocial 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: 2009/10 Crime by Category (%) 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.

Sustainability Issues	Characteristics	Likely Evolution of baseline without Implementation of WCS
Material assets	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 Severna 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

Annex A

Appraisal of Vision & Policies

Key

Impacts	Significance	Probability of effects	Direct or indirect benefits	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 × irreversible (i.e. permanent) effect

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	?	+	+	The vision explicitly promotes the waste hierarchy, with minimisation as a priority, high levels of recycling, recovering resources from the remainder and only landfilling as a last resort. Re-use is now referred to at (iii), and the vision now includes targets for recycling, composting and recovery of C&I, C&D and MSW waste streams.	M	D	✓
Climate Change 2. Reduce causes of and adapt to the impact of climate change	?	?	+	Vision seeks to mitigate the effects of waste management on climate change. New facilities will mitigate and adapt to climate change. By promoting the waste hierarchy the vision will support the reduction of greenhouse gas emissions from waste management activities.	M	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	0	0	Whilst the vision does address some and use issues, flooding is not explicitly referred to.	M	D	✓
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns	?	?	+	The vision seeks to locate facilities close to the source of arisings and to minimise the transport of waste by road, with water and rail being used where possible.	M	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.	?	?	+	Recognises the importance and contribution of waste management to the economy, although this will not be major contribution to the knowledge-driven economy or skills base.	M	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.	?	?	+	Directly aims to promote community-wide responsibility for waste.	M	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.	?	?	+	Allows for flexibility to respond to technological changes and promotes greater resource efficiency in waste management. Encourages contributions towards a low-carbon economy.	M	D	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	?	?	+	Use of waste as a fuel is promoted, as well as greater resource efficiency in waste management. Calls for facilities to be resource –efficient.	M	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Natural Resources 9. Protect and enhance the quality of water, soil and air.	?	?	+	Aims to ensure no pollution from waste management activities or damage to natural assets water efficiency should be indirectly encouraged through the promotion of resource efficiency in waste management.	M	D / 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.	?	?	+	Vision specifically encourages facilities to be located to best serve Worcestershire's communities.	M	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	?	?	+	The vision seeks to avoid damage to natural asserts, which should include landscape assets.	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.	?	?	+	The vision seeks to avoid damage to natural asserts, which should include landscape assets.	M	D	✓
Health 13. Improve the health and well being of the population and reduce inequalities in health.	?	?	0	Aims to avoid adverse effects on human health and amenity.	M	D	✓

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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 to vision.	Ø	Ø	Ø
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant to vision.	Ø	Ø	Ø
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.	?	?	+	Aims to avoid damage to cultural assets, which should include the historic and built environment. Seeks to promote resource efficiency in waste management. Now addresses issues of design.	M	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant to vision.	Ø	Ø	Ø

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.	?	?	+	By promoting the waste hierarchy, the vision will help to support the use of secondary aggregates thereby reducing the need for virgin materials. None of the identified areas of search impact on recreational/amenity open space. Vision also calls for facilities to be resource efficient. The waste resource will be managed in accordance with the principles of sustainable development, which is taken to include the efficient used of land and buildings.	M /L	I	✓ / ×

