Worcestershire County Council

Minerals Local Plan

Sustainability Appraisal Scoping Report

October 2012

Contents

1. INTRODUCTION

1.1 Worcestershire County Council (WCC) is producing a new Minerals Local Plan (the "emerging plan") to replace the existing plan dating from 1997 (the "current plan") and relevant saved Structure Plan policies. The plan will set out how minerals development will be delivered in the county and will ensure that mineral resources are not sterilised by other development. The emerging plan will be a Development Plan Document which will be used to determine planning applications.

1.2 The emerging plan will be developed through co-operation with partner organisations and will seek to reflect and complement other plans, including the Sustainable Community Strategy and district-level Core Strategies/Local Plans. It will direct development to broad areas where extraction is preferred and will identify the restoration priorities in these areas. Criteria-based location policies will be developed to assess the suitability of proposals brought forward.

1.3 Sustainability Appraisal (SA) of the emerging plan is a statutory requirement under section 19(5) of the Planning and Compulsory Purchase Act 2004. The appraisal is designed to ensure that the social, environmental and economic impacts arising from the plan are fully considered. The SA process is designed to ensure that plans take sustainability considerations into account, and that where there is the potential for negative effects, these effects are either avoided, reduced, or mitigated. Undertaking the appraisal should allow for negative impacts to be minimised and for positive impacts to be maximised, resulting in a more sustainable plan.

1.4 This Scoping Report represents the first stage in the Sustainability Appraisal (SA) process. It explains the purpose of SA, sets out the requirements of the process, and details how the requirements will be satisfied. It also proposes a 'sustainability framework' against which the draft supplementary guidance can be assessed, in order to ensure the final guidance takes account of sustainability issues and maximises social, environmental and economic benefits. It should be noted that SA incorporates the requirements of European Directive 2001/42/EC (the SEA Directive). This is discussed further in subsequent sections of this report and at Appendix 1.

1.5 The government's sustainable development principles are at the forefront of SA: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; using sound science responsibly; and promoting good governance[1]. These principles have been used to guide a joint SA framework, developed over a number of years by the county and district councils in Worcestershire. This 'high level' framework, which can be adapted and modified to reflect the particular document to be assessed, will be used as a basis for the SA of the MLP.

1.6 As part of the SA, the requirements of European Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (known as Strategic Environmental Assessment or SEA) must also be addressed.

[1] http://archive.defra.gov.uk/sustainable/government/publications/uk-strategy/documents/SecFut_complete.pdf

1.7 The objective of the Strategic Environmental Assessment (SEA) Directive is:

> *"To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development."*
>
> **(Article 1, European Directive 2001/42/EC)**

These requirements fit within the wider economic and social considerations of an SA, and as such it is appropriate to combine both the SEA and SA within a single document, subject to the environmental effects being addressed with sufficient rigour. In line with Government guidance, therefore, the SEA requirements are being combined within the SA process. Subsequent reference to SA therefore also refers to SEA.

1.8 The SEA requirements are set out in the Environmental Assessment of Plans and Programmes Regulations, 2004. As part of a quality assurance process, a checklist is included in Appendix 1 which shows where the SEA requirements have been addressed within the SA process.

1.9 Sustainability Appraisal is just one of the tools to help inform the Minerals Local Plan. A range of other assessments will also be carried out to help ensure the Plan meets statutory and best-practice requirements.

1.10 Directive 92/43/EEC (the Habitats Directive) on the 'Conservation of Natural Habitats and of Wild Fauna and Flora' requires a Habitats Regulations Assessment (known as Appropriate Assessment or 'AA') to be undertaken, when necessary, in preparing a project or plan. The Government has provided guidance on the need for AA:

> *"The purpose of an AA is to assess the impacts of a land-use plan against the conservation objectives of a European Site and to ascertain whether it would adversely affect the integrity of that site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects".*
>
> **(ODPM Letter, March 2006)**

1.11 Appropriate Assessment should ensure that as part of the planning process, land use plans protect the integrity of European 'Natura 2000' sites, which are classified as: Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and sites on draft lists for protection. The DCLG guidance, 'Planning for the Protection of European Sites: Appropriate Assessment' (2006) makes clear that "*AA and SA are two separate processes each with their own legal requirements*" and that "*SA and AA outputs must be clearly distinguishable and reported on separately*".

1.12 A screening exercise will be undertaken to determine whether or not it is likely that the Minerals Local Plan, either alone or in combination with other plans or projects, will significantly affect a Natura 2000 site. This screening opinion will take into account any relevant comments arising as a result of the early stage MLP consultation, and is expected to be published early in 2013. The screening opinion

will be provided to the Government's advisor, Natural England, in order to assess whether or not a full Appropriate Assessment is required.

1.13 Strategic Flood Risk Assessment (SFRA) is used to assess the impact that a plan could have on flooding. Previous SA work undertaken in Worcestershire has demonstrated that flooding is an issue of particular relevance to the county. The review of plans, policies and programmes, together with the collation of baseline data (see Sections 4 and 5 below, and Appendices 2 and 3) has established that the Minerals Local Plan could impact on flooding. The nature of the MLP may make it difficult to assess flooding impacts, as the locations, scale and type of sites is unlikely to be known, but as part of MLP preparation, the Council will work with the Environment Agency to agree an approach to SFRA. Any findings resulting from this can be used to inform subsequent stages of the SA.

1.14 In exercising its functions, Worcestershire County Council is bound by the public sector equality duty found in Section 149 of the Equality Act 2010. This means that regard must be had to the need to eliminate discrimination, harassment, victimisation and any other prohibited conduct; to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and to foster good relations between persons who share a relevant protected characteristic and persons who do not share it. In this context, 'protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation. An Equality Impact Assessment screening exercise has been undertaken which identified potential equality impacts that could arise as a result of the Minerals Local Plan. However, the screening recognised that at this early stage it is impossible to provide definitive conclusions on impacts, while MLP policies have not yet been developed. Further consideration of equality impacts will be made as the MLP develops.

2. BACKGROUND

2.1 The National Planning Policy Framework states that "minerals are essential to support sustainable economic growth and our quality of life" (paragraph 142). The Worcestershire Minerals Local Plan (MLP) will take this forward by providing a framework for the minerals development in Worcestershire, and will eventually replace the adopted 2001 Worcestershire Structure Plan and the Minerals Local Plan that has been in place since 1997.

2.2 Upon adoption, the MLP will be part of the formal Development Plan, and will provide a strategy for minerals development up to 2030 and beyond.

2.3 A wide range of legislation, policy and guidance is being used to inform the development of the MLP. In addition to many of the documents listed in subsequent sections of this Scoping Report, the MLP will seek to deliver the three Worcestershire County Council Corporate Plan objectives of 'Open for business' 'Environment' and 'Health and Well-being'.

2.4 The planning system needs to make sure that there are enough minerals for our current needs and that sufficient minerals are safeguarded for use in the future. It is the role of the MLP to set out guidelines for the quantity of minerals which should come from Worcestershire over the next 30 years. It is also the role of the MLP to balance the need for minerals and the benefits sites can bring against any impacts they might have. To do this, the MLP will seek to make the most of the positives and minimise any negatives from minerals sites by including policies to make sure that development happens in the right places, and by getting the right policies in place to control impacts.

2.5 Once completed, the MLP will be used by the County Council to make decisions about planning applications for mineral extraction and processing in the county. It is anticipated that the following minerals requirements will be needed and planned for:

Anticipated minerals requirements to 2030

Aggregates	
Sand and gravel	18-35 million tonnes
Hard (crushed) rock	4-7 million tonnes
Secondary and recycled aggregates	6-9 million tonnes
Industrial Minerals	
Silica sand	Likely to be sufficient permissions already
Clay	Likely to be sufficient permissions already
Salt	Resources unlikely to be viable
Energy Minerals	
Coal	Resources unlikely to be viable

2.6 The MLP will include a strategy to guide where minerals development should happen. This will be based on working viable resources in areas where there is the greatest ability to achieve restoration priorities. The MLP will not identify specific sites. It will include:

- a key diagram, directing development to broad areas where extraction is preferred, and identifying the restoration priorities in these areas.
- criteria-based location policies to assess the suitability of the site when proposals are brought forward.
- minerals safeguarding areas identifying areas where mineral resources should not be sterilised by other development.

2.7 The MLP will encourage use of recycled minerals and include policies to "safeguard" mineral resources so they can remain available when needed in years to come.

2.8 The MLP will seek to address the environment (including habitats, species, landscape, archaeology, historic environment, surface and ground water); transport (including site access and methods for transporting materials including road, rail, water, conveyors and pipelines); and the impacts on those nearby (including noise, dust, vibrations, visual impacts).

2.9 Further details on how the MLP is being developed, and the information that has been gathered so far to aid its preparation, is available in the background documents "Local Aggregates Assessment for Worcestershire" and "Ensuring Adequate and Steady Supply of Industrial and Energy Minerals". These reports are available online at www.worcestershire.gov.uk/mineralsbackground

3. METHODOLOGY

3.1 A variety of guidance has been used to inform the preparation of this Scoping Report, including the *Practical Guide to Strategic Environment Assessment* and DCLG's online *Plan-Making Manual*[2]. The guidance provides a structure for the SA and divides the process into distinct elements, which are then further broken down into specific tasks (see Figure 1, below). This Scoping Report falls under 'Stage A' of the process: 'Setting the context and objectives, establishing the baseline and deciding on the scope'. This Scoping Report provides the scope and level of detail against which the Minerals Local Plan will be appraised and reported on in the subsequent Sustainability Appraisal Report.

3.2 The SA process is specifically scheduled to co-ordinate with the production of the emerging plan. This is to ensure that the SA plays a valid role, and to ensure there are opportunities for its findings to influence the plan. Any recommendations identified in the SA will, where possible, need to be reflected in the plan to ensure that it contributes to the aims of sustainable development.

3.3 The principal means of assessing the sustainability of the Minerals Local Plan will be to judge its performance against an SA 'framework'. This framework will include a series of SA objectives, based on extensive desk-based literature and evidence review. The gathering of information via baseline data and a review of plans, policies and programmes has helped to establish the sustainability issues of concern for Worcestershire, with specific relevance to the Minerals Local Plan. In addition it has helped to refine the objectives, indicators and decision-making criteria against which the performance of the plan towards the achievement of sustainable development can be assessed. The proposed framework, broken down by issue, is set out in Appendix 4.

3.4 Sustainability requires a balance of social, economic and environmental indicators. In practice, it will not always be possible to achieve optimal outcomes against each of these 'legs' for any given plan or proposal, and there will be occasions where conflicts occur. As an example, development of a new minerals site may require a minor road modification that could potentially have a negative impact on noise emissions, but impacts on GDP and accessibility may be positive. This is considered further in Section 6.

3.5 Although the process has a series of separate stages, the actual undertaking of SA leads to continuous review and refinement as further baseline information is obtained and as more sustainable issues and options are identified.

3.6 It is necessary for this Scoping Report to be consulted upon for a five-week period. However, to integrate with the Minerals Local Plan preparation process, consultation will run for just over 12 weeks, from Tuesday 9th October 2012 to Friday 11th January 2013. Following this, any necessary revisions to the SA framework will be made. The final framework will then be used to appraise the emerging plan. A final SA Report will be produced to show how the SA process

[2] This has replaced the government's 2005 guidance *Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents*.

influenced the plan, and this final report will be published alongside the draft plan. The stages of the SA process are indicated in below.

The SA Process

(nb: this SA Scoping Report covers Stage A of the process)

STAGE A: SETTING THE CONTEXT AND OBJECTIVES, ESTABLISHING THE BASELINE AND DECIDING ON THE SCOPE
A1: Identifying other relevant policies, plans and programmes, and sustainable development objectives
A2: Collecting baseline information
A3: Identifying sustainability issues and problems
A4: Developing the SA Framework
A5: Consulting on the scope of the SA
STAGE B: DEVELOPING AND REFINING OPTIONS AND ASSESSING EFFECTS
B1: Testing the plan objectives against the SA framework
B2: Developing the plan
B3: Predicting the effects of the draft plan
B4: Evaluating the effects of the draft plan
B5: Considering ways of mitigating adverse effects and maximising beneficial effects
B6: Proposing measures to monitor the significant effects of implementing the plan
STAGE C: PREPARING THE SUSTAINABILITY APPRAISAL REPORT
C1: Preparing SA Report
STAGE D: CONSULTING ON DRAFT MINERALS LOCAL PLAN AND SUSTAINABILITY APPRAISAL REPORT
D1: Public participation on the SA Report and the draft Minerals Local Plan
D2: Assessing significant changes
STAGE E: MONITORING THE SIGNIFICANT EFFECTS OF IMPLEMENTING THE MINERALS LOCAL PLAN
E1: Finalising aims and methods for monitoring
E2: Responding to adverse effects

3.7 Although the Sustainability Appraisal Report will not formally form part of the emerging plan, it is a statutory requirement of plan production. The process of undertaking sustainability appraisal, working in parallel with plan preparation, will provide a commentary on the plan's potential social, environmental and economic effects. The final SA Report will describe the process undertaken, including potential alternatives; give reasons for any decisions made; and state the predicted implications (positive and negative) of the preferred approach advanced within the plan.

3.8 The effects of the plan upon each of the sustainability objectives will be considered in terms of short, medium and long-term impacts, as well as their secondary, cumulative and synergistic[3] effects.

3.9 The assessment of effects of the emerging plan will be undertaken in an open and transparent manner. Where appropriate, a collaborative approach will be taken, whereby stakeholders with specific expertise will help inform discussions. This may take the form of workshops and informal working groups, as well as more formalised council meetings.

3.10 The use of peer review will be considered where this could add value to the process. This could take the form of partnership working with other county and district councils (and potentially wider groups of stakeholders) through a reciprocal process of offering informal advice and challenging decision-making at draft stages. This could help improve the robustness of the plan and provide useful alternative perspectives.

[3] 'Synergistic effects' refers to the interaction or cooperation of two or more outcomes to produce a new or enhanced effect compared to their separate effects

4. RELEVANT POLICIES, PLANS, PROGRAMMES AND SUSTAINABILITY OBJECTIVES

4.1 As part of the evidence gathering for the SA all relevant policies, plans and programmes (PPP) were identified to help establish the key sustainability issues for Worcestershire that could affect/be affected by the Minerals Local Plan.

4.2 Policies, plans and programmes have been considered at a European, national, regional and local level, although it is assumed that national and European PPPs have been incorporated into the content and strategic direction of regional and locally-based documents. Only European and national documents of most direct relevance to the emerging plan and to sustainability have been reviewed.

4.3 Since the coalition government came to power in May 2010, the context in which development plan documents are prepared has changed significantly:

- Under the provisions of the Localism Act 2011, the regional tier of policy-making is being removed. This means that the policies and guidance provided by the West Midlands Regional Spatial Strategy (RSS) will no longer be in place. The exact date when the RSS will be formally revoked is unknown, but until such time as this is confirmed, it remains part of the development plan and can be taken into account in plan-making. Similarly, the wealth of evidence and background reports informing the RSS and its revision will remain available and can be used to inform Local Plan preparation. Of particular importance in minerals planning is the regional apportionment of aggregates provisions which is broken down into a sub-regional apportionment in the RSS. The Regional Aggregate Working Parties had a role in advising on sub-regional apportionment and provisions in the National Planning Policy Framework (see below) encourage joint working to continue, although the mechanisms for this are unclear at present.

- The National Planning Policy Framework (NPPF) was published in March 2012, replacing almost all Planning Policy Guidance, Planning Policy Statements[4], Minerals Planning Guidance[5] and Minerals Policy Statements. The NPPF now constitutes the government's planning policies and sets out how these should be used in determining planning applications. National policy on minerals planning in the NPPF amounts to eight relatively short sections that set out the key principles with which the Minerals Local Plan must accord. In addition, the NPPF is supported by Technical Guidance which includes 10 pages on minerals.

[4] *Planning Policy Statement 10: Planning for Sustainable Waste Management* remains extant until publication of the National Waste Management Plan.

[5] Except for the following, which remain extant: *Minerals Planning Guidance 4: Revocation, Modification, Discontinuance, Prohibition and Suspension Orders*; *Minerals Planning Guidance 8: Planning and Compensation Act 1991 - Interim Development Order Permissions (IDOS): Statutory Provisions and Procedures*; *Minerals Planning Guidance 9: Planning and Compensation Act 1991 - Interim Development Order Permissions (IDOS): Conditions*; and *Minerals Planning Guidance 14: Environment Act 1995 - Review of Mineral Planning Permissions* and the *National and regional guidelines for aggregates provision in England: 2005-2020*

4.4 In anticipating likely documents to include in the review of plans, policies and programmes, and the range of baseline data to consider, this scoping report has sought to take on board comments received in relation to previous county-level SA consultations. Specific guidance has also been consulted, including English Heritage's 2010 document *Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment*. It should be noted that whilst the MLP can provide policies relating to energy minerals, the National Policy Statements on energy govern only the infrastructure itself (i.e. power generating stations and transmission) and so are not considered of sufficient relevance to form part of the PPP review.

4.5 The review of PPPs is a dynamic process and as new PPPs emerge or are revised, they will be reviewed and any conflicts or inconsistencies will be recorded. Policy context continually shifts as new plans are adopted and/or take the place of former plans. The full list of reviewed policies, plans and programmes, with hyperlinks to each document, can be found in Appendix 2.

4.6 The purpose of the review has not been to highlight every detail from every document selected, but to identify the key implications for the SA. For each document reviewed the table sets out the name of the document, its date of publication/period of validity, key objectives/targets, and potential implications for the Minerals Local Plan.

4.7 The key points emerging from the review that the Minerals Local Plan may be able to positively influence (either directly or indirectly) are outlined below.

SOCIAL

- Existing sports and recreation should be protected and enhanced wherever possible by guiding development away from sites that would impact on assets. Opportunities to deliver sport and recreation through site restoration should be explored.

- There is an important educational opportunity in opening up and presenting geodiversity features and consideration should be given to the creation of permanent geodiversity exposures.

- Minerals workings can be a focus for involving local people in the historic environment.

- Improving health and wellbeing is a key priority for Worcestershire.

- Planning should be guided by sustainable development principles. It should foster an open and inclusive approach with opportunities for public participation and meaningful engagement. It should seek to ensure that economic, social and environmental impacts are balanced wherever possible.

- Public Rights of Way should be taken into account when considering the location of new development.

ENVIRONMENTAL

- There is a need to conserve and enhance biodiversity, and avoid any significant impacts on Natura 2000 sites. In determining site allocations, account should be taken of the particular sensitivities of each Natura 2000 site that could potentially be affected, and advice from Natural England should be sought.

- Strict requirements should be in place to prevent water pollution from extractive industries and should seek to contribute to meeting Water Framework Objective targets.

- Air quality should be protected through policies to limit dust and emissions from development activity and transportation.

- Minerals working and processing is a 'less vulnerable' land use, and therefore development can be appropriate in Flood Zones 1, 2 and 3a. Sand and gravel working is classed as 'water compatible', and can be appropriately located in any of the above Flood Zones as well as in the functional flood plain (Flood Zone 3b). Policies should ensure that minerals operations do not increase the risk of flooding elsewhere. Plan preparation should be informed by the findings of an SFRA.

- Waste should be minimised. The waste hierarchy should be promoted and site waste management plans should be required where appropriate. The aims of the Waste Framework Directive, including the 'polluter pays principle' and 'extended producer responsibility' should guide the approach to waste.

- Noise from developments, including transport, should be minimised.

- Landscape should be protected from harmful development, whilst recognising that some operations will be temporary and could result in landscape benefits in the longer term. This will be especially crucial in designated landscapes (the Cotswolds and Malvern Hills Areas of Outstanding Natural Beauty). Development in protected areas should be guided by the overarching aim of conserving and enhancing the natural beauty of these areas. Full consideration should be given to the Worcestershire Landscape Character Assessment Supplementary Guidance.

- Ancient Monuments, Listed Buildings, Conservation Areas, and the wider historic environment should be conserved and enhanced. This includes avoiding adverse impacts through location and design, and providing the materials necessary to ensure continued maintenance, repair and extension of historic buildings to preserve character and the local vernacular. Policies should guide development away from the most sensitive locations based on the significance of architectural heritage. Where loss of significance is unavoidable, policies should require assessment and recording where appropriate.