Assessment of WCS1: Location of Waste Management 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 aims to facilitate the development of new sites to divert waste from landfill, thereby helping to promote the management of waste at higher levels of the hierarchy than currently.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impact of climate change	+	+	+	The policy will promote the reduction of greenhouse gas emissions through the facilitation of new developments to divert waste from landfill. Linking areas of search to resource demand/waste arisings should minimise transport distances, but the climate change implications from waste transport will depend on the type and size of facilities at specific locations, which remains unknown. Climate change adaptation will be a matter for specific sites, rather than broad locations.	H	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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	The areas of search have been identified talking account of Flood Zones 3 (primary constraints) and 2 (secondary constraints). This precautionary principle should ensure that flood risk within the areas of search is minimal. Of the areas of search that have been taken forward as potentially developable, there are 9 areas that are wholly or partly within Flood Zone 2 (*Warndon Business Park, Worcester; Diglis Industrial Estate,* Worcester; *Ball Mill Quarry Complex,* Grimley, Nr Worcester; *Park Farm Industrial Estate,* Redditch; *Piper Road Park Farm Industrial Estate,* Redditch; *Washford Industrial Estate, Redditch; Lakeside Industrial Estate*, Redditch; *Upton upon Severn Industrial Estate,* Upton upon Severn; *The Green Business Centre*, Stanford Bridge). The specific impact of sites on surface water flooding is covered elsewhere in the WCS. It is intended that the Submission WCS will be informed by the combined SFRAs of the 6 Worcestershire districts.	L	I	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns	?	?	?	The areas of search have been chosen in part for their accessibility, including by modes other than road transport. Of the 58 areas of search taken forward as poptentially developable, only 6 are considered to have good transport/connectivity with multi-modal potential. Of the areas potentially suitable for larger developments, only one has the potential to be served by multi-modal transport. This could have mean a significant increase in road-borne HGV traffic, depending on the exact nature and location of specific developments.	M	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				Linking areas of search to resource demand/waste arisings should minimise transport distances, but the need for waste transport will depend on the type and size of facilities at specific locations, which remains unknown. Sites not within the areas of search are required to consider locations which facilitate the transport of waste by means of transport other than road, but the assessment of connectivity has demonstrated that the opportunities for multi-modal conncetion are likely to be very limited.			
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.	Ø	Ø	Ø
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.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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.	Ø	Ø	Ø
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	+	+	+	The policy does not directly impact upon renewables or low carbon energy. Most of the areas of search are on industrial estates, which often provide strong opportunities for low-carbon and renewable energy through providing heat and power to adjacent users. Opportunities to provide CHP for homes may be limited due to conflicts with compatible land uses. The policy should foster energy efficiency through minimising transport movement and encouraging transport by alterative modes.	L	I	×
Natural Resources 9. Protect and enhance the quality of water, soil and air.	?	?	?	By requiring compliance with national, regional and local policy, adverse effects on air, water and soil should be avoided. The areas of search include locations in Kidderminster, Bromsgrove and Worcester, where additional traffic movements could exacerbate emissions in AQMAs.	M	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.	+	+	+	Local recyclable collection points (such as "bottle banks" in car parks) have not been included within the areas of search, but must be assessed against much of the same methodology, including an 'assessment of proximity'. This should ensure that facilities are located in appropriate locations for community access.	M	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The areas of search should ensure protection for nationally-designated landscapes (AONBs), as they form primary constraints. The settings of AONBs may also be a consideration in specific proposals. None of the identified areas of search are within an AONB. The impact of specific proposals on the broader landscape, including landscape character assessment, is considered elsewhere in the WCS.	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 areas of search have been informed by the preclusion of European nature conservation sites, SSSIs, and Ancient Semi-Natural Woodland. Local Nature Reserves and Special Wildlife Sites are included as secondary constraints, so there is some risk of negative impact on these sites. The WCS areas of search have been arrived at following consideration against all known constraints. Of the areas of search that have been taken forward as potentially developable, there are 4 areas of search within 10m of a Special Wildlife Site. These are: Great Western Business Park, Worcester (potentially large-	M	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				scale, indoor operations); Buckholt Business Centre, Worcester (potential for very small waste facility); Warndon Business Park, Worcester (unknown size facility); and Birchen Coppice Trading Estate, Kidderminster (potentially suitable for medium-large scale facilities). For each of these areas, there is a risk of negative impact upon the wildlife and/or habitats of the respective SWS, depending on the specific circumstances of each site. It is crucial that developments take full account of the need to protect and enhance biodiversity. It is also important to ensure that consideration is taken of non-designated biodiversity. Policies elsewhere in the WCS should provide for this wider protection.			
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Health impacts will depend on the specific nature and location of each development, which remains unknown at this stage. Other policies elsewhere in the WCS seek to ensure health implications are fully considered in specific developments. Of the areas of search that have been assessed as potentially suitable for development, only one area is subject to HSE Consultation (due to bottled gas sales), and this should ensure that the specific health & safety issues associated with the site are given full consideration (Sherriff Street Industrial Estate, Worcester).	0	0	0

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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.	Ø	Ø	Ø
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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 areas of search have been informed by the preclusion of designated heritage assets (Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Parks & Gardens and Battlefields). Whilst none of the areas of search are directly located within/upon these designations, heritage value will also extend to the setting of the asset, and this would need to be determined at the site-specific level. Many of the areas of search are within close proximity to heritage assets; of the areas of search that have been taken forward as potentially developable, there are 2 areas of search adjacent to Historic Battlefields (Diglis Industrial Estate, Worcester and Weir Lane Industrial Estate, Worcester). 2 areas of search are within close proximity of Scheduled Ancient Monuments: Hartlebury Trading Estate, Kidderminster (within 300m) and East Moons Moat, Redditch (within 100m). Hartlebury Trading estate may be a particular concern due to the potential scale of new development, as this is one of 5 areas identified as	L	I	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
				potentially suitable for larger facilities. Part of Weir Lane Industrial Estate, Worcester falls within a Conservation Area. Upton upon Severn Industrial Estate is within 100m of listed building. Alongside the designated assets considered in the constraints, there is also a wealth of non-designated assets within the Historic Environment Record that could be impacted upon negatively by waste development. Policies elsewhere in the WCS would need to be applied to ensure the non-designated resource (including any as-yet undiscovered archaeology) is afforded adequate protection.			
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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	?	?	?	The WCS areas of search have been arrived at following consideration certain identified constraints. Agricultural land has not been included as either a primary or secondary constraint, but most of the areas on existing industrial sites and would not require virgin farmland. Of the areas of search that have been taken forward as potentially developable, there are 9 areas located in the Green Belt: Hartlebury Trading Estate, Kidderminster; Waresley, nr. Hartlebury; Ikon Trading Estate, nr.	L	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
biodiversity interest.				Hartlebury; Blackstone Quarry, Stourport on Severn; Weights Farm Business Park, Redditch; Ravensbank Business Park, Redditch; Pinches/Chadwich Mill Farm, nr. Bromsgrove; Stanley Evans Quarry, nr. Bromsgrove; and Wildmoor Quarry, Bromsgrove. Any proposals for development would need to justify exceptional circumstances if they were to compromise the purposes of the green belt designation.			
Summary	By facilitating the development of new sites to divert waste from landfill, the policy will help to promote the management of waste at higher levels of the waste hierarchy than currently and reduce greenhouse gas emissions from waste management activities. The areas of search do not take into account agricultural land quality, but as the areas are predominantly located on existing industrial land, this is not considered to be an issue of significance. Within the identified areas of search, opportunities for multi-modal transport are very limited, which could result in continued unsustainable transportation of waste materials by road. The sustainability of waste transport is constrained by the practical difficulties encountered in linking areas of need with sustainable transport infrastructure. The exact extent of road transport will depend on the nature and location of specific developments, which remain unknown at this stage.						
Mitigation	No mitigation measures have been identified.						