- All public bodies have a duty to have regard to biodiversity conservation when carrying out their functions (the ‘biodiversity duty’). The conservation of

biodiversity should become properly embedded in all relevant policies and decisions. Consideration should be given to how biodiversity enhancement can be used to bring about more sustainable development, through integration with other policy objectives and other land uses, for example housing and economic development, health, education and social inclusion.

- Carbon emissions should be minimised through directing development to sustainable locations where possible and encouraging lower-carbon practices in construction of plant and buildings, operations and transport. Planning should help the transition towards a low-carbon economy in the UK and help to meet the national legally binding target of at least an 80% cut in greenhouse gas emissions by 2050 and a reduction in emissions of at least 34% by 2020 (both against 1990 baseline). Across Worcestershire, policies should be informed by the local target to reduce climate-change-causing gas emissions by a minimum of 10% from 2005 levels by 2011 and 20% by 2020 and by the need to prepare land uses for adaptation to consequences of climate change.

- Opportunities to contribute to a linked green infrastructure network should be maximised.

- The value of minerals sites to nature and society should be recognised. This applies especially to restoration, but could also include exploring opportunities for education in the operational phases. Opportunities relate to biodiversity and geodiversity, as well as to sport and recreation.

- The value of trees should be recognised and policies should seek to avoid any loss where practicable through location and design policies. The potential contribution of trees in restoration schemes should be explored and maximised.

- The continued merits of specific restrictive policy on extraction of granite in the Abberley and Malvern Hills area should be considered.

- The most significant pressures which need to be dealt with in the river basin district are: abstraction and other artificial flow regulation; non-native species; nitrates; pesticides; phosphates; physical modification; sediment; and urban and transport pollution

ECONOMIC

- Minerals planning permissions must be reviewed every 15 years where necessary.

- Sufficient availability of sites for minerals extraction must be made to allow for the local and wider needs of energy and construction. Substitute and secondary aggregates should be used ahead of new resources where possible.

- Minerals areas should be protected from inappropriate development through safeguarding reserves and the infrastructure to support extraction and transportation.

- Birmingham International Airport and any other relevant aviation interests should be consulted when developing restoration policies, in recognition of the increased potential of bird strikes.

- Providing a framework for the economic development of minerals will allow the wider economy, especially construction, to prosper. A shortage of locally-produced minerals will require house-builders, road-builders, etc. to import minerals further, which could impact on viability and deliverability of new development.

- Restoration of sites can provide opportunities for economic growth, especially in leisure and tourism.

- Consideration should be given to setting a framework for the delivery of energy minerals, and for the extraction of shale gas (which may not be economically available in Worcestershire).

4.8 The above points, coupled with consideration of baseline data (discussed in the next chapter of this report), enables the initial identification of the key sustainability issues that will need to be addressed in the sustainability appraisal.

5. COLLECTING BASELINE INFORMATION

5.1 Baseline data plays a fundamental role throughout the stages of the appraisal, providing the evidence base from which to predict and monitor effects of the plan. In particular, the SEA Directive requires that *"the relevant aspects of the current state of the environment and likely evolution thereof without implementation of the plan"* be considered.

5.2 The SEA Directive also requires a summary of *"any existing environmental problems"*, especially those relating to European sites. The baseline data in Appendix 3 highlights those areas where Worcestershire is performing poorly. These issues can be summarised as:

- There are localised areas where SSSIs are in poor condition, especially in Bromsgrove district, where a majority of sites remain classified as 'unfavourable no change'.
- Too few local wildlife and geological sites are under appropriate management, which generally means their condition is poor.
- Recorded populations of breeding birds are falling, particularly in the case of the bullfinch. This situation reflects the pattern nationally, and is largely occurring as a result of agricultural practices.
- Water bodies are not of good quality, and their condition is significantly worse than the overall picture in the region and in the country as a whole.
- There has been a decline in minerals production in recent years due to the wider economy and slow-down in construction.
- Following year-on-year falls since 2005, CO_2 emissions increased in 2010. Per capita CO_2 emissions remain above both the regional and national figures.
- Per capita road transport emissions are especially high in more rural areas of the county (in Malvern Hills, Bromsgrove and Wychavon districts, these emissions are over twice the national average).
- Worcestershire has the second largest percentage land area at risk of flooding in the West Midlands (although it should be noted that, in terms of numbers of households at risk, Worcestershire is performing better than the national average).
- The number of Air Quality Management Areas in Worcestershire is increasing.

5.3 Alongside identification of environmental problems required by the SEA Directive, a series of additional issues (both good and bad) have emerged that fall within not only the environmental, but also the social and economic arenas. These issues can be summarised as follows:

- Worcestershire's landscape character is high quality.

- Worcestershire's two Special Areas of Conservation are in favourable condition, but are sensitive to various impacts, including water quality and levels, recreational pressure/disturbance and diffuse air pollution.

- The majority of Sites of Special Scientific Interest in the county are now in 'favourable' or 'unfavourable recovering' condition.

- The majority of Worcestershire's undesignated heritage is in good or intermediate condition. Indications suggest that Worcestershire is broadly equivalent to its neighbours in terms of risk and loss to undesignated heritage.

- Worcestershire has a relatively large resource of high-quality agricultural land, but there is a risk that an increasing national focus on economic growth could increase the chance of high quality agricultural land being lost to development.

- There has been a major reduction in the amount of household waste produced over the last six years.

- Household income in Worcestershire remains higher than the regional or national averages, but has seen a decline in the last two years as a result of the recession.

- The working age employment rate in Worcestershire remains better than the regional and national figures but has seen a fall in recent years due to the recession.

- GVA per resident head is significantly lower in Worcestershire than it is regionally or nationally, and it has seen a fall in recent years. However, GVA from waste management and minerals actually increased between 2007 and 2008.

- Whilst there is significant variation between districts, as a county Worcestershire is not very deprived relative to most of England. Of its surrounding counties, only Gloucestershire is less deprived overall.

- Latest population projections indicate that the number of households in Worcestershire is expected to increase by 38,000 between 2013 and 2033.

- The proportion of young people achieving level 2 or level 3 qualifications has seen a steady increase since 2005, and Worcestershire exceeds regional and national performance. This pattern is maintained when looking at progression to higher education.

- Although an overall reduction in crime has been seen over the period 2007/08 – 2011/12, there have been marked variations year-on-year in most districts.

5.4 As new baseline data becomes available, it will continue to be identified and collected. The existing range of resources includes government websites, the census, the Worcestershire Partnership's State of the Environment Report and Worcestershire County Council's Economic Assessment.

5.5 The ensuing process of data collection focuses on producing datasets that can provide the relevant evidence base for those SA objectives upon which the

emerging plan could have a significant effect (although recognising in some cases this may be remote). The table in Appendix 3 presents the headline data for each issue alongside potential opportunities for how the plan could positively influence the issue and the likely evolution of the baseline without implementation of the plan.

6. DEVELOPING THE SUSTAINABILITY APPRAISAL FRAMEWORK

6.1 The SEA requires that the following issues be addressed:

Biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; and the inter-relationship between the factors.

6.2 In addition, the review of plans, policies and programmes provided a list of further issues to be considered, particularly in relation to economic and social matters.

6.3 The Sustainability Appraisal Framework is the core component of the Sustainability Appraisal process. Through the development of a set of objectives and decision-making criteria, the framework provides the means through which sustainability effects of the emerging plan can be described, analysed and compared. The SA objectives are critical in assessing the potential sustainability effects of the plan and in prompting consideration of alternative approaches.

6.4 Sustainability appraisal guidance advocates a balance of environmental, social and economic objectives. Within this context the selection of objectives has derived from a combination of the following considerations, all of which are based on the best information available at the time:

- Review of the issues of relevance to Worcestershire as described within identified plans, policies and programmes;
- Review of the sustainability characteristics and issues; and
- Analysis of baseline data.

6.5 It will be important to bear in mind that due to the breadth of issues included within the SA, the emerging plan will only have limited scope to influence some of the objectives. There remains a crucial role for other plans, programmes and policies to secure sustainable benefits for Worcestershire.

6.6 The draft objectives for each of the sustainability issues are set out below. These are not in any order of importance.

Issue 1: Landscape
Objective: Safeguard and strengthen landscape character and quality.

Issue 2: Biodiversity, Geodiversity, Flora and Fauna
Objective: To conserve and enhance Worcestershire's biodiversity and geodiversity.

Issue 3: Cultural heritage, architecture and archaeology
Objective: Conserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.

Issue 4: Material assets
Objective: 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, whilst safeguarding open space/green infrastructure and biodiversity interests.

Issue 5: Natural Resources
Objective: Protect and enhance water, soil and air quality.

Issue 6: Climate Change
Objective: Reduce causes of and adapt to the impacts of climate change.

Issue 7: Energy
Objective: Promoting energy efficiency and energy generated from renewable energy and low-carbon sources.

Issue 8: Flooding
Objective: 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.

Issue 9: Access to Services
Objective: To improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.

Issue 10: Health
Objective: To improve the health and well-being of the population and reduce inequalities in health.

Issue 11: Waste
Objective: To manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.

Issue 12: Traffic and Transport
Objective: To reduce the need to travel and move towards more sustainable travel patterns.

Issue 13: Growth with prosperity for all
Objective: Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.

Issue 14: Provision of housing
Objective: Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.

Issue 15: Participation by all
Objective: To provide opportunities for communities to participate in and contribute to decisions that affect their neighbourhood and quality of life, encouraging pride and social responsibility in the local community.

Issue 16: Technology, innovation and inward investment
Objective: Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.

Issue 17: Population (skills and education)
Objective: To raise the skills levels and qualifications of the workforce.

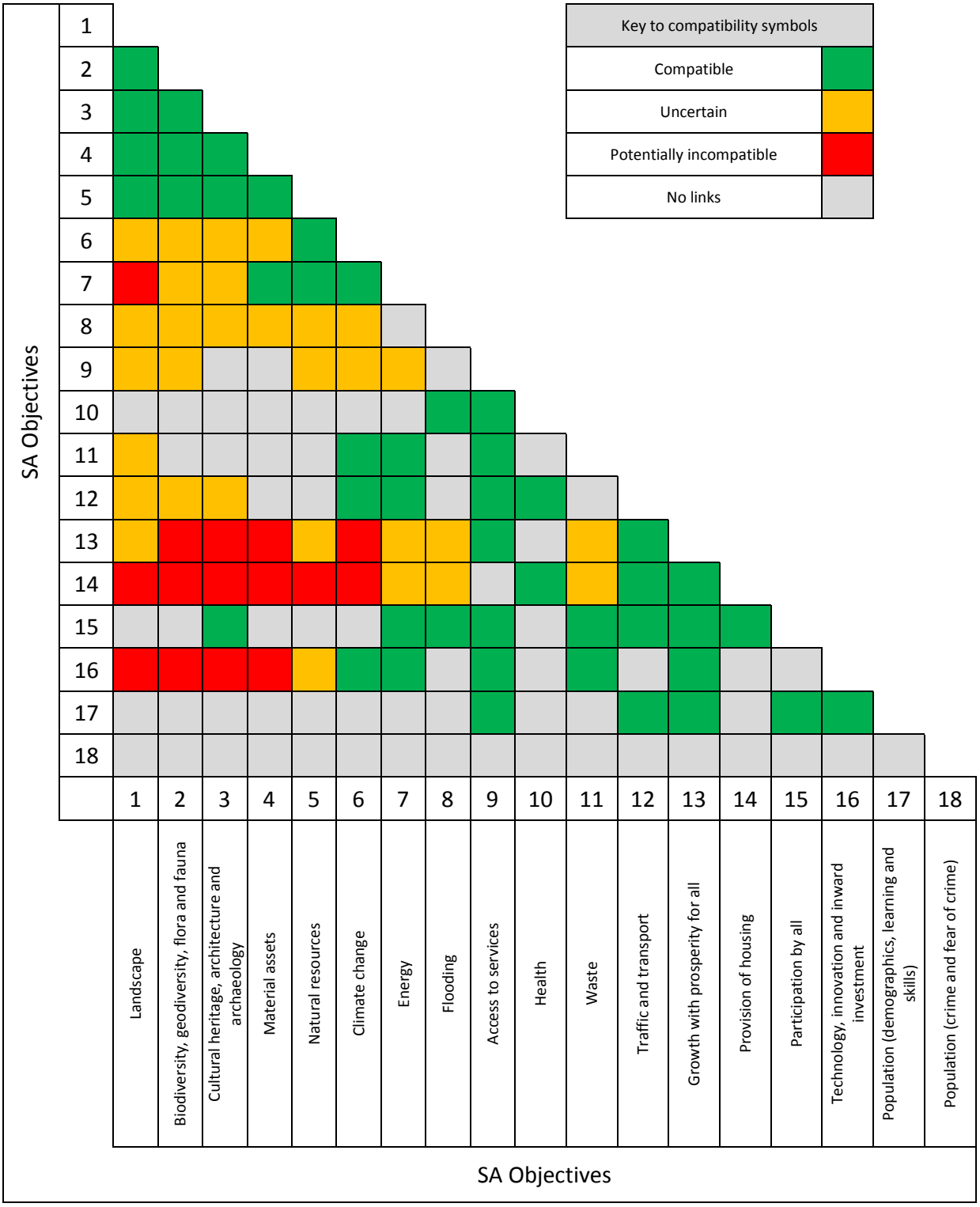
Issue 18: Population (crime & fear of crime)
Objective: Reduce crime, fear of crime and antisocial behaviour.

6.7 Due to the breadth of issues covered by the draft objectives, it is inevitable that some will be in conflict with each other, as mentioned in section 3.4. In order to identify how far every objective accords with every other objective, a compatibility matrix has been produced (see page 20, below). The matrix takes a series of very broad assumptions to establish the likely level of conflict, in principle, between each objective. The matrix suggests that there is no conflict between most of the objectives, but that there are certain areas where difficulties could arise.

6.8 In assessing potential conflicts, it is important to recognise that individual impacts will vary enormously depending on the development in question. Broadly speaking, a desire to see economic growth could potentially undermine the need to protect scarce resources and to conserve the natural and historic environment. However, with a greater focus on sustainability principles in plan-making and construction/operation, this need not be the case. Green infrastructure principles, in particular, can help ensure that mutual benefits arise from new development. Some types of development will have impacts that are, to an extent, subjective. One such example is wind turbines; whilst this would lead to a positive result in terms of the climate change and energy objectives, some would consider that such development would seriously comprise landscape character.

6.9 In practice, planning exists to balance competing interests, and the MLP will need to make provision for as sustainable approach as possible in guiding the location and nature of development. The SA framework will not be able to resolve competing demands, but it will be able to help influence policy through demonstrating the potential impacts of adopting particular strategies and approaches.

Matrix assessing compatibility between SA objectives



7. CONSULTING ON THE SCOPE OF THE SUSTAINABILITY APPRAISAL

7.1 Consultation on this Scoping Report is important as it ensures that the SA will be comprehensive and robust in supporting the emerging plan. Whilst the standard consultation period is 5 weeks, and will be targeted specifically at the consultation bodies required by the SEA Directive (Natural England, English Heritage, and the Environment Agency), this Scoping Report is also being made available for the full 12-week period of the early consultation on the MLP.

7.2 Comments are being sought on how the evidence-gathering and proposed SA framework could be improved or clarified. The following questions may assist consultees in making responses:

Consultation Questions

Q1. Have there been any significant omissions of plans, programmes or policies relevant to the scoping of this report?

Q2. Do you agree with the selection of key sustainability issues for Worcestershire?

Q3. Do you agree that the baseline data that have been, or will be collected, are relevant and of sufficient detail to support the appraisal?

Q4. Are there any key baseline data available that are or could be used in support of the issues that have not been identified? Are you aware of any appropriate targets that the report should cite?

Q5. Do the sustainability objectives provide a sound framework against which to assess the sustainability credentials of the emerging Minerals Local Plan?

Q6. Do you agree with the decision-making criteria?

7.3 The consultation period runs from 09 October 2012 to 11 January 2013. All responses must be made in writing, either by email, to minerals@worcestershire.gov.uk (please make clear in the title that your comments apply to the SA), or by post to the following address:

Minerals and Waste Policy
BEC G3
Worcestershire County Council
County Hall
Spetchley Road
Worcester
WR5 2NP

8. NEXT STEPS

8.1 The remaining SA stages are outlined below, and reflect the government guidance reproduced in Section 3.

Stage B – Developing, appraising and refining options;

Stage C – Detailed appraisal of the effects of the plan and documentation of the process in the SA report;

Stage D – Consulting on SA Report for the emerging Minerals Local Plan;

Stage E – Monitoring and Implementation of the Plan.

8.2 Following consultation on this Scoping Report, the SA framework will be revised where necessary and finalised. The framework will then be used to help shape the emerging plan through testing alternatives and recommending any identified changes to enhance sustainability.

8.3 The Draft Minerals Local Plan will be published for consultation alongside an SA report showing how far the plan satisfies the SA objectives.

8.4 Upon adoption, a Sustainability Appraisal statement will be published summarising how the SA had influenced the Minerals Local Plan.

8.5 The Minerals Local Plan and the SA will be monitored through the indicators agreed during the development process, and will be reported on through existing methods, including Annual Monitoring Reports as appropriate.

APPENDIX 1

REQUIREMENTS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT DIRECTIVE AND WHERE THEY HAVE BEEN MET

Requirements of the Strategic Environmental Assessment Directive and where they have been met

SEA requirement for Stage A	Location in SA Scoping Report
An outline of the contents of the emerging plan, the main objectives of the plan and the relationship with other plans and programmes.	Section 1 Section 2 Section 4 Appendix 2
The relevant aspects of the state of the environment are recorded and the likely evolution of these aspects without the implementation of the emerging plan.	Section 6 Appendix 3
The environmental characteristics of areas likely to be significantly affected.	Section 6 Appendix 3
Any existing environmental problems, which are relevant to the emerging plan. This may take the form of a particular environmental issue.	Section 6 Appendix 3
The international, national and community level, environmental protection objectives, which are relevant to the emerging plan. In addition it will be demonstrated how these objectives and any environmental considerations have been taken into account during its preparation.	Appendix 2 Appendix 3
Consultation with authorities with environmental responsibility, when deciding the scope and level of detail of the information, which must be included in the environmental report.	Section 7

APPENDIX 2

REVIEW OF PLANS, POLICIES AND PROGRAMMES

EUROPEAN

Habitats Directive (92/43/EEC)
Birds Directive (2009/147/EC)
Water Framework Directive (2000/60/EC)
Groundwater Directive (2006/118/EC)
Air Quality Directive (2008/50/EC)
Floods Directive (2007/60/EC)
Mining Waste Directive (2006/21/EC)
Waste Framework Directive (2008/98/EC)
Environmental Noise Directive (2002/49/EC)
European Landscape Convention (2000)
Convention for the Protection of the Architectural Heritage of Europe (1985)
Convention on the Protection of the Archaeological Heritage (1992)
A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development (2001)

NATIONAL

Wildlife and Countryside Act 1981
The Environment Act 1995
Natural Environment and Rural Communities Act 2006
Guidance for Local Authorities on Implementing the Biodiversity Duty, DEFRA (2007)
Climate Change Act 2008
Localism Act 2011
Flood and Water Management Act 2010
Natural Environment White Paper (2011)
Spatial Planning for Sport and Active Recreation: Guidance on Sport England's Aspirations and Experience (2005)
Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment, English Heritage (2010)
Planning (Listed Buildings and Conservation Areas) Act 1990
Ancient Monuments and Archaeological Areas Act 1979
Proofing for Sport and Active Recreation in Spatial Plans, Sport England (2009)
National Planning Policy Framework, DCLG (2012)
Technical Guidance to the National Planning Policy Framework, DCLG (2010)
Planning Policy Statement 10: Planning for Sustainable Waste Management, DCLG (2011)
Minerals Planning Guidance 4: Revocation, modification, discontinuance, prohibition and suspension orders, DCLG (1997)
Minerals Planning Guidance 8: Planning and Compensation Act 1991 – Interim development order permissions (IDOS): statutory provisions and procedures, DCLG (1991)
Minerals Planning Guidance 9: Planning and Compensation Act 1991 - Interim development order permissions (IDOS): conditions, DCLG (1992)
Minerals Planning Guidance 14: Environment Act 1995 - Review of Mineral Planning Permissions, DCLG (1995)
National and regional guidelines for aggregates provision in England 2005-2020, DCLG (2009)
Nature After Minerals: how mineral site restoration can benefit people and wildlife (2006)

Securing the Future: UK Sustainable Development Strategy (2005)
A Strategy for England's Trees, Woods and Forests, DEFRA (2007)

REGIONAL
West Midlands RSS (Phase 2 Draft Revision Preferred Option) (2007)
Creating Advantage – The West Midlands Economic Strategy (1999)
West Midlands Energy Strategy (2004)
West Midlands Historic Environment Strategy (2009)
Regional Sustainable Development Framework (2005)

COUNTY
Worcestershire County Structure Plan 1996-2011 (2001)
Worcestershire Single Sustainable Community Strategy (2011)
Worcestershire Climate Change Strategy 2005-11 (2009 review)
Worcestershire Landscape Character Assessment Supplementary Guidance (2011)

OTHER
River Basin Management Plan Severn River Basin District (2009)
Cotswolds AONB Management Plan 2008-13
Cotswolds Conservation Board Position Statement: Minerals and Waste Planning
Malvern Hills AONB Management Plan 2009-14

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
EUROPEAN			
Habitats Directive (92/43/EEC)	Aims to protect wild plants, animals and habitats. Directive created a network of protected areas called Natura 2000 sites, including Special Areas of Conservation (SACs) – supporting rare, endangered or vulnerable natural habitats, plants and animals (other than birds), and Special Protection Areas (SPAs) – supporting significant numbers of wild birds and their habitats.	MLP should seek to conserve and enhance biodiversity, and avoid any significant impacts on Natura 2000 sites. In determining site allocations, account should be taken of the particular sensitivities of each Natura 2000 site that could potentially be affected, and advice from Natural England should be sought.	Ensure biodiversity objective within SA framework. HRA Scoping will assess whether full Appropriate Assessment is necessary.
Birds Directive (2009/147/EC)	Emphasises protection of habitats for endangered and migratory species, especially through the establishment of a coherent network of Special Protection Areas (SPAs).	MLP should seek to conserve and enhance biodiversity, and avoid any significant impacts on SPAs. In determining site allocations, account should be taken of the particular sensitivities of each SPA site that could	Ensure biodiversity objective within SA framework. HRA Scoping will assess whether full Appropriate Assessment is necessary.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		potentially be affected, and advice from Natural England should be sought.	
Water Framework Directive (2000/60/EC)	Looks at the ecological health of surface water bodies as well as achieving traditional chemical standards. In particular it will help deal with diffuse pollution. Successful implementation will help to protect all elements of the water cycle and enhance the quality of our groundwaters, rivers, lakes, estuaries and seas.	MLP should be informed by the WFD's aims and objectives. Policies should include strict requirements to prevent water pollution from extractive industries.	Ensure water quality forms part of SA framework.
Groundwater Directive (2006/118/EC)	Establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. Establishes quality criteria taking account of local characteristics. Member States have to establish standards at the most appropriate level and take into account local or regional conditions. It requires groundwater quality standards to be established by the end of 2008; pollution trend studies to be carried out by using existing data and mandatory WFD data; pollution trends to be reversed so that environmental objectives are achieved by 2015; measures to prevent or limit inputs of pollutants into groundwater; reviews of technical provisions of the directive to be carried out in 2013 and every six years thereafter; compliance with good chemical status criteria. This directive will be replaced by the WFD at the end of 2013.	MLP should seek to protect groundwater quality through policies to prevent water pollution from extractive industries.	Ensure water quality objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
Air Quality Directive (2008/50/EC)	Merges most existing air quality legislation into a single directive that sets standards and target dates for reducing concentrations of fine particles, which together with coarser particles known as PM10 already subject to legislation, are among the most dangerous pollutants for human health. Under the directive Member States are required to reduce exposure to PM2.5 in urban areas by an average of 20% by 2020 based on 2010 levels. It obliges them to bring exposure levels below 20 micrograms/m3 by 2015 in these areas. Throughout their territory Member States will need to respect the PM2.5 limit value set at 25 micrograms/m3.	MLP should seek to protect air quality through policies to limit dust and emissions from minerals activity and transportation.	Ensure air quality objective within SA framework.
Floods Directive (2007/60/EC)	Concerns the assessment and management of flood risk and requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. Also reinforces the rights of the public to access this information and to have a say in the planning process.	Minerals working and processing is a 'less vulnerable' land use, and therefore development can be appropriate in Flood Zones 1, 2 and 3a. Sand and gravel working is classed as 'water compatible', and can be appropriately located in any of the above Flood Zones as well as in the functional flood plain (Flood Zone 3b). Policies should ensure that minerals operations do not increase the risk of flooding elsewhere. Plan	Ensure flooding objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		preparation should be informed by the findings of an SFRA. The MLP should be informed by the findings of an SFRA.	
Mining Waste Directive (2006/21/EC)	Overall objective is to prevent or reduce any adverse effects on the environment and risks to human health from the management of waste from the extractive industries.	MLP should seek to minimise waste from minerals operations. Policies should promote the waste hierarchy and require site waste management plans where appropriate.	Ensure waste objective within SA framework.
Waste Framework Directive (2008/98/EC)	The Directive sets the basic concepts and definitions related to waste management, and lays down some basic waste management principles. It requires that waste be managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise or odours, and without adversely affecting the countryside or places of special interest. It requires waste legislation and policy to apply the waste management hierarchy: of prevention; preparing for re-use; recycling; recovery; and disposal. The Directive introduces the "polluter pays principle" and the "extended producer responsibility". It incorporates provisions on hazardous waste and waste oils, and includes two new recycling and recovery targets to be achieved by 2020: 50% preparing for re-use and recycling of certain waste materials from households and other origins similar to	MLP should seek to minimise waste from minerals operations and encourage the waste hierarchy to be followed. Policies should promote the waste hierarchy and require site waste management plans where appropriate. Cross-references to the Waste Core Strategy	Ensure waste objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
	households, and 70% preparing for re-use, recycling and other recovery of construction and demolition waste.	would also be valuable.	
Environmental Noise Directive (2002/49/EC)	Aims to avoid, prevent or reduce on a prioritised basis harmful effects, including annoyance, due to exposure to environmental noise. It provides a basis for developing EU measures to reduce noise emitted by major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery. Seeks to address local noise issues by requiring competent authorities to draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good. The directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.	MLP should ensure that noise from mineral operations, including transport, is minimised. Policies should require specific measures to limit noise, including bunding and screening where necessary.	Ensure noise objective within SA framework.
European Landscape Convention (2000)	Promotes landscape protection, management and planning, and European co-operation on landscape issues. Highlights the importance of developing landscape policies dedicated to the protection, management and creation of landscapes, and establishing procedures for the general public and other stakeholders to participate in policy creation and implementation.	MLP should seek to protect the landscape from harmful development, whilst recognising that some minerals operations will be temporary and could result in landscape benefits in the longer term. Full consideration should be given to the Worcestershire Landscape Character Assessment	Ensure landscape objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		Supplementary Guidance and the MLP should direct applicants to this guidance.	
Convention for the Protection of the Architectural Heritage of Europe (1985)	Reinforces and promotes policies for the conservation and enhancement of Europe's heritage.	MLP should ensure that the historic environment is conserved and enhanced. Policies should guide development away from the most sensitive locations based on the significance of interest of architectural heritage. Where impacts on historic environment are unavoidable, policies should require assessment and recording where appropriate.	Ensure historic environment and design objective within SA framework.
Convention on the Protection of the Archaeological Heritage (1992)	Updates the previous 1969 Convention and makes conservation and enhancement of archaeological heritage a goal of urban and regional planning policies. It is concerned in particular with arrangements to be made for co-operation among archaeologists and town and regional planners in order to ensure optimum conservation of archaeological heritage.	MLP should ensure that the historic environment is conserved and enhanced. Policies	Ensure historic environment objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
	Sets guidelines for funding excavation and research work and publication of findings. Also deals with public access and educational actions to develop public awareness of the value of archaeological heritage.	should guide development away from the most sensitive locations based on the significance of interest of archaeological heritage. Where impacts on historic environment are unavoidable, policies should require assessment and recording where appropriate.	
A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development (2001)	Strategy provides EU-wide policy framework to deliver sustainable development: to meet the needs of the present without compromising the ability of future generations to meet their own needs. It rests on four pillars – economic, social, environmental and global governance – which need to reinforce one another. The economic, social and environmental consequences of all policies thus need to be examined in a coordinated manner and taken into account when drawn up and adopted. The strategy is based on the following guiding principles: promotion and protection of fundamental rights, solidarity within and between generations, the guarantee of an open and democratic society, involvement of citizens, involvement of businesses and social partners, policy coherence and governance, policy integration, use of best available knowledge, the precautionary principle and the polluter-pays principle.	MLP should be guided by sustainable development principles. It should foster an open and inclusive approach to planning with opportunities for public participation and meaningful engagement. It should seek to ensure that economic, social and environmental impacts are balanced wherever possible.	The SA framework will test the sustainability of the MLP and help ensure it embodies sustainable development principles.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
NATIONAL			
Wildlife and Countryside Act 1981	The Act [inter alia] prohibits certain methods of killing or taking wild animals; amends the law relating to protection of certain mammals; restricts the introduction of certain animals and plants; amends the Endangered Species (Import and Export) Act 1976; amends the law relating to nature conservation, the countryside and National Parks; and amends the law relating to public rights of way.	MLP should ensure wildlife protection through policies to protect and enhance biodiversity. Policies should also ensure that public rights of way are taken into account when locating and developing minerals sites.	Ensure biodiversity and access objectives within SA framework.
The Environment Act 1995	Sites with planning permission(s) for the development consisting of the winning and working of minerals or involving the depositing of mineral waste ("minerals development") must be reviewed every 15 years and, where it is considered necessary, new conditions imposed to ensure that they remain up to date. Compensation is payable if new conditions, other than restoration and aftercare conditions, restrict working rights. (extract from MPG4)	The MLP should make clear that minerals planning permissions must be reviewed every 15 years where necessary.	No role identified for the SA.
Natural Environment and Rural Communities Act 2006	Section 40 of the Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. The aim of the biodiversity duty is to raise the profile of biodiversity in England and Wales, so that the conservation of biodiversity becomes properly embedded in all relevant policies and decisions made by public authorities.	MLP should seek to protect and enhance biodiversity through policies to guide locations and operations to avoid adverse	Ensure biodiversity objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		impacts, and to seek net gains from restoration.	
Guidance for Local Authorities on Implementing the Biodiversity Duty, DEFRA (2007)	The guidance is intended to assist local authorities in meeting the Biodiversity Duty. The conservation of biodiversity is highly dependent on the extent to which it is addressed in infrastructure and development projects and how well the planning process integrates biodiversity into planning and development control policies. Core Strategies and Local Development Plan Strategies set out the overarching policy framework for the plan area. Strategic objectives and policies should be developed for biodiversity, including objectives for enhancement. Consideration should also be given to how biodiversity enhancement can be used to bring about more sustainable development, through integration with other policy objectives and other land uses, for example housing and economic development, health, education and social inclusion.	MLP should be informed by the guidance in seeking to protect and enhance biodiversity.	Ensure biodiversity objective within SA framework.
Climate Change Act 2008	The Act aims to improve carbon management, helping the transition towards a low-carbon economy in the UK and to demonstrate UK leadership internationally. Key provisions of the Act include: - a legally binding target of at least an 80% cut in greenhouse gas emissions by 2050 and a reduction in emissions of at least 34% by 2020 (both against 1990 baseline). - a carbon budgeting system that caps emissions over five-year periods; - creation of the Committee on Climate Change; - further measures to reduce emissions, including measures on biofuels; - a requirement for the Government to report at least every five years on the risks to the UK of climate change, and to publish a programme setting out how these will be addressed. The Act also introduces powers for Government to require public bodies and statutory undertakers to carry out their own risk assessment and make plans to address those risks;	MLP should seek to ensure that carbon emission arising from minerals development/transport are minimised through directing developments to sustainable locations where possible and encouraging lower-carbon practices in construction of plant and buildings, operations	Ensure climate change objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		and transport.	
Localism Act 2011	The Localism Act takes power from central government and hands it back to local authorities and communities. Community organisations have the chance to bid to take over land and buildings that are important to them. Local communities can shape new development through Neighbourhood Plans. Once written, the plan will be independently examined and put to a referendum of local people for approval. Neighbourhood Plans will enable local people to ensure there are enough homes in their area by providing planning permission for homes in community ownership (particularly through the Community Right to Build). The 'general power of competence' gives local authorities the legal capacity to do anything an individual can do that isn't specifically prohibited.	MLP process should seek to engage Parish Councils in consultation. Local communities should have adequate opportunities to become involved with the plan as it develops through a variety of consultation methods, including those aimed at hard-to-reach groups.	Ensure participation objective within SA framework.
Flood and Water Management Act 2010	The Act addresses the threat of flooding and water scarcity. It defines unitary/county councils as lead local flood authorities for their area, but enables this role to be delegated to another risk management authority by agreement. The Act requires a lead local flood authority to develop, maintain, apply and monitor a strategy for local flood risk management in its area. The Act establishes a SuDS Approving Body (the “SAB”), with responsibility for approving proposed drainage systems in new Developments/redevelopments at county/unitary level. Approval must be given before the developer can commence construction.	MLP should recognise that minerals working and processing is a 'less vulnerable' land use, and therefore development can be appropriate in Flood Zones 1, 2 and 3a. Sand and gravel working is classed as 'water compatible', and can be appropriately located in any of the above Flood	Ensure flooding objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		Zones as well as in the functional flood plain (Flood Zone 3b). Policies should ensure that minerals operations do not increase the risk of flooding elsewhere. The MLP should be informed by the findings of an SFRA.	
Natural Environment White Paper (2011)	The Natural Environment White Paper has four ambitions: Protecting and improving our natural environment Growing a green economy Reconnecting people and nature International and EU leadership It looks at ecosystem services provided by natural systems and promotes a step-change in nature conservation which makes sustainable use of natural capital and natural networks by working at a landscape scale. It aims to ensure that by 2020 17% of England is managed effectively to safeguard biodiversity.	MLP should seek to conserve and enhance biodiversity and to take forward green infrastructure principles. MLP should be informed by the need to contribute to delivery of the key ambitions of the White Paper.	Ensure biodiversity, landscape and community involvement form part of SA framework.
Spatial Planning for Sport and Active Recreation: Guidance on Sport England's	Spatial planning creates opportunities for addressing the needs, and wider contribution, of sport and active recreation through the development of cross-cutting policies and plans; through multifaceted development proposals which include sports-related elements; through increasing recognition of the role of community interests in shaping space; and through greater partnership working in policy development and delivery.	MLP should seek to protect and enhance existing sports and recreation by wherever possible guiding	A specific sports objective is not considered necessary, but SA objectives on access to services and health will be

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Aspirations and Experience (2005)	The guidance states that there is the prospect of delivering a planned approach to the provision of facilities, and in doing so adding value to the work of others and helping to deliver sustainable development goals, which might mean taking a broader view of the role of spatial planning as an enabling function which goes beyond the setting and delivery of land-use policy; identifying opportunities for delivering an enhanced quality of life for communities, in the short, medium and longer term; recognising and taking full advantage of the unique ability of sport and active recreation to contribute to a wide array of policy and community aspirations; the development of partnership working stimulated by, and perhaps centred on, sport and active recreation as a common interest; and using sport and recreation as one of the building blocks of planning and delivery of sustainable communities.	development away from sites that would impact on assets. MLP should take into account the opportunities for sport and recreation that could be delivered through site restoration.	included in the SA framework.
Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment, English Heritage (2010)	English Heritage will look to see how the historic environment is considered in SA. In terms of SEA, this covers cultural heritage, including architectural and archaeological heritage, landscape and material assets. English Heritage recommends that Scoping Reports are tailored to the type, purpose, and level of plan under consideration. The tiering of Scoping Reports, through the use of an overarching report subsequently fine-tuned for particular documents, can help to reduce repetition and give a better focus to the appraisal framework. Recommends that a review of PPPs draws out implications for developing SEA/SA objectives, and draws out implications for the DPD and other relevant plans.	MLP should be informed by EH advice and ensure EH are fully consulted as the MLP develops.	EH's 'tiering' recommendation has been followed. The MLP SA framework is based on a Worcestershire-wide SA which has been tailored accordingly.
Planning (Listed Buildings and Conservation Areas) Act 1990	Governs special controls in respect of buildings and areas of special architectural or historic interest. Any alteration, extension or demolition of a listed building in a way that affects its character as a building of special interest requires Listed Building Consent.	MLP should ensure that Listed Buildings and Conservation Areas are conserved and enhanced. This includes	Ensure historic environment objective within SA framework.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
		avoiding adverse impacts through location and design policies, and providing for the materials necessary to ensure the continued maintenance, repair and extension of historic buildings to preserve character and the local vernacular.	
Ancient Monuments and Archaeological Areas Act 1979	Under the Act a monument which has been scheduled is protected against any disturbance including unlicensed metal detecting. Permission must be obtained for any work which might affect a monument above or below ground. English Heritage gives advice to the Government on each application. In assessing an application the Secretary of State will try to ensure any works on protected sites are beneficial to the site or are essential for its long term sustainability.	MLP should ensure that Ancient Monuments and archaeology are conserved and enhanced. This includes avoiding adverse impacts through location and design policies, and providing for the materials necessary to ensure the continued maintenance, repair and extension of historic buildings to preserve character and the local vernacular.	Ensure historic environment objective within SA framework.

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Proofing for Sport and Active Recreation in Spatial Plans, Sport England (2009)	Guidance sets out a series of checklists to assist with the preparation of regional and local plans, emphasising the opportunities for making the most of the potential for sport and active recreation to contribute to a number of agendas including health, education and regeneration. Though the recommendations for Core Strategies are aimed primarily at district-level plan-making, some are relevant to the Minerals Local Plan, including: - to have a policy which clearly states the aspiration to protect and enhance existing facilities, and develop new ones where appropriate, in all cases founded on a sound evidence base; - to recognise the role of sport in contributing to a wide range of spatial planning issues: regeneration, health promotion, crime reduction, quality of life, etc; and - to maximise contributions to spatial planning initiatives such as greenspace networks or better use of the urban fringe and the wider countryside.	MLP should recognise the opportunities afforded by minerals development to provide for sports and recreation facilities. Policies should also seek to protect and enhance existing facilities, and to contribute to a linked green infrastructure network.	A specific sports objective is not considered necessary, but SA objectives on access to services, material assets and health will be included in the SA framework.
National Planning Policy Framework, DCLG (2012)	Sets out Government planning policy for England. The purpose of the planning system is to contribute to the achievement of sustainable development, the three dimensions of which are: economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure; a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and	The MLP should seek to protect minerals areas from inappropriate development through safeguarding reserves and the infrastructure to support extraction and transportation. The MLP should define criteria against which minerals applications can be determined,	The SA is designed to ensure that the social, economic and environmental impacts of minerals extraction are fully considered. The SA framework will help to identify the most sustainable options. It will allow the benefits to be maximised, whilst reducing the potential for negative impacts.

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	an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy. It is important that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, it is important to make best use of them to secure their long-term conservation. In preparing Local Plans, local planning authorities should: - identify and include policies for extraction of mineral resource of local and national importance in their area, but should not identify new sites or extensions to existing sites for peat extraction; - so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously; - define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that resources defined will be worked; and define Minerals Consultation Areas based on these Minerals Safeguarding Areas; - safeguard: - existing, planned and potential rail heads, rail links to quarries, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, including recycled, secondary and marine-dredged materials; and - existing, planned and potential sites for concrete batching, the	including: natural and historic environment or human health, including from noise, dust, visual intrusion, traffic, tip- and quarry-slope stability, differential settlement of quarry backfill, mining subsidence, increased flood risk, impacts on the flow and quantity of surface and groundwater and migration of contamination from the site. The MLP should plan for mineral reserves in accordance with the NPPF and should liaise with other authorities in preparing the plan and defining the scale and location of landbanks for each type of mineral.	It is also important to be open and honest about the impacts of development, and to recognise that there will be instances where some parties will feel disadvantaged by the impacts of development (or by a refusal to allow development).