Assessment of WCS2: Ensuring Sustainable Waste Management 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 explicitly promotes the waste hierarchy and also requires developments to maximise the use of recycled materials.	H	D	×
Climate Change 2. Reduce causes of and adapt to the impact of climate change	+	+	+	The policy has a strong emphasis on reduction of greenhouse gas emissions and adaptation to climate change, through design and construction of facilities, by requiring a minimisation of waste transport and by promoting the waste hierarchy.	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 specifically requires developments to not adversely contribute to flood risk and to remain safe and operational during flooding events. The policy calls for the sequential test to be applied.	H	D	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	+	The policy requires the minimisation of waste miles by road through considering locations that reduce the need for transport, or by using alternative modes of transport.	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.	+	+	+	The policy explicitly requires proposals to benefit the local and sub-regional economy and contribute tot he county's Economic Strategy.	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 developers to consult and involve the local community.	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.	+	+	+	The policy's requirement to implement the waste hierarchy and to employ on-site energy generation will provide support for environmental technologies.	M	D	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	+	+	+	The policy explicitly requires the efficient use of energy and the use of on-site renewable energy for large developments or redevelopments.	H	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Natural Resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy does not specifically address the quality of air, water and soil, but does require the protection and enhancement of locally important natural resources.	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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The policy requires that the protection and enhancement of locally important natural resources, including landscape, is part of the determining design features of waste development.	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 requires the protection and enhancement of locally important natural resources, including landscape and biodiversity, to be part of the determining design features of waste development. This could be strengthened through promoting the importance of linked networks of habitats as part of a green infrastructure approach.	M	D	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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.	Ø	Ø	Ø
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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 the efficient use of energy, water and resources to be part of the determining design features of new development, but does not recognise the need to conserve and enhance the historic environment or the need for good design quality (but note that these issues are covered in WCS4).	H	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø

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.	+	+	+	By promoting sustainable construction standards including the use of recycled materials, the policy will help to reduce demand for virgin mineral resources although the effect is not likely to be significant for the county overall.	H	D	×
Summary	Policy WCS2 provides comprehensive protection of the environment and should ensure that new waste-related development is in accordance with the waste hierarchy and takes account of sustainability principles.						
Mitigation	Whilst this policy does seek to ensure that landscape and biodiversity are taken into account, it could promote the importance of linked networks of habitats as part of a green infrastructure approach.						

Assessment of WCS3: Managing waste from 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 demonstrate how waste will be reduced, reused and recycled, during both construction and operation.	H	D	✓
Climate Change 2. Reduce causes of and adapt to the impact of climate change	+	+	+	By facilitating the implementation of the waste hierarchy through construction and 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.	Ø	Ø	Ø
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	+	+	+	Reduction of waste arisings will reduce the need for transport, and increased recycling of materials is likely to encourage more reuse of demolition materials onsite. Some materials will need to be transported off site for recycling, but the tonnages involved are likely to be smaller in comparison to rubble and soil/subsoil.	M	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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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 will support greater civic responsibility by making it easier for the occupants of developments to recycle their waste.	M	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.	+	+	+	The policy will not directly lead to benefits, but there is the potential for business opportunities through waste recovery and markets in recycled materials.	L	I	✓
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	0	0	0	The policy will not directly lead to benefits, but there is potential for energy recovery, including renewable energy, to be increased through greater separation and storage.	L	I	✓

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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 standard at waste management facilities. Increasing use of recycled materials should reduce the need for new resources and associated environmental impact.	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.	+	+	+	The policy requires developers to provide facilities for recycling and composting, which will help to improve access.	H	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	0	0	0	No direct impact, but increasing use of recycled materials should reduce the need for new resources and associated environmental impact, including upon landscape.	L	I	×
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	0	No direct impact, but increasing use of recycled materials should reduce the need for new resources and associated environmental impact, including upon biodiversity, geodiversity, flora and fauna.	L	I	×
Health 13. Improve the health and well being of the population and reduce inequalities in health.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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, and promote the adoption of sustainable construction methods in waste management.	H	D	×
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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, and promote the adoption of sustainable construction methods in waste management.	H	D	×
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø

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.	+	+	+	By waste minimisation, recycling and reuse in developments, the policy will help to increase the supply and use of secondary aggregates and help to conserve mineral resources.	H	D	×
Summary	This policy should help to ensure the waste hierarchy is applied to mall new development, and helps all people and communities to take responsibility for the waste they generate. This should help educate and inform on the wider benefits of sustainable resource management.						
Mitigation	No mitigation measures have been identified.						