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	manufacture of coated materials, other concrete products and the handling, processing and distribution of substitute, recycled and secondary aggregate material. - set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place; - set out environmental criteria, in line with the policies in this Framework, against which planning applications will be assessed so as to ensure that permitted operations do not have unacceptable adverse impacts on the natural and historic environment or human health, including from noise, dust, visual intrusion, traffic, tip- and quarry-slope stability, differential settlement of quarry backfill, mining subsidence, increased flood risk, impacts on the flow and quantity of surface and groundwater and migration of contamination from the site; and take into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality; - when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and - put in place policies to ensure worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place, including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources), geodiversity, biodiversity, native woodland, the historic environment and recreation. When determining planning applications, local planning authorities should: - give great weight to the benefits of the mineral extraction, including to the economy; - as far as is practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks, the Broads, Areas of Outstanding Natural Beauty and World Heritage sites, Scheduled Monuments and Conservation Areas; - ensure, in granting planning permission for mineral development, that there are no unacceptable adverse impacts on the natural and historic environment, human health or		

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	aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality; - ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source, and establish appropriate noise limits for extraction in proximity to noise sensitive properties; - not grant planning permission for peat extraction from new or extended sites; - provide for restoration and aftercare at the earliest opportunity to be carried out to high environmental standards, through the application of appropriate conditions, where necessary. Bonds or other financial guarantees to underpin planning conditions should only be sought in exceptional circumstances; - not normally permit other development proposals in mineral safeguarding areas where they might constrain potential future use for these purposes; - consider how to meet any demand for small-scale extraction of building stone at, or close to, relic quarries needed for the repair of heritage assets, taking account of the need to protect designated sites; and - recognise the small-scale nature and impact of building and roofing stone quarries, and the need for a flexible approach to the potentially long duration of planning permissions reflecting the intermittent or low rate of working at many sites. Minerals planning authorities should plan for a steady and adequate supply of aggregates by: - preparing an annual Local Aggregate Assessment, either individually or jointly by agreement with another or other mineral planning authorities, based on a rolling average of 10 years sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources); - participating in the operation of an Aggregate Working Party and taking the advice of that Party into account when preparing their Local Aggregate Assessment; - making provision for the land-won and other elements of their Local Aggregate Assessment in their mineral plans taking account of the advice of the Aggregate Working Parties and the National Aggregate Coordinating Group as appropriate. Such provision should take the form		

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	of specific sites, preferred areas and/or areas of search and locational criteria as appropriate; - taking account of published National and Sub National Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates; - using landbanks of aggregate minerals reserves principally as an indicator of the security of aggregate minerals supply, and to indicate the additional provision that needs to be made for new aggregate extraction and alternative supplies in mineral plans; - making provision for the maintenance of landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock, whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised. Longer periods may be appropriate to take account of the need to supply a range of types of aggregates, locations of permitted reserves relative to markets, and productive capacity of permitted sites; - ensuring that large landbanks bound up in very few sites do not stifle competition; and - calculating and maintaining separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market. Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by: - co-operating with neighbouring and more distant authorities to co-ordinate the planning of industrial minerals to ensure adequate provision is made to support their likely use in industrial and manufacturing processes; - encouraging safeguarding or stockpiling so that important minerals remain available for use; - providing a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant and the maintenance and improvement of existing plant and equipment, as follows: at least 10 years for individual silica sand sites; at least 15 years for cement primary (chalk and limestone) and secondary (clay and shale) materials to maintain an existing plant, and for silica sand sites where significant new capital		

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	is required; and at least 25 years for brick clay, and for cement primary and secondary materials to support a new kiln. - taking account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made. Minerals planning authorities should also: - when planning for on-shore oil and gas development, including unconventional hydrocarbons, clearly distinguish between the three phases of development (exploration, appraisal and production) and address constraints on production and processing within areas that are licensed for oil and gas exploration or production; - encourage underground gas and carbon storage and associated infrastructure if local geological circumstances indicate its feasibility; - indicate any areas where coal extraction and the disposal of colliery spoil may be acceptable; - encourage capture and use of methane from coal mines in active and abandoned coalfield areas; and - provide for coal producers to extract separately, and if necessary stockpile, fireclay so that it remains available for use. When determining planning applications, minerals planning authorities should ensure that the integrity and safety of underground storage facilities are appropriate, taking into account the maintenance of gas pressure, prevention of leakage of gas and the avoidance of pollution. Permission should not be given for the extraction of coal unless the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if not, it provides national, local or community benefits which clearly outweigh the likely impacts to justify the grant of planning permission.		

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Technical Guidance to the National Planning Policy Framework , DCLG (2010)	The Technical Guidance expands on the flood risk and minerals planning sections of the NPPF. Specifically, it provides guidance on flood risk (which is largely in line with former PPS25), and expands on the following issues relating to minerals: Proximity of mineral workings to communities; Dust emissions; General considerations; Health effects of dust; Noise emissions; Noise standards; Stability in surface mine workings and tips; Restoration and aftercare of mineral sites; Landscape strategy; Reclamation conditions/schemes; Aftercare schemes; Financial guarantees; and Landbanks for industrial minerals.	MLP should take full account of the technical guidance in developing policy and context on each of these issues.	SA framework should include objectives to assess each of these key issues.
Planning Policy Statement 10: Planning for Sustainable Waste Management, DCLG (2011)	Planning strategies should [inter alia]: - drive waste management up the waste hierarchy, help communities take more responsibility for their waste; - enable waste management facilities to meet community needs; - help implement the national waste strategy and support targets; - help secure recovery or disposal of waste without endangering human health and harming the environment; - enable waste to be disposed of in one of the nearest appropriate installations; - reflect community concerns and the needs of waste collection authorities, waste disposal authorities and business; - encourage competitiveness; - protect green belts but recognise locational needs of some facilities when defining green belt boundaries; and - ensure the design and layout of new development supports sustainable waste management.	MLP should seek to include policies to reduce waste arisings from mineral operations, and to encourage the use of recycled aggregates ahead of newly-won minerals where appropriate. Consideration should also be given to encouraging or requiring site waste management plans and requirements for waste minimisation during any construction of plant and buildings.	Ensure waste objective within SA framework.

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Minerals Planning Guidance 4: Revocation, modification, discontinuance, prohibition and suspension orders, DCLG (1997)	Provides guidance on orders of revocation, modification, discontinuance, prohibition and suspension for minerals sites.	MLP should provide guidance on these issues as relevant to Worcestershire.	No implications for SA identified.
Minerals Planning Guidance 8: Planning and Compensation Act 1991 – Interim development order permissions (IDOS): statutory provisions and procedures, DCLG (1991)	Provides guidance on mineral permissions granted under Interim Development Orders on or after 22 July 1943 in respect of development which had not been carried out before 1 July 1948.	MLP should provide guidance on these issues as relevant to Worcestershire.	No implications for SA identified.
Minerals Planning Guidance 9: Planning and Compensation Act 1991 - Interim	Gives advice on the considerations to be taken into account by applicants and minerals planning authorities in preparing and determining the conditions to which registered IDO permissions should be subject.	MLP should provide guidance on these issues as relevant to Worcestershire.	No implications for SA identified.

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development order permissions (IDOS): conditions, DCLG (1992)			
Minerals Planning Guidance 14: Environment Act 1995 - Review of Mineral Planning Permissions, DCLG (1995)	Gives advice to mineral planning authorities and the minerals industry on the statutory procedures to be followed and the approach to be adopted in the preparation and consideration of updated planning conditions in the review process.	MLP should provide guidance on these issues as relevant to Worcestershire.	No implications for SA identified.
National and regional guidelines for aggregates provision in England 2005-2020, DCLG (2009)	Guidelines should be used in preparing and revising minerals LDFs and RSSs to inform provision of aggregates through the planning system in the English regions and for individual mineral planning authorities. Worcestershire falls within the West Midlands, for which the guidelines apportion 165 million tonnes of land–won sand & gravel and 82 million tonnes of land-won crushed rock, with assumptions of 100 million tonnes of alternative materials and 23 million tonnes of net imports to England. Further disaggregation to sub-regional areas is the responsibility of 'responsible regional authorities', taking into account advice from the mineral planning authorities (MPAs) and the regional aggregates working party (RAWP). The future of RAWPs is unclear at this stage.	MLP should be informed by liaison with other authorities in arriving at a Worcestershire apportionment of aggregates production.	Ensure material assets objective within SA framework.
Nature After	Minerals sites have the potential to enhance biodiversity and to provide a public benefit at	MLP should recognise	Ensure biodiversity,

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Minerals: how mineral site restoration can benefit people and wildlife (2006)	the end of their working lives through restoration. The potential contribution of the minerals industry to UK BAP targets is immense. Securing funding for long-term management will unlock many more opportunities by making nature conservation a more attractive option to landowners. Guidance must be provided to facilitate this through local planning policies (including for minerals) and a revised Mineral Planning Statement on reclamation of sites. Planning policies and site allocations should support habitat creation on mineral sites. Appropriate habitat creation can be a solution to the identified problem of bird-strike. A risk assessment approach must be taken by safeguarding authorities and Mineral Planning Authorities.	and enable the value of minerals sites to nature and society. This applies especially to restoration, but could also explore opportunities for education in the operational phases. Opportunities relate to biodiversity and geodiversity, as well as sport and recreation. Birmingham International Airport and any other relevant aviation interests should be consulted when developing restoration policies, in recognition of the increased potential of bird strikes.	geodiversity, material assets and access to services objectives within SA framework.
Securing the Future: UK Sustainable Development Strategy (2005)	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	MLP should embody sustainability principles, and recognise the valuable contribution that minerals sites can	The SA process is designed to ensure that sustainable development principles are fully considered in MLP preparation, and to

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	- Climate change and energy Our landscapes and seascapes are inseparable from our culture, bearing the imprints of generations of land use. Our physical and mental health is reliant on the quality of the environment. There must also be access to a variety of well-managed and maintained green spaces for leisure, sport, recreation and general public benefit to help people choose healthy lifestyles, in urban as well as rural areas.	make to society, the economy and the environment, both during operational phases and following restoration.	help ensure the social, economic and environmental benefits are maximised.
A Strategy for England's Trees, Woods and Forests, DEFRA (2007)	Aims to provide a resource of trees, woods and forests where they can contribute environmental, economic and social benefits now and for future generations; to ensure that existing and newly planted trees, woods and forests are resilient to climate change and contribute to biodiversity and natural resources adjusting to a changing climate; to protect and enhance water, soil, air, biodiversity and landscape, and the cultural and amenity values of trees and woodland; to increase the contribution that trees, woods and forests make to quality of life; and to improve the competitiveness of woodland businesses and promote development of new/improved markets for sustainable woodland products and ecosystem services. It seeks to do this through the long-term sustainable management of trees, woods and forests; by seeking 'the right tree in the right place'; by effective use of public investment; and by ensuring synergies with other Government policies.	MLP should recognise the value of trees and policies should seek to avoid any loss where practicable through location and design policies. The potential contribution of trees in restoration schemes should be explored and maximised.	Ensure flora and fauna objective within SA framework.

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REGIONAL			
West Midlands RSS (Phase 2 Draft Revision Preferred Option) (2007)	Spatial Strategy Objectives: a) to make the MUAs of the West Midlands increasingly attractive places where people want to live, work and invest b) to secure the regeneration of the rural areas of the Region c) to create a joined-up multi-centered Regional structure where all areas/centres have distinct roles to play d) to retain the Greenbelt but to allow an adjustment of boundaries, where *exceptional circumstances can be demonstrated, either* to support urban regeneration *or to allow for the most sustainable form of development to deliver the specific housing proposals referred to within the sub-regional implications of the strategy* e) to support the cities and towns of the Region to meet their local and sub-regional development needs f) to support the diversification and modernisation of the Region's economy while ensuring that opportunities for growth are linked to meeting needs and reducing social exclusion g) to ensure the quality of the environment is conserved and enhanced across all parts of the Region h) to improve significantly the Region's transport systems i) to promote the development of a network of strategic centres across the Region j) to promote Birmingham as a *global* city. Local authorities and other agencies in their plans, policies and proposals should [inter-alia] protect and enhance the distinctive character of different parts of the Region as recognised by the natural and character areas and associated local landscape character assessments, and through historic landscape characterisation.	Whilst the relevance of the RSS has decreased in line with the announcement of the government's intention to abolish the strategies, the WM RSS does remain part of the development plan until the abolition is formally concluded. The MLP should seek to deliver the RSS objectives.	SA framework should ensure these issues are included within the objectives.

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	Local authorities and other agencies, in their plans, policies and proposals should conserve, enhance and, where necessary, restore the quality, diversity and distinctiveness of landscape character throughout the Region's urban and rural areas by: i) ensuring that a consistent approach is taken to landscape and character issues, particularly where they cross local planning authority boundaries; ii) establishing a positive and integrated approach to the use, management and enhancement of the urban fringe; iii) supporting the Community Forest and National Forest programmes; iv) protecting and, where possible, enhancing natural, man-made and historic features that contribute to the character of the landscape and townscape, and local distinctiveness; v) considering other factors that contribute to landscape character including tranquillity and the minimisation of noise and light pollution; and vi) identifying opportunities for the restoration of degraded landscapes including current and proposed minerals workings and waste disposal sites.		
Creating Advantage – The West Midlands Economic Strategy (1999)	Aims: - Increase wealth and make the most of competitiveness within West Midlands businesses through innovation. - Transform the West Midlands' economy by supporting the development of new and existing sectors to meet the demands of the future. - Develop a workforce that is highly skilled and can adapt to meet the challenges that will face businesses in the next 10 years. - Develop a culture of lifelong learning and continuous improvement. - Improve the movement of people, goods and services inside and outside the region. - Provide sites and premises of the right size and quality, and in the right place. - Encourage people to take part in economic and community life by targeting resources at	MLP can help provide the right sites to allow the economic development of minerals. This in turn will allow the wider economy, especially construction, to prosper. Restoration of sites can provide opportunities for economic growth, especially in leisure and	Ensure economic growth objective within SA framework.

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	communities and individuals that suffer poverty and social exclusion. - Develop the connections between public, private, voluntary and community sectors so we can support the complete development of the region to benefit everyone who lives here.	tourism.	
West Midlands Energy Strategy (2004)	The strategy seeks to achieve: Improved energy efficiency Increased use of renewable energy Business benefiting from commercial opportunities Focused and practical delivery Landscape character and biodiversity considerations should be taken into account for all renewable energy prospects.	MLP can help deliver energy minerals, and set a framework for the extraction of shale gas (which may not be economically available in Worcestershire). Policies should seek to ensure that operations are energy efficient through siting near to sustainable transport nodes where possible and requiring buildings to be energy efficient.	Ensure energy objective within SA framework.
West Midlands Historic Environment Strategy (2009)	Sets out a description of the places and special qualities that make up the historic environment of the region, some of the successes and achievements of the many people and organisations who champion and care for historic places, the strategy – People, Places and Policies – for making the most of the positive contribution of the historic environment, and an action plan to realise the vision. It looks at three broad themes: People:	MLP has a role to play in ensuring sufficient stone supplies are available to enable the maintenance of historic environment assets. There is also an important educational	Historic environment objective to be included within SA framework.

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	Everyone benefits from improved and enhanced physical and intellectual access to the historic environment, so that the lives of present and future generations are enriched through enjoyment, learning and physical activity, leading to a better quality of life.• People and communities are actively engaged in the management and enhancement of their historic environment through volunteer, civic and business activities.• There are sufficient people with the expertise and traditional skills to ensure that the historic environment is properly maintained and managed and secured for the future. Places: The 'everyday' places of the historic environment, not just the protected and iconic, whether old or modern, are better understood and valued for the way in which they shape the unique character and identity of the West Midlands. • New buildings and places complement the historic urban and rural environment and are of a design standard and quality that will allow them to be valued by future generations.• The significance of the West Midlands' industrial legacy, which put our region on the world stage, is recognised and valued. This industrial heritage is put to sympathetic and sustainable re-use, so that it contributes to carbon reduction and the regeneration of the region. Policies: Strategies and policies for the region benefit from a robust evidence-base which furthers understanding of the positive contribution that the historic environment can make to the region's prosperity and economic well-being.• Policies and plans for the West Midlands reflect the needs of the historic environment, and recognise, promote and use the positive contribution that it can make to well-being and culture.• The policies and strategic plans of all those engaged in the management and championing of the historic environment are developed in partnership, in order to ensure that their aspirations and objectives are aligned towards shared goals and outcomes. The Strategy also refers to a successful case study example of how to involve communities in	opportunity in opening up and presenting geodiversity features. Minerals workings can be a focus for involving local people in the historic environment, and any such opportunities could be encouraged through the MLP.	

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	the historic environment: Warwickshire County Council involved communities and local people in the interpretation and understanding of their heritage. An outreach project linked to the Historic Environment Record promoted understanding and appreciation of the historic environment, within the parts of the county where minerals and aggregates are quarried. Engaging both the public and the quarry products industry, the initiative included the creation of two exhibitions, a guide to documentary research and an archaeology schools pack.		
Regional Sustainable Development Framework (2005)	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	MLP should embody sustainability principles, and recognise the valuable contribution that minerals sites can make to society, the economy and the environment, both during operational phases and following restoration.	The SA process is designed to ensure that sustainable development principles are fully considered in MLP preparation, and to help ensure the social, economic and environmental benefits are maximised.

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COUNTY			
Worcestershire County Structure Plan 1996-2011 (2001)	Saved Structure Plan policies remain part of the development plan for Worcestershire. Whilst there are many policies with a relevance to the MLP, most of the issues raised have been covered already through the other documents considered in the PPP review. The most important for minerals are: Regional Production (Policy M.1): Worcestershire's share of the regional production of aggregates should be met through the allocation of sufficient land and the maintenance of a land bank of permitted reserves in accordance with current national policy guidance and regional guidelines, subject always to the taking into account of relevant development plan policies. Safeguarding of Deposits (Policy M.2): Known mineral deposits will be safeguarded as far as possible. Proposals for development which would sterilise them or prevent them being worked will be resisted unless: (i) it can be demonstrated that no workable deposit exists; or (ii) the mineral is extracted prior to the commencement of the proposed development; or (iii) extraction is not possible without unacceptable effects on the environment. Mineral Extraction (Policy M.3): Mineral extraction, processing or associated development will normally only be allowed where it can be demonstrated that the best and most versatile agricultural land, local amenities, landscape character or features of landscape, historic and nature conservation importance will not be unacceptably affected, and safe access can be provided. Proposals in AONB or affecting SSSI or designated sites of international importance will be subject to the most rigorous examination.	MLP should allocate sufficient land and a sufficient landbank of reserves for whatever apportionment is determined for Worcestershire. Known minerals deposits should be protected from sterilisation through safeguarding policies. Nationally-protected sites should enjoy the highest level of protection through policies guiding development away from them wherever possible. Restoration should be required to ensure positive biodiversity and landscape outcomes.	

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	Restoration and Aftercare (Policy M.4): All mineral extraction operations shall be carried out in accordance with approved schemes for working, restoration and aftercare. The approved restoration and aftercare plan should provide for an afteruse and landscape/landform acceptable to the Minerals Planning Authority, enhancing the landscape and ecological quality where appropriate. Where ecological quality is to be enhanced BAP target habitats should be created. Where it is necessary to ensure that proper management of a restored site continues beyond the five-year aftercare period, the necessary provisions to cover this will need to be in place prior to planning permission being issued. Abberley and Malvern Hills (Policy M.5): Unless it can be shown that the need for the mineral overrides environmental considerations, no further planning permissions will be granted for aggregates mineral working in the Abberley Hills area apart from the possible modification of working, subject to environmental considerations, within the existing lateral limits of Woodbury and Shavers End quarries. No further planning permissions will be granted for the extraction of granite from the Malvern Hills. Recycled Materials (Policy M.6): The production, processing, treatment, storage and use of materials suitable for use as alternatives to primary aggregates will be encouraged. Preference will be given to proposals in the following general locations, provided they conform with other development plan policies: (i) existing or proposed industrial areas; (ii) derelict or despoiled areas; (iii) permanent facilities close to major sources of construction waste arisings and temporary facilities on or adjacent to demolition sites; or (iv) working or worked out mineral or landfill sites.	MLP should consider the continued merits of specific restrictive policy on extraction of granite in the Abberley and Malvern Hills area. MLP should encourage the use of alternatives to primary aggregates.	

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Worcestershire Single Sustainable Community Strategy (2011)	The SCS identifies three key priorities for Worcestershire: 1. A skilled and prosperous economy 2. An environment that is cherished and resilient 3. Improving health & well-being. Economic priority outcomes for the next ten years are: A. Enhanced economic prosperity through sustainable economic growth B. Improved survival rates for new and existing business C. A skilled workforce that meets the needs of business. Environmental priority outcomes for the next 10 years are: A. Protecting and enhancing the county's natural and historic environment through a better understanding of its social and economic value and its contribution to health and well-being B. Working better together to deliver environmental improvements C. Mitigating and adapting to climate change. Health and well-being priority outcomes for the next 10 years are: A. To reduce health inequalities between social groups in terms of health and quality of life outcomes B. To improve the quality of life and independence of older people and those with a long-term illness C. To improve mental health and well-being.	MLP can help deliver all three of the county-wide priorities, but will be of particular relevance in helping to achieve the economic and environmental priority outcomes. The MLP should foster a collaborative, partnership approach and should consult with sector experts when developing policies for restoration.	SA should include objectives and criteria relating to health, the economy and the environment.
Worcestershire Climate Change Strategy 2005-11 (2009 review)	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.	MLP should be informed by the latest climate change predictions and should seek to guide	Ensure climate change objective forms part of SA framework.

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	In the next decade and beyond it is predicted there will be further climate change and the incidence of extreme weather will increase. Worcestershire's geography means that the county is susceptible to flooding. Major rivers flow through low lying areas and quite a lot of the soil is relatively impermeable (i.e. Clay and Gley soils). This leads to a tendency to both fluvial (river) and flash flooding. It is highly likely that Worcestershire will see an increased rainfall intensity leading to greater flooding, more frequent and severe gales, warmer winters and hotter summers, more summer drought and increases in average temperatures (by up to 1.3^{o}C by 2020s and up to 4.5^{o}C by 2080s). There is a growing need to be prepared for weather extremes and subsequent consequences. The variability of weather systems is such that it is now essential to prepare for a range of eventualities - including floods and heat waves with associated droughts. The impacts on Worcestershire's environment, economy and society include: Biodiversity: Changing conditions may be beneficial to some species but harmful to others. For example, some species may be lost due to wetland habitats changing and drying up. Geodiversity: Changing soil types and structures; soil erosion, leading to loss of peat soils and subsequent release of carbon dioxide; changes to streams and rivers. Agriculture: Problems caused by drought, floods and new crop pests. Transportation: Roads may be less affected by frost and freeze/thaw but may be closed and damaged more often due to flooding. Higher temperatures are likely to affect roads, rails and associated structures. Health Services: More heat related summer deaths and cases of food poisoning; fewer cold related winter deaths. Leisure and tourism are important industries for the county. People may take more day trips and holidays in the UK due to the warmer weather and the worldwide global downturn. This could mean more spending at local businesses.	development type and location so as to minimise additional CO_2 emissions and to adapt to the consequences of climate change. This should include requirements for sustainable construction and for sites to take advantage of sustainable transport modes wherever possible. The role of restored minerals sites to act as a refuge for wildlife displaced by climate change should also be explored.	
Worcestershire Landscape	The LCA SG seeks to explain the modern concepts of landscape and landscape character and to offer guidance in the application of Landscape Character Assessment (LCA). The advice	MLP should include policies to ensure that	Ensure landscape objective within SA

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Character Assessment Supplementary Guidance (2011)	offered is targeted at both planning and land management and will enable local communities to identify the landscape elements that contribute to local distinctiveness. It provides background information, sets landscape character within the planning framework and describes the processes of assessment and evaluation. It describes the Landscape Types which underlie landscape-based planning, along with a brief analysis of changing character trends and guidance for future management and development. It aims to: a) support the landscape policies within Worcestershire's County and District Plans and thus help guide development; b) enable an understanding and appreciation of the character and diversity of the Worcestershire landscape, both in its own right and as part of the national framework; c) identify and describe the various Landscape Character Areas within Worcestershire; d) identify the range of Landscape Types within the county through an understanding of their inherent characteristics; e) inform and explain the process of Landscape Character Assessment to interested professionals and members of the public; f) provide an analysis of inherent character and current landscape condition in order to enable future identification and development of landscape related strategies and priorities; g) enable the analysis and evaluation of landscape character and so arrive at an understanding of the resilience of different landscapes to change; and h) enable detailed analysis of landscape character areas with a view to evaluating their sensitivity to change. Potential development should be assessed against the LCA to enable both planning officers and developers to consider the landscape character potential for development and the most appropriate design treatment. Discussion at pre-application stage is also important. Development should be assessed by undertaking the following steps: 1- Identify the Landscape Type in which the site is located. 2- Assess whether this is an unsettled landscape. If the proposal is for built development	the landscape impact of proposals is taken into account. It should ensure that landscape character assessment is used to assess potential impact, recognising that the landscape impact during development may only be temporary, and that the lasting landscape impact may not be realised until restoration is complete. The MLP should reference the LCA SG and direct applicants towards its assessment framework.	framework.

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	within an unsettled landscape there would be, in landscape terms, a high presumption against new development. 3- If the site is not located within an unsettled landscape, assess whether the proposals conform to the Landscape Type's settlement pattern. 4- Ideally, built development, particularly housing, should respect the inherent settlement pattern and avoid imposing an inappropriate pattern on the landscape. 5- Assess whether the site-specific character of the landscape conforms to the generic Landscape Types used in LCA. The Landscape Description Unit descriptions and the Land Cover Parcel data available online can aid in this assessment. If it is clear that the site in question is untypical, a different analysis should be made. 6- Other planning applications that do not constitute built development should consult the description of the relevant Landscape Type, in order to ensure that they are consistent with the relevant key characteristics. 7- Ensure that detailed proposals fully take into account all site features and that mitigation and enhancement measures, such as green infrastructure, conform to and strengthen the key characteristics of the landscape.		

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OTHER			
River Basin Management Plan Severn River Basin District, DEFRA/EA (2009)	This plan focuses on the protection, improvement and sustainable use of the water environment. The most significant pressures which need to be dealt with in the river basin district are: • abstraction and other artificial flow regulation – problems related to taking water from rivers, lakes and groundwater; • non-native species - invasive non-native species are plants and animals that have deliberately or accidentally been introduced outside their natural range, and by spreading quickly threaten native wildlife and can cause economic damage; • nitrate – a nutrient found in fertilisers used in agriculture, and in sewage effluent; • pesticides – chemical and biological products used to kill or control pests; • phosphate – a nutrient in sewage and fertiliser, which can cause too much algae to grow in rivers when in excess quantities; • physical modification – changes to the structure of water bodies, such as for flood defence; • sediment – undissolved particles floating on top or suspended within water, for example those caused by increased rates of soil erosion from land based activities. Sedimentation can smother river life and spread pollutants from the land into the water environment; • urban and transport pollution – a range of pollutants related to urban areas and the transport network. River basin management is an opportunity for people and organisations to work together to improve the quality of every aspect of the water environment. The mining and quarrying sector has active operations in this river basin district. Past activity has left a legacy from historic mining and now, working with partners, the Environment Agency has an established Strategy for investigation and remediation of these sites.	MLP should recognise the impact that mineral operations can have on the water environment and should seek to ensure that protective policies are in place.	Water objective to be included within SA framework.

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	Example action: Investigate emissions from working sites and appraise options of best practice controls at mines and quarries to ensure environmental quality standards are met (Operators). Implementation of best practice controls and remediation at prioritised abandoned coal and metal mines (Coal Authority) Assess mineral restoration schemes for potential for delivering Water Framework Directive benefits (Local Authorities, Environment Agency, Environmental NGOs) Develop and deliver pollution prevention advice to landowners and users on abandoned metal mines and coal mines (Environment Agency) • Wye, Usk, South East Valleys, Severn Uplands Co-ordinate research and develop sustainable and integrated remediation options for: a) use of heat from minewater, b) alternate uses for ochre, and c) co-treatment of minewater and sewage (Coal Authority) Where the work of a public body affects a river basin district, that body has a general duty to have regard to the River Basin Management Plan. Ministerial guidance states that the Environment Agency should: • work with other public bodies to develop good links between river basin management planning and other relevant plans and strategies, especially those plans that have a statutory basis such as the Local Development Plans and Wales Spatial Plan; • encourage public bodies to include Water Framework Directive considerations in their plans, policies, guidance, appraisal systems and casework decisions.		

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Cotswolds AONB Management Plan 2008-13	The primary purpose of AONB designation is to conserve and enhance the natural beauty of the area. Within an AONB priority is given to the landscape, flora and fauna, geological or physiographical features and heritage, including archaeology and settlement character. Limestone gives the area unity. This can be seen in the underlying geology and in the stone used for buildings and dry stone walls throughout the Cotswolds. The following fundamental principles inform the Board's whole approach to managing the Cotswolds' AONB. • The implications of climate change for all activities must be addressed - seeking to mitigate the causes of climate change by minimising the output of greenhouse gases; and at the same time taking action to adapt to the effects of climate change in ways that conserve and enhance the Cotswolds' special qualities. • The landscape of the AONB must be managed in ways that conserve and enhance landscape character, local distinctiveness, geology and geomorphology, historic features, habitats and biological diversity. • A sustainable approach must be taken to all issues within the AONB, particularly in the development and management of its rural economy. • It is important to increase people's awareness, knowledge and understanding of the qualities of the AONB, and of the opportunities to enjoy and explore the area. Key Issue LK4: Development can damage the landscape, including the settings of settlements. While some development is needed to ensure a viable rural economy and can provide benefits such as affordable housing, renewable energy and local stone, rigorous assessment of need and of any impacts - in line with Planning Policy Statement 7 and the Board's Landscape Strategy and Guidelines and other published guidance - is required.	MLP should recognise the impact minerals development can have on the Cotswolds AONB. MLP should give consideration to having policies stating that any extensions to existing or new quarries for crushed limestone in the AONB will only be permitted if in the national interest. MLP should promote use of secondary aggregates. MLP should make provision for a continuous supply of walling and building stone to maintain local distinctiveness, and should be informed by the 2003 study referred to. MLP should encourage small scale local quarries.	Include SA objective relating to natural assets and landscape.

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	Aspects of resources within the Cotswolds AONB considered distinctive include: High-quality building stone - seams of high-quality limestone occur within the AONB and have been quarried extensively for centuries. These represent a very valuable resource. It is important to maintain supplies of high-quality building stone to ensure that repairs and new buildings can be constructed in a way that is in keeping with their distinctive surroundings, particularly within the Cotswolds area itself, but also at important sites elsewhere. NRK1: A key issue is future quarrying within the AONB. Planning Policy Statement 7 and Minerals Planning Policy Statement 1 require that an overriding national need must be established before further quarrying can take place. As a mineral operation, quarrying is subject to policies established by county and unitary authorities acting as Minerals Planning Authorities within Minerals Local Development Frameworks. Minerals planning applications are also determined by these authorities. They must balance the supply of minerals with safeguarding the environment. To ensure continued supplies of suitable high-quality building stone and in recognition of the basic principle that minerals can only be worked where they occur, existing quarries within the AONB must continue to operate effectively. The Board has adopted a Position Statement on Minerals Planning. This makes it clear that the Board is opposed to the development of quarries predominantly for the winning of crushed limestone (aggregates) within or which affect the setting of the AONB. The Board also wishes to see Local Minerals Development Documents support the provision of small-scale quarries and delves to supply natural building, walling and roofing stone for predominantly local projects. Action: NRA3: Encourage and support, through policies in Minerals Local Development Plan Documents produced by Minerals Planning Authorities, the safeguarding of supplies of natural building and roofing stone from sources of appropriate location and scale for historic repair and preservation purposes. Further, to maintain local distinctiveness where no harm is		

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	caused to the landscape and traffic is minimised, whilst discouraging the extension of quarrying for crushed rock and aggregates, except where required in the national interest.		
Cotswolds Conservation Board Position Statement: Minerals and Waste Planning	Although the Position Statement refers to the previous edition of the AONB Management Plan, the principles remain valid to the MLP. The aim of the Plan with respect to minerals is to support the use of sustainable resources, involving a reducing demand within the Cotswolds AONB unless there is an overriding national need. The Board would therefore expect a Minerals and Waste Planning Authority to demonstrate that it has made very clear in negotiations regarding regional apportionment of minerals requirements that additional quarrying for crushed limestone has a considerable adverse impact on the designated landscape. The Board will be expecting a Minerals and Waste Planning Authority to demonstrate very clearly that any extensions to existing or new quarries for crushed limestone in the AONB are only to be permitted if in the national interest. The Board will wish to see the use of secondary aggregates promoted in Mineral Planning Documents. However a continuous supply of walling and building stone, including stone roofing slates, is required to conserve and enhance the distinctive built environment of the Cotswolds. The character of stone varies considerably across the AONB, and local sources are required to maintain local distinctiveness. In 2003 the former Cotswolds AONB Partnership published a study “Local Distinctiveness and Landscape Change”. This identified the reducing local supply of stone (other than crushed rock) as a threat to this locally distinct built environment. Supply of building stone is becoming more restricted to bigger quarries	MLP should recognise the impact minerals development can have on the Cotswolds AONB. MLP should give consideration to having policies stating that any extensions to existing or new quarries for crushed limestone in the AONB will only be permitted if in the national interest. MLP should promote use of secondary aggregates. MLP should make provision for a continuous supply of walling and building stone to maintain local distinctiveness, and should be informed by the 2003 study referred to. MLP should encourage small scale local quarries.	Include SA objective relating to natural assets and landscape.

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	supplying larger areas. This is leading to a more uniform appearance of stone buildings than existed previously. The study suggests that a possible solution would be the formulation of mineral planning policies which encouraged small scale local quarries and discouraged the further expansion of the larger operations. A resurgence of the formerly widespread "delving" tradition, particularly for low grade walling stone, as part of land management is envisaged. An investigation of the potential for small scale mining for stone where this would be less harmful to the landscape is also suggested. The Board would therefore wish to see this matter explored in the Minerals Local Development Plan process. A copy of the study has been supplied to all Minerals and Waste Planning Authorities.		
Malvern Hills AONB Management Plan 2009-14	Insensitive development can lead to the direct loss of, or adverse effect on, geodiversity through the loss of designated sites or exposures. Sensitive development, on the other hand, can create temporary or even permanent exposures and features. At present little data is available on the extent of loss or damage to sites of geodiversity interest other than designated sites. Lost sites include part of Tank Quarry at the north end of the Malvern Hills (which has been used for landfill), and Brays Pit and Mathon Pit to the west of the hills. Strategic objectives include: GO1 Conserve the geodiversity resource in line with emerging Geodiversity Action Plans (GAPs). GO2 Promote greater understanding of the geological value of the AONB and the need for its protection and management. GO3 Undertake survey, research and monitoring to secure complete information on the state of the AONB's geodiversity resource, including recording temporary exposures before reburying.	MLP should consider the need to retain strict policies in relation to mineral extraction in the AONB. The MLP should consider the merits of providing for small-scale local extraction for heritage building purposes. The MLP should encourage the use of recycled or secondary minerals wherever possible. Consideration should also be given to the	Include SA objective relating to natural assets and landscape.

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SA	IMPLICATIONS FOR EMERGING MINERALS LOCAL PLAN	IMPLICATIONS FOR THE SUSTAINABILITY APPRAISAL
	GO4 Develop and implement local Geodiversity Action Plans, with the first phase of action plans to be implemented by April 2011. GO5 Monitor climate change and its effects on the geodiversity resource of the AONB. Mineral extraction is largely non-existent in the AONB as it is effectively prohibited by mineral plan policies other than in exceptional circumstances. A lack of local building materials can make it difficult to restore characteristic features such as walls and buildings and to meet locally distinctive design standards in new developments. It can also reduce sustainability as more materials have to be brought in from elsewhere. Systems need to be put in place to encourage recycling and re-use of local materials. The use of spoil and the investigation of sources for small-scale, localised extraction of new stone should be considered. This needs to be addressed through the Minerals and Waste Development Frameworks being developed by Worcestershire and Herefordshire Councils. Locally grown wood from woodlands run on sustainable principles is an important building material. Where appropriate, its use would also help to reduce importing materials from outside the area while supporting local forestry business. Strategic objective DO1: Encourage the recycling, re-use and investigation of extraction of small quantities of locally distinctive building materials, such as Malvern stone, where this is needed to help retain local distinctiveness in the built environment.	creation of permanent geodiversity exposures.	

APPENDIX 3

BASELINE DATA

LANDSCAPE and LAND USE
Percentage of Total New Homes Built on Brownfield Land
Condition of the Landscape
Planted ancient woodland sites restored to native woodland

BIODIVERSITY, GEODIVERSITY, FLORA & FAUNA
European nature conservation sites
Condition of SSSIs
Management Status of Local Sites
Key Breeding Birds Population Numbers

CULTURAL HERITAGE, BUILT DESIGN AND ARCHAEOLOGY
Number of grade I and II* listed buildings 'at risk'
Proportion of undesignated heritage assets at risk

MATERIAL ASSETS - including land use and local amenity
Amount of land falling within Agricultural Land Classifications (hectares)
Hectares of Green Belt land

NATURAL RESOURCES (AIR, WATER, SOIL, MINERALS)
Number of Air Quality Management Areas (AQMAs) in Worcestershire
Water quality
Water resource availability
Contaminated Land
Annual production of land-won aggregates (sand and gravel)
Annual production of land-won aggregates (crushed rock)

CLIMATE CHANGE
CO_2 emissions per head
Ecological Footprint (Global Hectares per Person)

ENERGY
Total final energy consumption by local authority (kilo-tonnes of oil equivalent)

FLOODING
Properties at risk of flooding

ACCESS TO SERVICES
Access to information: Satisfaction rates regarding Minerals & Waste planning policy
Accessibility to Worcestershire acute hospitals

HEALTH
Health ACORN categories
Female life expectancy at birth
Male life expectancy at birth

WASTE
Household waste produced per head of population
Percentage/Amount of household waste recycled or composted

TRANSPORT
Working age people with access to employment by public transport (and other specified modes)
Access to services and facilities by public transport, walking and cycling
CO_2 emissions in the county per capita arising from road transport

GROWTH WITH PROSPERITY FOR ALL
Average Worcestershire household income
Percentage employment rate (working age)
GVA per Worcestershire resident head

PROVISION OF HOUSING
New affordable homes built
Relationship between average salary and average house prices

PARTICIPATION BY ALL/RESPONSIBILITY
Waste Core Strategy consultation response rates
Percentage of properties provided with kerbside household recycling collection

TECHNOLOGY, INNOVATION & INWARD INVESTMENT
New business enterprises

POPULATION: DEMOGRAPHICS, LEARNING AND SKILLS
Population
Proportion of young people achieving a level 2 qualification by the age of 19
Proportion of young people achieving a level 3 qualification by the age of 19
Progression to higher education

POPULATION: ANTI-SOCIAL BEHAVIOUR & CRIME; LITTER; GRAFFITI
Crimes per 1,000 people
Perceptions of anti-social behaviour

LANDSCAPE and LAND USE

Percentage of Total New Homes Built on Brownfield Land

Key data:

During 2010/11, 76% of new housing completions in Worcestershire were built on previously-developed land (PDL). This is slightly below the proportion in 2009/10 (85%), and level with the proportion in 2007/08.
During 2008/09, total housing completions on previously-developed land in the West Midlands region was 87. No more recent figures are available.
Worcestershire's average proportion of development of new dwellings on PDL is above the national average. DCLG have published provisional statistics showing that 76% of all dwellings (including all conversions) were completed on previously-developed land in 2010.
The proportion of new houses in Worcestershire built on previously-developed land is slightly lower than the proportion in 2008/09. The proportion remains significantly above the national rate.