Assessment of WCS4: Managing the impact of new waste management 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	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
Climate Change 2. Reduce causes of and adapt to the impact of climate change	0	0	0	The requirement for developments to be located within existing buildings or on previously-developed land will lead to efficiency in resource use, and may have some benefits in terms of climate change emissions mitigation when compared to new buildings on greenfield sites. However, the climate change impacts will depend on the nature and exact location of the development, and consequent need for transport movements, etc.	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.	+	+	+	The policy does not directly impact upon flooding, but does protect the natural flow of water systems.	L	I	✓
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns.	?	?	?	The policy requires good access to the strategic transport network and seeks to reduce congestion, but the exact amount of road traffic generated will depend on what type of facilities are developed in certain areas.	M	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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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.	Ø	Ø	Ø
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.	Ø	Ø	Ø
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Natural Resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy seeks to ensure new waste management development avoids unacceptable impacts on a range of receptors, including air and water quality. Requiring development to be located in existing building or previously-developed land in the first instance should help to preserve soil quality at greenfield sites.	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.	Ø	Ø	Ø
Landscape 11. Safeguard and strengthen landscape character and quality.	+	+	+	The policy requires developments to have no adverse impacts on landscape character. The purposes of the AONBs should be safeguarded as they are specifically included.	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 requires protection and enhancement of protected and BAP species and biodiversity and geodiversity sites. The policy does not apply to all biodiversity (i.e. non-designated and non-BAP), and does not make any linkage to the need for a network of sites.	H	D	✓

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Health 13. Improve the health and well being of the population and reduce inequalities in health.	+	+	+	The policy requires protection of local amenity, and seeks to ensure developments do not cause unacceptable noise, fumes, dust or light pollution. Health impacts are unlikely if facilities are operated in accordance with good practice standards.	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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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 seeks to protect designated historic sites, sites of local importance, and the character of the local environment.	H	D	✓

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.	Ø	Ø	Ø
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 directs new development to existing buildings or previously-developed land and seeks to maintain strong protection of the green belt.	H	D	×
Summary	Policy WCS4 provides for a robust level of environmental protection and should ensure that sensitive receptors are safeguarded from negative effects of waste development. The policy does not seek to avoid detrimental impact to high-quality agricultural land when assessed against the 'Material assets' SA objective. Whilst the importance of agricultural land is recognised in the supporting text, it does not appear to feature in any policy.						
Mitigation	Whilst this policy seeks protection and enhancement of biodiversity, it could promote the importance of linked networks of habitats as part of a green infrastructure approach. The value of all biodiversity, not just that designated at European/national/local level should be recognised.						

Assessment of WCS5: Energy from Waste

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 facilitates resource recovery and recycling, energy recovery and recovery of value from by-products. The energy hierarchy is largely supported, although it is not explicitly stated that EfW should only be considered once other options had been exhausted. EfW proposals could relate to AD (composting) or thermal treatment.	M	D	×
Climate Change 2. Reduce causes of and adapt to the impact of climate change	+	+	+	By maximising energy recovery and the recovery of value from by-products, the policy will help to reduce greenhouse gas emissions through reducing the need to consume virgin/fossil resources and by reducing emissions of landfill gas. Whilst he policy does require energy recovery to be maximised, it does not explicitly call for CHP to be considered where appropriate, which could be a missed opportunity.	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.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns	?	?	?	Whilst it is recognised that EfW developments can be at a range of scales, the largest of these would demand an economy of scale that could see significant waste transport movements, potentially including feedstock from adjoining authorities. This could lead to localised impacts on the transport network.	M	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.	0	0	0	Significant effects are unlikely.			
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.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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 promoting energy recovery, the policy will support the use of more resource-efficient technologies, although this is unlikely to give a significant stimulus to innovation.	H	I	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	+	+	+	The policy gives a strong emphasis on increasing energy efficiency by promoting recovery, and will also help to promote renewable generation from landfill gas and anaerobic digestion. The use of CHP wherever practicable should be promoted.	H	D	×
Natural Resources 9. Protect and enhance the quality of water, soil and air.	+	+	+	The policy requires for any residues to be satisfactorily managed and disposed. This should avoid increased pollution. Other policies elsewhere in the WCS, especially policy WCS4, should ensure the protection of water, soil and air.	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.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Landscape 11. Safeguard and strengthen landscape character and quality.	?	?	?	Whilst it is recognised that EfW developments can be at a range of scales, the largest of these would demand an economy of scale that could result in buildings of a height and mass to impact negatively on landscape character. However, this has to be balanced against possible alternative means of waste management, which could ultimately include further landfill – the landscape impact of which would also be major.	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.	Ø	Ø	Ø	Dependent on sensitivities at particular sites rather than overall approach to permitting energy recovery. Areas of search have not been allocated for specific technologies.	Ø	Ø	Ø
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	Policy does not include any provisions for the avoidance of health risks. Policies elsewhere in the WCS should ensure that health is not compromised in specific developments.			
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.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Note relevant.	Ø	Ø	Ø
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 sensitivities at particular sites rather than overall approach to permitting energy recovery. Areas of search have not been allocated for specific technologies.	Ø	Ø	Ø
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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	Ø	Ø	Ø	Dependent on sensitivities at particular sites rather than overall approach to permitting energy recovery. Areas of search have not been allocated for specific technologies.	Ø	Ø	Ø