Authority	Total dwellings completed 2010/11	Dwellings completed on PDL	% of new dwellings completed on PDL	2009/10 % for comparison
Bromsgrove	138	99	72%	73%
Malvern Hills	149	105	70%	74%
Redditch	124	115	93%	99%
Worcester City	196	196	100%	100%
Wychavon	213	83	39%	57%
Wyre Forest	154	142	92%	90%
Worcestershire	974	740	76%	85%

Note: figures may not round exactly. [1] Net figures, including new and converted dwellings.

Likely evolution:

It is difficult to predict future brownfield development, as for some Worcestershire districts (e.g. Kidderminster) there remain large areas of land for regeneration, but for other districts this can be more limited, and as rates have been very high in recent years, there may be a 'tipping point' at which the majority of land has been redeveloped (although there will always be a certain amount of redevelopment). National changes to planning policy, including the removal of brownfield targets, are likely to see rates decline across the country.

Role of MLP:

Minerals can only be extracted where they are found. Relative to some other types of more footloose developments, scope to direct development to specific brownfield locations will be limited. The nature of some mineral workings would make them unsuitable for many brownfield areas which are often surrounded by incompatible land uses, although there may be some potential for small-scale workings such as borrow pits on brownfield development sites. Whilst minerals development is often on Greenfield land, it differs from most other developments in that it is a temporary land use and in most cases workings will be restored back to Greenfield status on completion of restoration works. Most minerals sites also fall within the flood plain, which renders their potential for future development extremely limited.

Data sources:

Worcestershire Partnership State of the Environment Report 2011-12
West Midlands RSS Annual Monitoring Report 2009 (published March 2010)

Condition of the Landscape

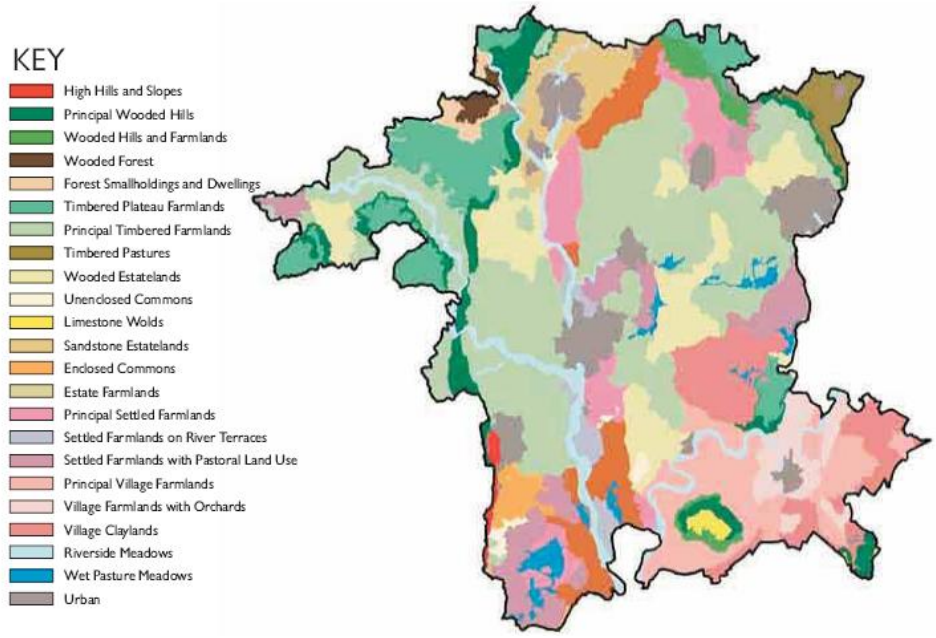
Key data:

Worcestershire contains parts of two Areas of Outstanding Natural Beauty (the Cotswolds and the Malvern Hills). These nationally-designated areas account for approximately 5% of Worcestershire's land area and offer a valuable recreation and tourism resource.

A comprehensive landscape character assessment has been undertaken in Worcestershire. Landscape character assessment places the features of a particular landscape in context, providing not just a description of the different landscapes within the county, but an understanding as to why those differences and different landscapes are there and what they represent.

22 Landscape Types have been identified in Worcestershire: High Hills and Slopes; Principal Wooded Hills; Wooded Hills and Farmlands; Wooded Forest; Forest Smallholdings and Dwellings; Timbered Pastures; Principal Timbered Farmlands; Timbered Plateau Farmlands; Wooded Estatelands; Limestone Estatelands; Sandstone Estatelands; Enclosed Commons; Estate Farmlands; Principal Settled Farmlands; Settled Farmlands with Pastoral Land Use; Settled Farmlands on River Terraces; Principal Village Farmlands; Village Farmlands with Orchards; Village Claylands; Riverside Meadows; Wet Pasture Meadows; and Unenclosed Commons.

Landscape type distribution



Each of the above Landscape Types is made up of a number of smaller Landscape Description Units (LDUs). These LDUs, in turn, comprise many smaller-scale 'Land Cover Parcels' (LCPs). These LCPS are too small-scale to be meaningfully mapped here, but they have formed the basis of an assessment of the quality of the county's landscape.

In the baseline year (2005 aerial photograph set, assessed 2008) the percentage of landscape units (LCPs) in 'high' condition was 69%, 'medium' was 27%, and 'poor' condition was 4%. The indicator excludes urban areas. This means that current status of the landscape character in Worcestershire is good. It has not been possible to update this indicator in 2012 due to an absence of up-to-date aerial photographs. It is anticipated that the next aerial photos will be available in 2013-14 and an update to this indicator will be provided as soon as possible after this.

As yet, no other West Midlands counties have undertaken or published condition and sensitivity analyses, and no national data has been identified. Some protected landscapes undertake fixed-point photographic surveys at regular intervals it monitor landscape change, but this is not comparable with the Worcestershire assessment. Expert interpretation of the baseline data by landscape officers has confirmed that Worcestershire's landscape is in good condition.

Likely evolution: The likely evolution of the landscape is dependent on a wide range of factors, including development planning and development control decision–making. Specific proposals could undermine landscape quality through eroding character if designs fail to respond to their landscape context in a sensitive manner through scale, massing, etc.

Role of MLP: The MLP has a major role to play in helping to ensure that landscape is conserved and enhanced. The impact of minerals development on landscape can be significant, and there is potential for serious detriment. It is recognised that the impacts of minerals development will change over time, and whilst some harm could be experienced during operational phases, site restoration has the potential to create high-quality landscapes.

A wide range of support, guidance, and self-administered online checklists exist to ensure that landscape can be fully considered in development proposals from the earliest stage. The MLP could help to ensure the benefits afforded by this resource are maximised by signposting to the data/toolkits, and ensuring landscape considerations are fully integrated into policies.

Data sources: Worcestershire Partnership State of the Environment Report 2011-12

Planted ancient woodland sites restored to native woodland

Key data: It is a woodland action plan objective in Worcestershire to promote appropriate restoration of coniferous and non-native broadleaved woodland to semi-natural broadleaved woodland. Restoration sites will be prioritised on former ancient woodland sites (AWS) where greatest levels of biodiversity can be retained adding to the creation and provision of forest habitat networks.
The baseline data used in this report concerns all woodlands above 2Ha in extent, and the baseline year is 2009. Data is sourced from academic reports, Forestry Commission (FC) estate holdings under restoration during the last 5 years, and private woodlands under English Woodland Grant Scheme Planted Ancient Woodland (PAWS) restoration restocking grant claimed during the last 2 years. Worcestershire's Biodiversity Action Plan target for PAWS restoration is 60% by 2017, which amounts to approximately 1000ha. In March 2010 the area of woodland under PAWS in Worcestershire was 2,649ha. FC estate restoration amounted to 290ha, and private woodland 41.08ha. In the year to March 2012 there has been continued phased restoration on the public forest estate. There have been a number of areas of private woodland PAWS restoration in Worcestershire in the past year (to March 2012) totalling approximately 9.54ha. Many woodlands in Worcestershire are currently unmanaged, under-utilised, neglected and damaged. Only 3.6% of the county area is AWS, with 2.5% ASNW and 1.1% replanted.

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: The MLP can play a role in ensuring that ancient woodland, which forms a key part of the Worcestershire landscape, is conserved and enhanced through guiding development. Minerals restoration policies could also make provision for the restoration of ancient woodland, either on-site or elsewhere.

Data sources: Worcestershire Partnership State of the Environment Report 2011-12

BIODIVERSITY, GEODIVERSITY, FLORA & FAUNA

Condition of European nature sites

Key data: **European Sites considered for Habitat Regulation Assessment in Worcestershire and their Conservation Objectives**

European Site	Conservation Objectives (summarised)	Favourable Condition Comment
Lyppard Grange Ponds SAC	To maintain the designated habitats in favourable condition for great crested newts. Habitat Types represented (Biodiversity Action Plan categories): - Lowland ponds and neutral grassland/parkland	Favourable
Bredon Hill SAC	To maintain the presence of dead ash wood and pollards for Violet click beetle (*Limoniscus violaceus*). Focussed on component Site of Special Scientific Interest (Bredon Hill). The Conservation Objectives for the European interest on the SSSI: • to maintain, in favourable condition, the habitats for *Limoniscus violoceus*, with particular reference to the wood-pasture and ancient ash woodland.	Favourable
Dixton Wood SAC	The Violet click beetle (*Limoniscus violaceus)* was discovered at Dixton Wood in 1998 and was found at the site on a single occasion subsequently. It is a small site with large number of ancient ash *Fraxinus excelsior* pollards, and supports a rich fauna of scarce invertebrate species associated with decaying timber on ancient trees. The Conservation Objectives focussed on: • maintaining, in favourable condition, the habitats for the population of violet click beetle; • principal risks to the site's integrity are lack of future replacement pollards (age-class skewed to older generation) and game management practices. • These are issues addressed through provision for the creation of new pollards as well as management of existing resource to prevent loss through senescence and wind-blow.	Favourable
Fens Pools SAC	To maintain the extent of the amphibian habitat (terrestrial and aquatics). Conservation objectives: • No loss of area or fragmentation of site (through significant barriers to amphibian dispersal) compared with status at designation.	Favourable
River Wye/ Afon Gwy SAC	The Conservation Objectives for the River Wye SAC are focussed on the component SSSIs (River Lugg and Lower Wye). The Conservation Objectives for the European interest on the SSSIs are to maintain, in favourable condition, the: • floating formations of water crowfoot (*Ranunculus*) of plain and sub-mountainous rivers and populations of: • Atlantic salmon (*Salmo salar*) • Allis shad (*Alosa alosa*) • Twaite shad (*Alosa fallax*) • Bullhead (*Cottus gobio*) • Brook lamprey (*Lampetra planeri*) • River lamprey (*Lampetra fluviatilis*) • Sea lamprey (*Petromyzon marinus*) • White-clawed crayfish (*Austropotamobius pallipes*) and the river and adjoining land as habitat for populations • Otter (*Lutra lutra*)	Favourable
Downton	The site is potentially vulnerable to effects of air- and water-borne	Favourable

Gorge SAC	pollution, particularly in respect of its significant lichenological interest. However, effects are not related to management of site. • ensure no loss of ancient semi-natural stands, no loss of ancient woodland or wood-pasture and no reduction in the number of veteran trees.	
Walmore Common SPA	Internationally important bird assemblage of *Cygnus columbianus bewickii* • no significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline • significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure; • relevant attribute: disturbance in feeding or roosting areas; • measure: reduction or displacement of wintering birds.	Favourable
Walmore Common Ramsar	Internationally important bird assemblage of *Cygnus columbianus bewickii* • no significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline. • maintain no less than 43 individuals, representing an average of 0.5% of the GB population (i.e. 5 year peak mean 1998/9- 2002/3)	Favourable
Severn Estuary SAC	The Conservation Objectives for the European interest are to maintain, in favourable condition, the: • estuaries • mudflats and sandflats not covered by seawater at low tide • atlantic salt meadows	Favourable
Severn Estuary SPA	• no significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline • significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure; • relevant attribute: disturbance in feeding or roosting areas; • measure: reduction or displacement of wintering birds. "Supporting habitats" are identified which describe the key habitats within the European marine site necessary to support the interest features i.e. the qualifying bird species. The "favourable condition table" contains further detail on habitat conditions. • subject to natural change, maintain in favourable condition the habitats for the internationally important populations of the Annex 1 and migratory species • intertidal mudflats and sandflats (Annex 1 species, migratory species and waterfowl assemblages); • saltmarsh communities (Annex 1 species, migratory species and waterfowl assemblages); and • shingle and rocky shore (migratory species and waterfowl assemblages).	Favourable
Severn Estuary Ramsar	No less than 68,026 individuals in the assemblage (i.e. the 5 year peak mean between 1988/9 – 1992/3). • Relevant attribute which may cause deterioration: Nonphysical disturbance, noise (e.g. coastal development; visual (coastal development). Non-toxic contamination: changes in nutrient loading and changes in organic loading (industrial outfalls). • No significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline. Target number of Annex II species: • Dunlin - >41,683;	Favourable

	• Shelduck>2,892; • Redshank>2,013; (i.e. the 5 year peak mean between 1988/9 – 1992/3). Maintain in a favourable condition the habitats for the internationally important assemblages of waterfowl listed, in particular: • saltmarsh - Upper and lower saltmarsh provide important feeding and roosting areas. The European white-fronted geese graze on a range of saltmarsh grasses and herbs. The birds feed on the saltmarsh and the transition to coastal grazing marsh in front of the sea defences in the upper estuary. • mudflats and sandflats; and • coastal lagoons.	

Key European Site Sensitivities

Habitat Type and Species Associated European Site	Key Sensitivities represented across the European sites by habitat type (assuming no direct habitat loss)
<u>Ponds and Pools</u> **• Lyppard Grange Ponds SAC – Great Crested Newt** **• Fen Pools SAC – Great Crested Newt**	• 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.
<u>Woodland</u> **• Bredon Hill SAC** **• Dixton Wood SAC** **• Downton Gorge 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 degradation 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, including temperature – more algal blooms, reduced summer flow. Including high rainfall – more erosive runoff and sedimentation. • Illegal fish poaching • Spread of introduced non-native species • Artificial barriers to fish migration
Wet Grassland **• Walmore Common SPA and 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 Habitats **• Severn Estuary SAC/SPA/ Ramsar**	• Water quality – pollution • Recreational/tourism 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)

Likely evolution: It is unclear how the condition of European sites may change in the future. The strength of existing planning controls should help ensure that conflicting land use that compromises site integrity is minimised in all but a minority of cases.

Role of MLP: The extraction and movement of minerals has the potential to impact negatively on European sites. The MLP can help to ensure that no significant effects arise from minerals operations through providing policies on the location, operation, and safeguarding of European sites. A Habitats Regulations Assessment screening report (and full 'appropriate assessment' report if necessary) will be carried out alongside the MLP to assess whether or not the MLP is likely to have significant effects on any European site.

Data sources: Minerals Local Plan Habitats Regulations Assessment Scoping Report 2012

Condition of SSSIs

Key data: Sites of Special Scientific Interest (SSSIs) are wildlife or geological sites of national importance. They are key to the conservation of some of our most valued biodiversity and it is essential that they meet their conservation objectives and that we have information on their condition, as a measure of the wider biodiversity of the county. SSSIs cover 2.05% of Worcestershire's area (3,560 ha). There has been a steady increase in the proportion of SSSIs within the county in 'favourable' or 'unfavourable recovering' (i.e. returning to favourable) condition. 96% of SSSI's are now in favourable or unfavourable recovering condition.

Condition of Worcestershire SSSIs

Condition at 1st April 2012	Area (ha)	Percentage of total area
Favourable	1370.69	38.50%
Unfavourable Recovering	2031.24	57.06%
Unfavourable No Change	102.33	2.87%
Unfavourable Declining	51.23	1.44%
Part Destroyed	1.69	0.05%
Destroyed	2.74	0.08%
Total area (ha)	**3559.92**	**100%**

In Redditch and Malvern Hills 100% of sites are in 'favourable' or 'unfavourable recovering' condition. Significant issues remain in Bromsgrove, where 44% of sites are classified as 'unfavourable no change' and 15% as 'unfavourable declining'.

District breakdown

	Favourable/ unfavourable recovering %	Unfavourable no change %	Unfavourable declining %	Destroyed %
Bromsgrove	39.6	43.9	14.7	1.8
Malvern Hills	99.3	-	0.7	-
Redditch	100	-	-	-
Worcester City	100	-	-	-
Wychavon	96.6	3.4	-	-
Wyre Forest	98	0.4	1.5	0.1

Likely evolution: The condition of SSSIs has improved significantly over recent years and it may be that the results have reached a 'plateau'. Changes to the Common Agricultural Policy and other funding schemes could see a slight decline in condition as resources become increasingly stretched, but this will not become clear until around 2013/14.

Role of MLP: Through guiding development to help conserve and enhance SSSIs, the MLP can contribute to biodiversity goals. Indeed, the BIS report on the impact of mining and quarrying referred to below states that despite its poor record in the past, the industry now makes an overall positive contribution to biodiversity and geodiversity which is disproportionate to its land take. This is illustrated by the

large number of Sites of Special Scientific Interest and Natura 2000 sites linked to past and current mineral extraction. Opportunities afforded by site restoration should seek to maximise biodiversity and where appropriate create or enhance features of geodiversity importance.

Data sources: Worcestershire Partnership State of the Environment Report
BIS: Digging the backyard: Mining and quarrying in the UK and their impact on future land use, Land Use Policy Journal, 2009

Management Status of Local Sites

Key data: This indicator does not measure the actual condition of local sites (Special Wildlife Sites and Local Geological Sites), but rather assesses which of the sites are under management regimes appropriate for the retention of site designation. By proxy, it can be reasonably inferred that a site under a favourable management regime will be in better condition than one that it not (although there will be isolated exceptions to this).
In Worcestershire, the current condition of local sites is rated as poor, as only 31% of the total combined sites have been rated as being under appropriate management.

	Biodiversity only			LGS only		
	Total no. bio sites in district	No. sites scoring from revised scores	Indicator % fig bio only	Total no. LGS in district	No. RIGS scoring	Indicator fig RIGS only %
Bromsgrove	79	17	21.5	5	4	80.0
Malvern Hills	183	45	24.6	63	25	39.7
Redditch	22	8	36.4	0	0	0.0
Worcester City	9	7	77.8	0	0	0.0
Wychavon	123	44	35.8	16	5	31.3
Wyre Forest	45	14	31.1	8	3	37.5
County totals	**461**	**135**	**29.3**	**92**	**37**	**40.2**

Figures correct as of May 2010. Updates anticipated before May 2013.

Likely evolution: The proportion of sites under appropriate management has seen a slight increase of 4.9% since the previous assessment, although this is mainly due to survey work to find out about the status of the sites, rather than actual changes in site management. It is unclear whether this improvement will continue.

Role of MLP: Through requiring development proposals to take account of local biodiversity and geodiversity sites, the MLP could seek to protect and conserve these assets. The location of minerals sites can also be guided to help minimise disturbance to these sites. The MLP could have a positive impact on geodiversity by opening up new sites which could ultimately become additional Local Geological Sites (LGSs). Policies could also make provision for both designated and non-designated geodiversity to be opened up for educational and recreational benefit where appropriate, to form a lasting legacy of value to naturalists and the wider public. The opportunities afforded by site restoration should seek to maximise biodiversity.

Data sources: Worcestershire Partnership State of the Environment Report

Key Breeding Birds Population Numbers

Key data:

The status of wild bird populations is considered an important indicator of the overall health of the natural environment, as birds occupy all habitats and are near the top of the food chain. This indicator comprises population data for three species, which between them display a variety of habitat preferences. For the countryside to be in good health all habitats need to be doing well - if one component is failing, the general health of the countryside cannot be considered as good. Performance of this indicator is therefore based on the species performing least well. Latest results (2010/11) show that two of the three species (bullfinch and skylark) are declining, whilst thrush has shown a small increase. Status is defined by comparing the most recent 5 year average frequency of occurrence with the 94-98 five year average, which is used as a baseline.

Species	1994 -1998 5 yr average	2006-2010 5 yr average	Change (no.)	Change (%)	Indicator status
Song thrush	84.3	90.5	6.2	7.31	Amber
Skylark	72.8	63.9	-8.9	-12.2	Red
Bullfinch	44.3	23.9	-20.4	-46	Red

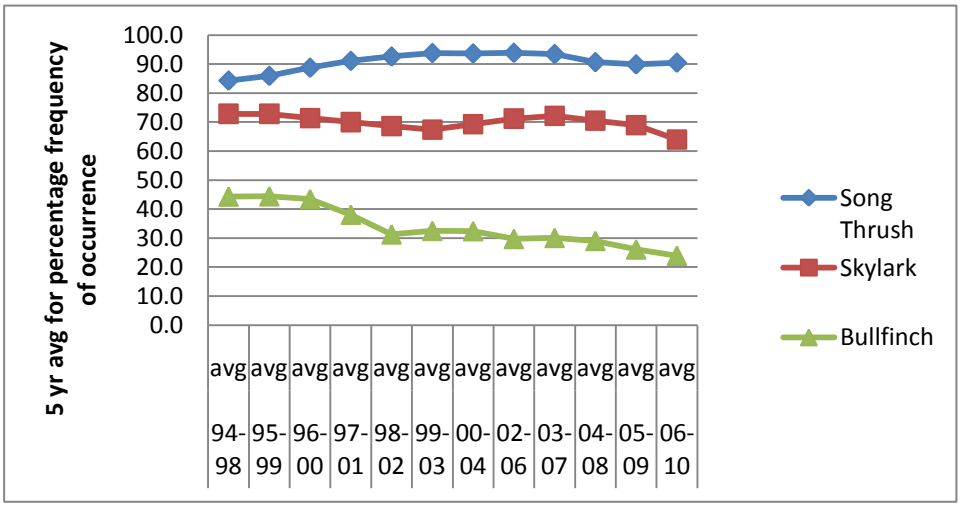
A percentage change +/- 10% is the chosen threshold for a population status change assessment.

Performance of this indicator is based on the species which is performing least well. The latest 2010/11 data show that two of the three species are declining. Direction of travel is indicated by the magnitude and direction of the percentage change between the latest 5-yr average and the preceding 5-yr average.

Species	2000-2004 5 year average	2006-2010 5 year average	Change (no)	Change (%)	Direction of travel
Song thrush	93.7	90.5	-3.2	-3.4	↔
Skylark	69.2	63.9	-5.3	-7.65	↓
Bullfinch	32.4	23.9	-8.5	-26.15	↓

A percentage change of +/- 5% is the chosen threshold for a population trend change assessment.

Rolling 5 yr average frequency of occurrence for the three indicator species



A national comparator to the Worcestershire data is the *Populations of selected species (birds)* indicator, which includes trends relating to breeding farmland and woodland birds. The latest data (UK Biodiversity Indicators in your pocket 2011) describes both farmland and woodland birds as 'declining', although there have been recent increases to the numbers of woodland breeding birds. The Worcestershire results broadly reflect the national picture, in that the species more dependent on farmland features (skylark and bullfinch) are declining, whereas song thrush, which has a broader range of habitat preferences, has a stable population.

Likely evolution: The song thrush, a generalist species of towns, gardens and wooded habitats, is doing well, as its basic habitat requirements are maintained.
The skylark, a bird of arable land and locally, unenclosed grasslands and commons, has previously shown an increase in population numbers, but now appears to be declining. The increase had been attributable to the habitat provided by arable set-aside and the considerable investment in farmland bird conservation practices through local uptake of agri-environment schemes (although research has not been undertaken to prove this). The ending of compulsory set aside in 2009, may mean the removal of much skylark nesting habitat. Winter survival rates, which have already been reduced by the change from spring to autumn cereal sowing, may have been further impacted by the colder winters of 2009/10 and 2010/11. The onus is on farmers, their representative bodies, Natural England and Defra to take effective measures to offset further population declines.
The bullfinch, a specialist of woodland edges, mature scrub and thick hedgerows, has been in long-term decline, with indications of a recent levelling off. Contributory factors are likely to be the harsh management of wood edges and hedgerows, including the replacement of tall and thick hedges with short flailed hedges, and the decline in traditional orchards.

Role of MLP: The MLP has a role to play in guiding development to minimise the risk to breeding bird populations and their habitats. Restoration policies should take into account the potential for beneficial gains resulting from sensitive landscape and habitat creation.

Data sources: Worcestershire Partnership State of the Environment Report

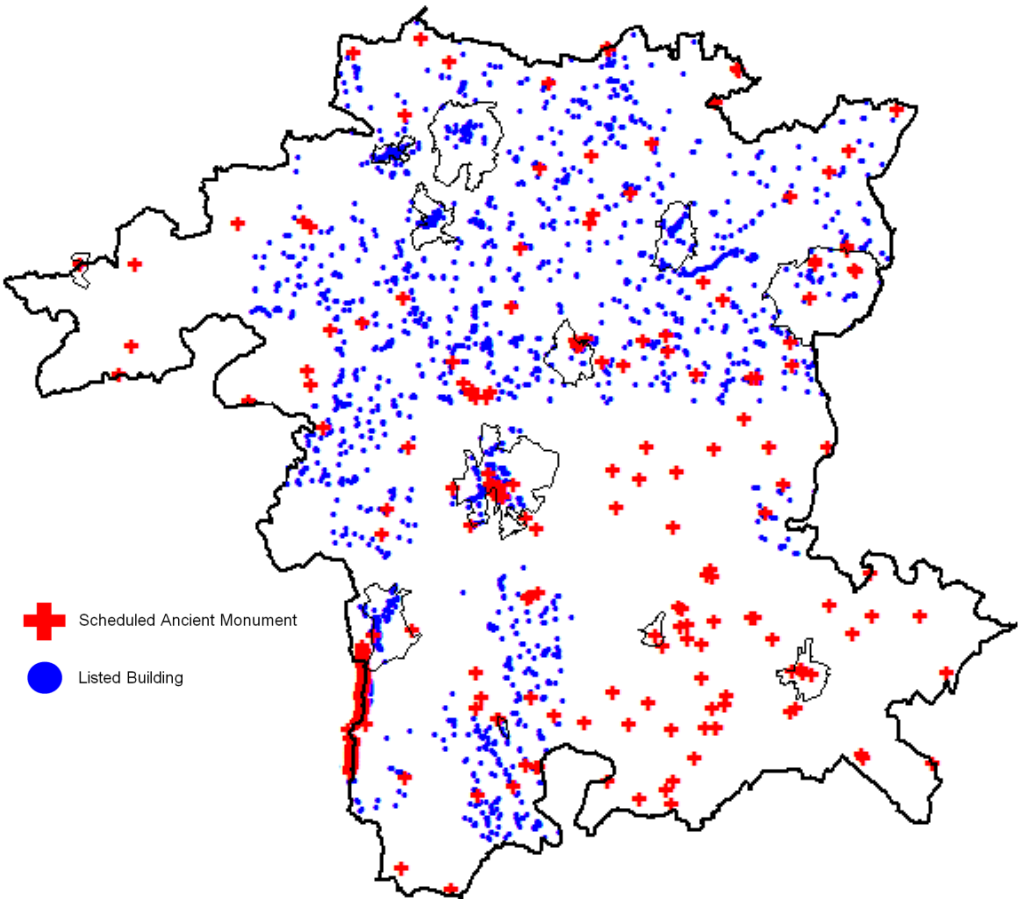
CULTURAL HERITAGE, BUILT DESIGN AND ARCHAEOLOGY

Number of grade I and II* listed buildings 'at risk'

Key data: Specific Worcestershire-level data is not available.

In the West Midlands in 2011, there were 111 Grade I and II* listed buildings at risk (4% of the total). This is an improvement on 2010 (4.4%) and 2009 (4.5%). There were also 230 Scheduled Monuments at risk (16% of the total), an improvement on 2010 (17%) and 2009 (20%).
There were 10 Registered Parks and Gardens at risk in 2011 (6.7% of the West Midlands total. This is the same as 2010, and an improvement on 2009 (7.3%).

Distribution of Listed Buildings and Scheduled Ancient Monuments in Worcestershire



Nationally, English Heritage data show that the percentage of Grade I and II* buildings at risk in 2011 was 3.0% (a decrease from 3.8% in 2009). The percentage of scheduled monuments at risk in 2011 was 16.9% (a decrease from 17.9% in 2009). The percentage of registered parks and gardens at risk in 2011 was 6.4%, an increase from 6% in 2009.

Likely evolution: Generally, the number of grade I and II* listed buildings classified as being 'at risk' is falling as work is undertaken to conserve their fabric and secure new uses.

Role of MLP: The MLP can help listed buildings, ancient monuments and historic parks and gardens from becoming at risk through policies to ensure that minerals sites do not compromise these assets, which could lead to a decline in their management (for example, mineral workings too close to a listed building could see the occupier withdrawing, leaving the building to fall into decline).
The greatest role for the MLP may be in ensuring sufficient building stone/brick clay is available to provide for repairs to historic buildings, many of which will need to be maintained in the local vernacular style. This may require small-scale workings to be available, or for stocks of materials to be kept, to allow for small-scale repairs as and when needed.

Data sources: Heritage Counts 2011, English Heritage

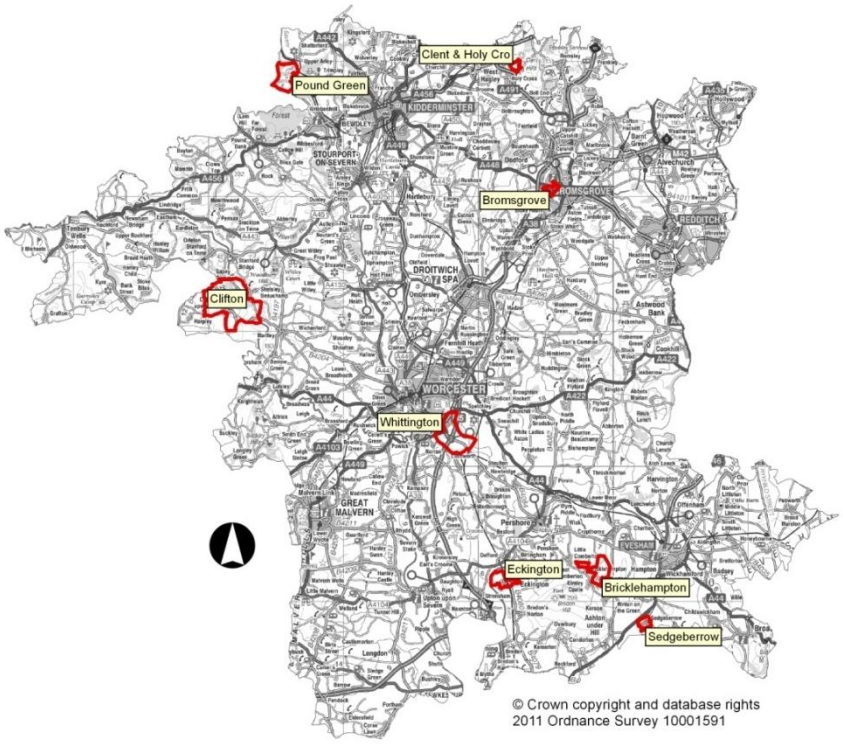
Proportion of undesignated heritage assets at risk

Key data:

There are around 26,000 undesignated heritage assets on the Worcestershire Historic Environment Record. Worcestershire Archive and Archaeology Service (WAAS) developed the Heritage at Risk Monitoring (HARM) project to monitor risk and change to a range of these historic environment features across the county. This framework closely follows the methodology of English Heritage's own Heritage at Risk initiative. The HARM indicator will give a broader and more accurate picture of the state of the historic environment than analysis of designated assets alone can provide.

Eight sample areas were selected (as below) to ensure a representative range of monument and landscape settings in rural, urban and peri-urban locations across Worcestershire. The sample areas do not change from year to year.

Worcestershire's Undesignated Heritage at Risk Monitoring Areas



The condition of the 70 Heritage Assets has been assessed as:

	Good	Intermediate	Poor
2012	50%	31%	19%
2011	48%	36%	16%

The majority of sample assets are in either 'good' or 'intermediate' condition. Four heritage assets were deemed to be deteriorating (two of which were already in poor condition and considered high risk). The third was in 'intermediate' condition and has dropped to 'poor'. The fourth was in 'intermediate' condition and remains in 'intermediate' condition as the deterioration is minor. One

heritage asset was deemed to have improved (a sympathetically-restored dwelling).
In terms of risk, 16% of heritage assets were considered to be high risk, 54% at medium risk and 30% at low risk. This is fairly similar to 2011, when 16% of assets were considered to be high risk, 57% at medium risk and 27% at low risk. The high risk examples fall into two categories:

- buildings not protected in any form (e.g. within a Conservation Area) with no current function or in a state of disrepair;
- cropmarks/earthworks under arable cultivation or at risk from a specific threat e.g. flood damage or run-off erosion.

Trends in the types of heritage assets most at risk should become apparent over a longer period.

Worcestershire is currently the only county monitoring undesignated heritage assets in this way, so it is not possible to carry out a direct comparison with other counties. Other regional surveys of the historic environment, such as English Heritage's monitoring of designated assets and the Historic Farmsteads Characterisation project, indicate that Worcestershire is broadly equivalent to its neighbours in terms of risk and loss, performing slightly better in some areas and slightly worse in others.

Likely evolution: Unlike Scheduled Monuments, where certain controls are in effect, undesignated assets have little or no protection. Management within Environmental Stewardship agreements can provide a solution, but only for those historic buildings in agricultural use. It is currently unclear how performance may be expected to progress.

Role of MLP: The MLP can help to prevent unlisted heritage assets from becoming at risk through policies to ensure that minerals sites do not compromise these assets, which could lead to a decline in their management. Policies should require archaeological investigations of any site where there may be undisturbed heritage assets.
The greatest role for the MLP may be in ensuring sufficient building stone/brick clay is available to provide for repairs to historic buildings, many of which should be maintained in the local vernacular style. This may require small-scale workings to be available, or for stocks of materials to be kept, to allow for small-scale repairs as and when needed.

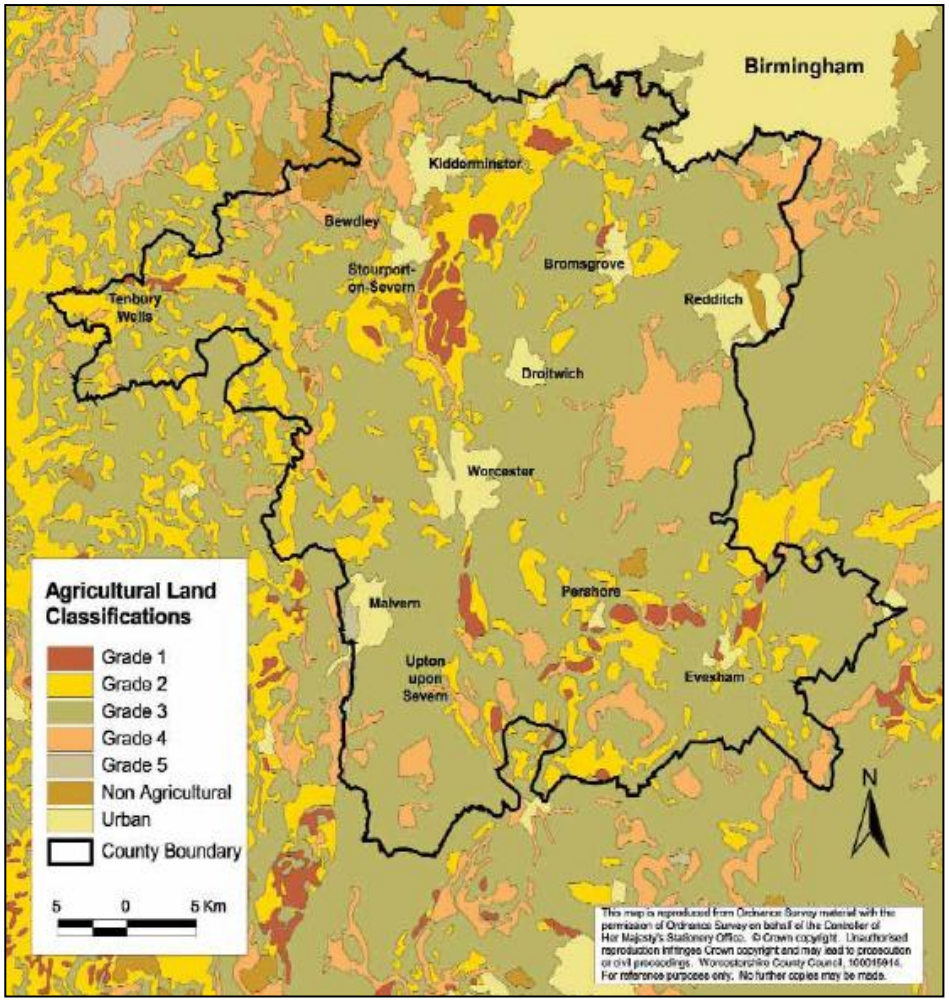
Data sources: Worcestershire Partnership State of the Environment Report

MATERIAL ASSETS - including land use and local amenity

Amount of land falling within Agricultural Land Classifications (hectares)

Key data: The Agricultural Land Classification provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long- term limitations on agricultural use.

Agricultural Land Classification	Area (hectares)
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



No regional assessment of land falling within each agricultural land classification has been identified, but the following figures show the hectarage of Grade 1 agricultural land in some of Worcestershire's neighbouring counties:

Area	Hectares of Grade 1 Agricultural Land
Warwickshire	105
Shropshire	10
Gloucestershire	2,883
Herefordshire	8,961

These figures suggest that Worcestershire's agricultural land quality is good relative to other areas.

Likely evolution: Worcestershire has a relatively large resource of high-quality agricultural land, but it is not possible to chart how this may have changed in recent years, as monitoring is not undertaken. It is not clear how this may evolve in the future, but with national brownfield targets no longer applicable, it may be that increasing proportions of Greenfield land are used for development, which increases the chance of high quality agricultural land being lost to development.

Role of MLP: Minerals sites can only be developed where the resource exists, so this may mean that some high quality agricultural land is lost to development. However, the temporary nature of mineral sites may afford the opportunity to return the land to high quality agricultural (or other) use once the mineral operations are complete, and this could even see a net gain where sites are restored to agricultural land of better quality than that of the 'original' site.

Data sources: Planning for Soils in Worcestershire Technical Research Paper

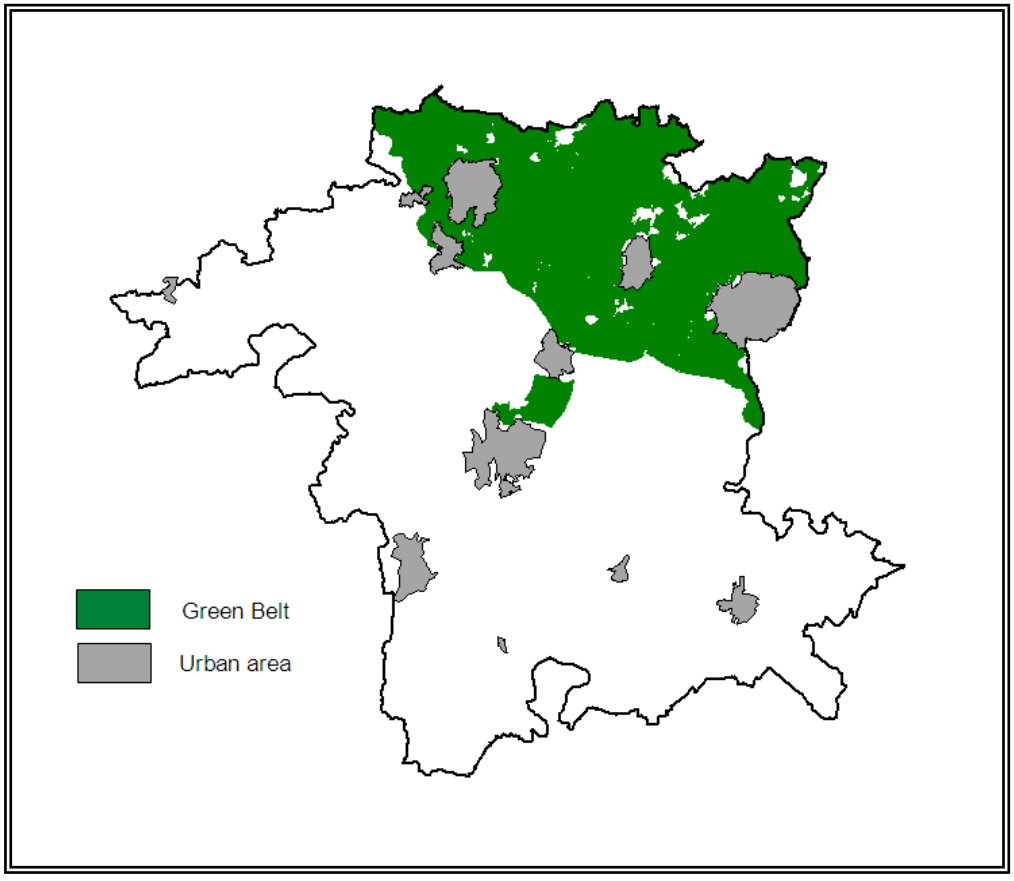
Hectares of Green Belt land

Key data: In 2011, Worcestershire had 41,650ha of land within the Green Belt, made up as follows:

Authority	Hectares of Green Belt land
Bromsgrove	19,490
Redditch	1,830
Worcester	240
Wychavon	8,870
Wyre Forest	11,220
County Total	41,650

In 2011, the West Midlands had 269,380ha of Green Belt land.