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
biodiversity interest.							
Summary	Whilst the policy does require energy recovery to be maximised, it does not explicitly call for CHP to be considered where appropriate, which could be a missed opportunity.						
Mitigation	The need to ensure opportunities for CHP are considered in any Energy from Waste proposal should be included within the policy, rather than only appearing in the supporting text to within the policy itself.						

Assessment of WCS6: Landfill

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 indirectly supports the waste hierarchy through reducing the potential for 'disposal', but does little to promote the upper tiers of reduction, reuse and recycling/composting and recovery.	M	I	×
Climate Change 2. Reduce causes of and adapt to the impact of climate change	0	+	+	The policy requires energy generation from landfill gas where practicable. This will reduce emissions of methane, which is more environmentally damaging than the resultant CO_2 emissions.	M	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 does not explicitly consider surface/groundwater conditions or flood management which could be affected by landfill (including land raising), but does require locally important characteristics to be taken into account.	L	D	×
Traffic and transport 4. Reduce the need to travel and move towards more sustainable travel patterns	?	?	?	Restricting development of landfill sites has an uncertain effect on waste transport distances. It may encourage the management of waste closer to the source of arisings, but will also require multiple handling of waste materials. Allowing development of inert landfill capacity in the county may enable waste to be disposed of nearer than would be the case with alternatives outside Worcestershire, however the significance of impacts depends on the specific locations.	L	I	×

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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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.	Ø	Ø	Ø
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 restricting the development of landfill, the policy will support the development of more resource-efficient technologies.	H	D	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	0	+	+	The policy promotes landfill gas recovery and energy generation, which is a renewable energy technology. Furthermore, by restricting landfill, waste will be managed higher up the hierarchy, including through recovery.	H	D	✓

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Natural Resources 9. Protect and enhance the quality of water, soil and air.	0	+	+	The policy's requirement for restoration should ensure the protection of natural resources. Restricting landfill development will reduce the potential environmental impacts of ground and water contamination.	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.	Ø	Ø	Ø
Landscape 11. Safeguard and strengthen landscape character and quality.	?	?	?	Restricting development of landfill sites has an uncertain effect on landscape. Landfill sites will generally have significant visual impact due to their size and associated infrastructure. However, landfill restoration schemes can result in more appropriate landscape features. By contrast, the alternatives to landfill may include large-scale recycling and energy recovery plants which could impact negatively upon the 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.	0	+	+	The policy requires restoration of landfill sites which should ensure biodiversity, geodiversity, flora and fauna are protected and enhanced. The specific impacts resulting from landfill and alternatives to it will depend on the particular sites and developers would be required to comply with Worcestershire's Biodiversity and Geodiversity Action Plans, therefore significant effects should be unlikely.	H	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Health 13. Improve the health and well being of the population and reduce inequalities in health.	0	0	0	No specific health impacts. The development of facilities could have adverse impacts on residential amenity but this is dependent on site-specific sensitivities rather than the overall approach to provision of the required facilities.	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.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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	+	+	The policy specifies that restoration schemes must take into account locally important characteristics, but does not provide any details on what these include. Explicit protection of the historic environment is contained in Policy WCS4.	M	D	×

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.	Ø	Ø	Ø
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.	?	?	?	Restricting development of landfill sites has an uncertain effect on material assets. The specific impacts resulting from landfill and alternatives to it will depend on particular sites and locations.	L	I	×
Summary	Policy WCS6 performs less well in relation to the 'Waste' objective than the previous Emerging policy WCS9 on which it is based, as it does not refer to the waste hierarchy.						
Mitigation	WCS6 should explicitly refer to the waste hierarchy to clarify the need to ensure waste should be managed at a higher level of the waste hierarchy than disposal to landfill where possible. The policy's reference to 'locally important characteristics' is very broad and would benefit from greater specificity.						

Assessment of WCS7: Managing the impact of surrounding 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	+	+	+	The policy will support the management of waste at higher levels of the waste hierarchy by ensuring the availability and continued operation of sites to manage waste.	H	D	✓
Climate Change 2. Reduce causes of and adapt to the impact 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 unclear, but are unlikely to be significantly affected if alternative sites are required to be in an equally sustainable location to the existing waste site.	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 could potentially restrict economic development that could otherwise be located close to the waste facility, but the implications of this are unclear.	L	D	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
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.	Ø	Ø	Ø
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 could potentially restrict economic development that could otherwise be located close to the waste facility, but the implications of this are unclear.	L	D	×
Energy generation and use 8. Promote energy efficiency and energy generated from renewable and low carbon sources.	?	?	?	The policy could potentially restrict economic development that could otherwise be located close to the waste facility, but the implications of this are unclear.	L	D	×
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 if alternative sites are required to be in an equally sustainable location to the existing waste site.	L		

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.	0	0	0	Access to HWRCs should be maintained through safeguarding of sites or by requiring alternative sites to be in an equally sustainable location. However, improvements are unlikely to be achieved.	M	D	×
Landscape 11. Safeguard and strengthen landscape character and quality.	0	0	0	Unlikely to have significant implications for landscape quality, if alternative sites are required to be in an equally sustainable location to the existing waste site.	L		
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	0	Unlikely to have significant implications if alternative sites are required to be in an equally sustainable location to the existing waste site.	L		
Health 13. Improve the health and well being of the population and reduce inequalities in health.	+	+	+	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	Whilst the land area for housing may potentially be restricted through this policy, 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	×

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
Population (learning and skills) 15. Raise the skills level and qualifications of the workforce.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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	Unlikely to have significant implications if alternative sites are required to be in an equally sustainable location to the existing waste site.	L		
Population (antisocial behaviour, crime, litter and graffiti) 17. Reduce crime, fear of crime and antisocial behaviour.	Ø	Ø	Ø	Not relevant.	Ø	Ø	Ø
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	0	0	Unlikely to have significant implications if alternative sites are required to be in an equally sustainable location to the existing waste site.	L		

SA Objectives	Short term	Med term	Long term	Description	Prob	Dir/Ind	Rev?
biodiversity interest.							
Summary	The policy's restrictive nature could, in some circumstances, potentially limit opportunities for development. This has resulted in unclear outcome against the 'Growth with prosperity for all', 'Technology, innovation and inward investment', and 'Energy generation and use' SA objectives. WCS7 has now been rated positively against the 'Health' SA objective, whereas the previous SA rated the equivalent policy direction as having no impact. It is considered that the policy's provisions will help to ensure negative health effects from waste operations (e.g. noise, etc) will not cause harm to neighbouring occupiers.						
Mitigation	No mitigation identified.						