The area of designated Green Belt land in England at March 2011 was estimated at 1,639,540 hectares, about 13% of the land area of England.



Likely evolution: No trend data for Green Belt land in Worcestershire has been identified. There is not currently any indication that green belt boundaries are going to be reconsidered in the near future. Bromsgrove district's Draft Core Strategy makes

provision for a possible green belt review in that district post 2021, if needed to accommodate housing growth.

Role of MLP: Minerals extraction is not inappropriate in the Green Belt providing the development preserves the openness of the Green Belt. The MLP could identify sites for mineral working which fall within the Green Belt. Whether or not each specific development coming forward was contrary to Green Belt policy would have to be determined on the merits of each scheme and whether or not they amounted to inappropriate use. The MLP can help guide developments to sites less likely to have an adverse impact on the openness of the Green Belt by applying a criterion which seeks, if possible, to exclude such sites through a site sifting process. It should be noted that most mineral workings are temporary in nature, and that upon completion the site may be restored to the same or better landscape quality than that of the 'original' site. Even if there is some impact on Green Belt openness during operations, it is unlikely that openness would be compromised in the longer term. The MLP should include polices to ensure that restoration of workings in the Green Belt is not inappropriate.

Data sources: DCLG/ONS: Local Planning Authority Green Belt Statistics: England 2010/11

NATURAL RESOURCES (AIR, WATER, SOIL, MINERALS)

Number of Air Quality Management Areas (AQMAs) in Worcestershire

Key data:

All Local Authorities have a legal duty to review and assess air quality against national objectives, which include two for nitrogen dioxide (NO_2). The data is either obtained by continuous real time analysers or by using diffusion tubes that are exposed for a period of time before being analysed.
Where exceedances are found, local authorities have to declare Air Quality Management Areas (AQMAs) and produce Action Plans, the aim of which is to reduce the level of that pollutant to below the objective. The only exceedances of the objectives in Worcestershire are for annual mean of 40µg/m^3 for NO_2.
The principal source of the nitrogen dioxide is emissions from road vehicles in busy and congested streets. Other pollution, including commercial, industrial and domestic sources, also contributes to background pollution concentrations.

There are currently 8 Air Quality Management Areas (AQMAs) in Worcestershire:

District	AQMA
Bromsgrove	Worcester Road, Bromsgrove Lickey End, Bromsgrove Kidderminster Road, Hagley Redditch Road, Stoke Heath
Wyre Forest	Welch Gate, Bewdley Horsefair, Kidderminster
Wychavon	Port Street, Evesham
Worcester City	St. Johns, Worcester

Likely evolution:

The number of AQMAs in Worcestershire has increased in recent years.
Due to poor air quality results, detailed assessment has been undertaken in Stourport-upon-Severn. Whilst the investigation has yet to be concluded, it is suspected that an AQMA will be declared in this location.
Detailed assessment is also required at the junction of Shaw Street and Foregate Street in Worcester, due to deteriorating results.

Whilst air quality is generally deteriorating, work is in place to coordinate action across the county with production of a county-wide Action Plan to identify and implement remedies that would provide general improvement and those that would resolve specific areas of poor air quality. Air quality at Newtown Road in Worcester has improved such that this location is no longer an AQMA.

Role of MLP:

Minerals development can mean significant numbers of HGV movements, and mineral operations can cause localised air pollution through dust and emissions. The MLP should seek to guide development to locations that can be served by sustainable transport modes and avoid the potential to add to vehicle emissions, particularly through HGVs passing through heavily-congested hotspots.

Data sources:

Air Quality Strategy for Herefordshire and Worcestershire 2008
Worcestershire Partnership State of the Environment Report

Water Quality

Key data:

River water quality is affected by many factors. These can generally be divided into point sources, which have a traceable discharge point, and diffuse sources, which cannot usually be traced back to a single discharge point. Examples of point sources include domestic and industrial waste water; examples of diffuse sources include polluted water and sediment washing off fields, recreational areas, roads and pavements. There have been significant improvements in waste water discharges over recent years but pollution from diffuse sources is becoming an increasing threat. Quality of the county's water bodies is assessed by the Environment Agency under Water Framework Directive (WFD) classifications:

Ecological status or potential	Number of water bodies
Good	10
Moderate	56
Poor	11
Bad	5

82 river and canal water bodies fall wholly or partially within Worcestershire, representing around 700 km of watercourse. 6 water bodies have been designated as 'artificial' and 12 as 'heavily modified'. These water bodies must meet *Good Ecological Potential* (GEP). The remaining 64 'natural' water bodies are required to meet *Good Ecological Status* (GES).

Worcestershire Water Courses do not compare very favourably with those 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 'good' status (nationally, the figure is 26%).

Minerals operations have the potential to impact negatively on water quality. Depending on the minerals being worked, extraction itself can involve flushing by high-pressure jets, or by controlled pumping. The subsequent processing can involve water in washing and screening. The used water is cleaned and returned to the environment. If the treated water is not sufficiently clean, dissolved or suspended minerals can leach into the ground below the water table and cause water quality issues that could impact on human health and biodiversity.

Likely evolution:

The largest challenge for those working to improve the quality of Worcestershire's rivers is in tackling sources of run-off from roads and fields. These diffuse sources of pollution are difficult to attribute to a single discharge point and will not be affected by the regulatory approach that has been successfully adopted to reduce the impacts of point source pollution.
Failure to meet WFD targets will mean the UK facing fines, some of which may be passed to local authorities. This is a major driver for change, and a great deal of attention is being paid to water quality from a broad range of partners. It is expected that water quality will therefore continue to improve in coming years.

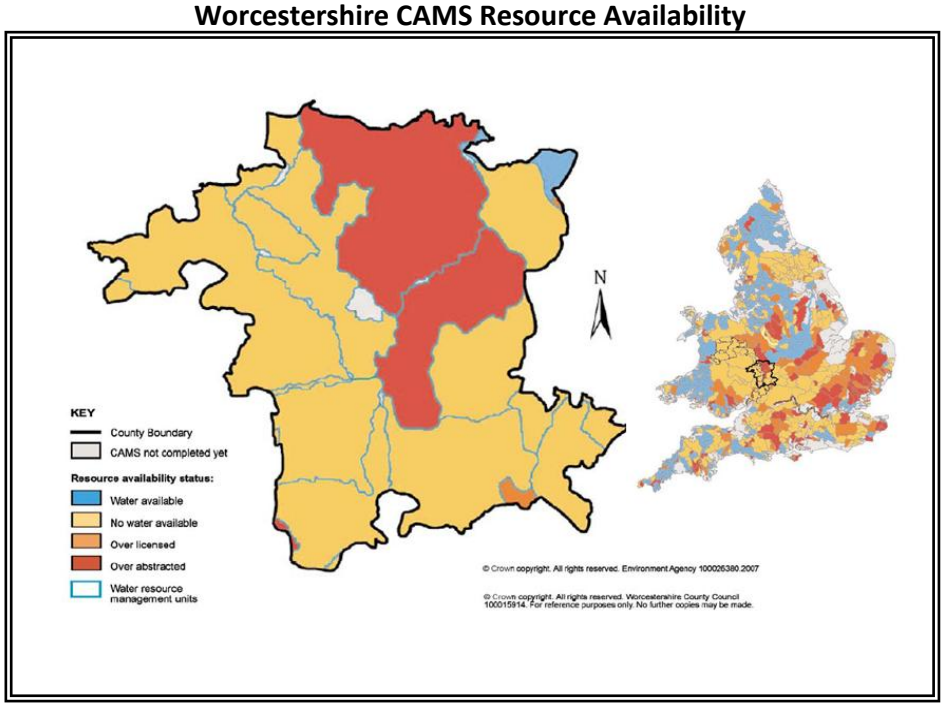
Role of MLP: The MLP can help to ensure risks to water quality are minimised through requiring the siting and operation of mineral working to take into account run-off and waste water disposal.

Data sources: Worcestershire Partnership State of the Environment Report
BGS: Mineral Matters 11: Mineral Extraction and the Water Environment 2005

Water resource availability

Key data: Catchment Abstraction Management Strategies include the availability of water resources. Data for Worcestershire shows large areas of water stress where availability is limited. This could have implications for water-intensive development (or multiple developments which aren't in themselves water-intensive, but which present a considerable extra burden when considered collectively). Liaison with the Environment agency will be needed from the earliest stage to establish whether or not water is available.

Worcestershire CAMS Resource Availability



Likely evolution: Resource efficiency will be essential if development is to be sustainable. Increasingly stringent standards in Building Regulations and the Code for Sustainable Homes should mean that future domestic and commercial buildings consume less water, but the collective impact of new development could present a major difficulty for water resources.

Role of MLP: Many mineral operations are worked 'dry', which requires water to the pumped out of the quarry void and discharged, often off-site. The 'draw down' in the water table can have impacts on surrounding groundwater and hydrology. The MLP should cooperate with the environment agency to develop policies which complement the existing regulator regime with regard to abstraction and discharge licences.

Data sources: Worcestershire Partnership State of the Environment Report
Planning for Water in Worcestershire Technical Research Paper.

Contaminated Land

Key data: This actual amount of land that is definitely 'contaminated' is not known. This indicator is a measure of all the work undertaken to clarify whether sites that have been subject to a potentially contaminative use, incident or activity, are 'Contaminated Land' or conversely are suitable for use. This covers sites that are contaminated from current activity, historical land-use, natural contamination or a one-off spill or incident. It is a measure of knowledge and associated risk as much as remediation of contaminated land sites. For most parts of the county the number of sites addressed proactively by landowners or developers is counterbalanced by new sites resulting from spills, leaks or incidents.

As of 1 April 2011 there were considered to be 7,941.94 hectares of potentially contaminated land in Worcestershire.

During the period 2011-12 local authorities in the county addressed a number of sites that are no longer considered to be potentially contaminated land. The majority of those sites were addressed through the Planning regime despite the economic constraints. Following this work 1.84% of land that was potentially contaminated is no longer considered to be potentially contaminated land, through inspection, investigation or remediation during 2010-11.

Whilst this is an improvement in the amount of land no longer considered to be potentially contaminated land it is a lot less than that achieved during previous years. There are several reasons for this:

- Fewer large sites were addressed through voluntary remediation or investigation due to the economic climate.
- The remediation of 16 properties in Redditch was resource-intensive, but the hectarage concerned was small.

About 300,000 hectares of land in England and Wales has had some form of historic use that could have caused contamination. This is approximately two per cent of the land area of England and Wales. As this is a locally-developed indicator, national comparisons cannot be made.

Likely evolution: Worcestershire Regulatory Services have completed remediation of 16 properties in Redditch that were determined as Contaminated Land in 2011. There is likely to be improved performance for 2012-13 following conclusion of investigation at over 600 properties in Redditch.

Role of MLP: The MLP should include policies to ensure that the risk of contamination from mineral extraction is minimised. This includes policies for the restoration of sites following the end of the extraction operations.

Data sources: Worcestershire Partnership State of the Environment Report

Annual production of land-won aggregates (sand and gravel)

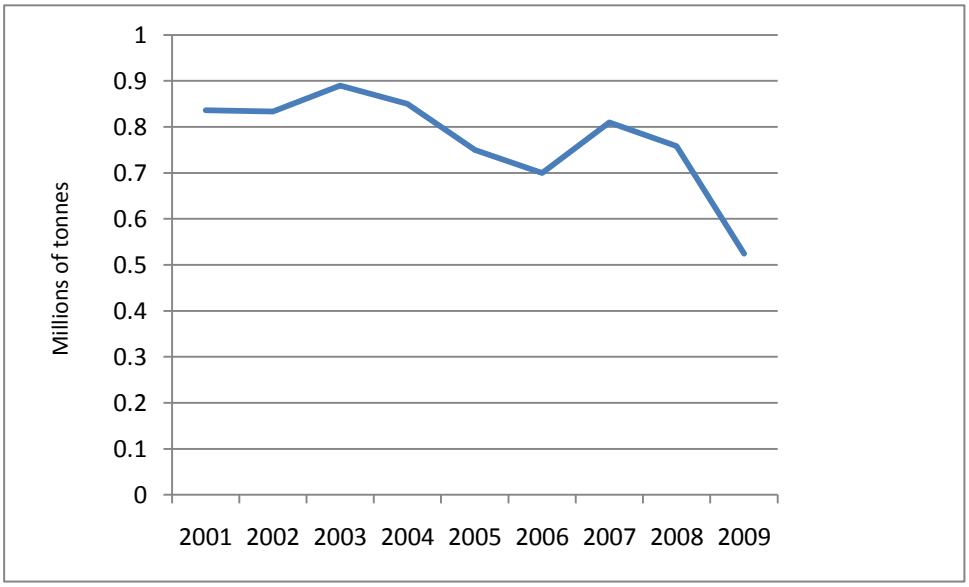
Key data:

In Worcestershire sand and gravel sales in 2004 – 2008 were relatively stable, albeit lower than in previous years. There has, however, been a significant decline in 2009. Conversations between planning officers and operators suggest that the "credit crunch" in 2008 has reduced local demand for sand and gravel, and whilst the target to meet 8.6% of the regional apportionment for sand and gravel was exceeded in 2007-08, it was not met in 2008-09. The patterns of sales in Worcestershire broadly reflect the trends in the region, as shown below.

Sand and Gravel sales for aggregate purposes (million tonnes) (RAWP)

Sand and Gravel	2005	2006	2007	2008	2009
Worcestershire	0.75	0.7	0.81	0.758	0.524
Regional Total	9.1	9.99	10.02	8.332	6.212

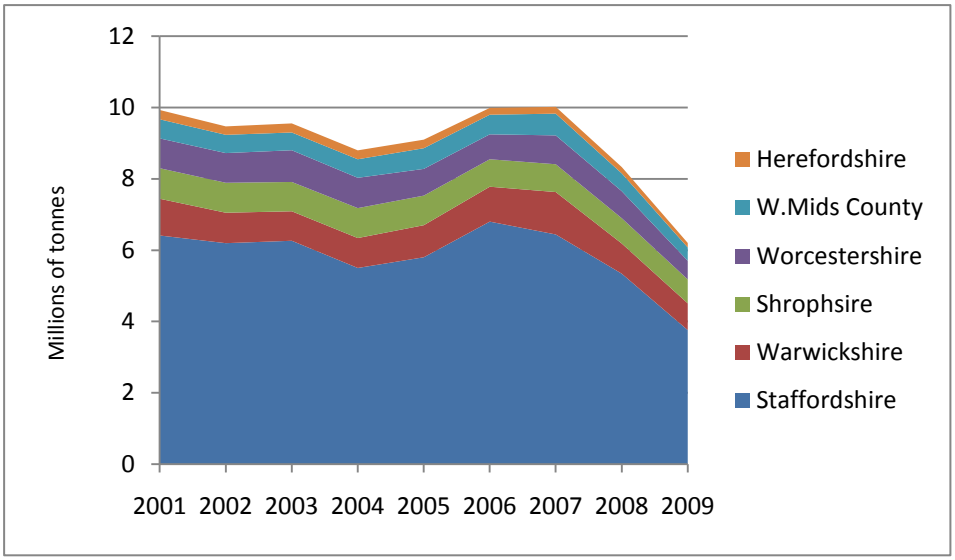
Sand and Gravel Sales for Aggregate purposes in Worcestershire (million tonnes) (RAWP)



Production

Sand and Gravel Apportionment 8.6% Regional production	2004-05	2005-06	2006-07	2007-08	2008-09
Worcestershire	9.3%	8.24%	7%	9.1%	8.44%

Sand and Gravel Sales for Aggregate purposes in the West Midlands region (million tonnes) (RAWP)



Likely evolution: The likely evolution is unclear at this stage, but demand for sand and gravel is inextricably linked to the performance of the wider economy. If there is an increase in construction and housebuilding, then it is likely that levels of extraction will increase.
Existing policies guiding extraction of sand and gravel are perceived to be adequate in themselves but two applications for sand and gravel working were refused (or refused in part) by Members against Officer recommendation during the previous (2007-8) monitoring year. Both were granted permission at Appeal. It appears to be difficult for developers to obtain Member approval for planning permission for gravel pits in areas which are outside the Preferred Areas for extraction in the Minerals Local Plan but which nonetheless pass the sieve test in (saved) Policy 2 in the Local Plan. The development of the Minerals Development Framework will seek to address these issues.

Role of MLP: The MLP will seek to ensure that an adequate supply of sand and gravel is extracted in Worcestershire to support the identified need. This need may be the same as the regional apportionment, or research may indicate that a different target is more appropriate.

Data sources: WCC MWDF Annual Monitoring Report 2010/11

Annual production of land-won aggregates (crushed rock)

Key data:

The supply of crushed rock is problematic in terms of meeting both regional supply and the number of productive units. Difficulties arise because no significant applications for crushed rock extraction have been made in the county since 1997 (the only applications have been for alterations and a very modest deepening at Fish Hill, Broadway).

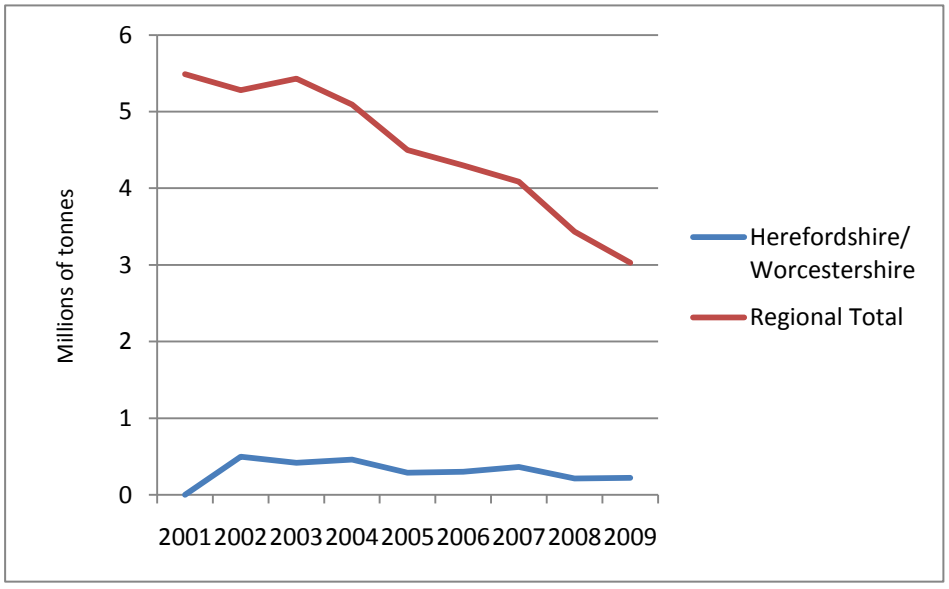
The lack of applications probably reflects the limited nature and distribution of hard rock within the county, very little of which appears to be of aggregate quality.

For reasons of confidentiality, figures for crushed rock sales in Worcestershire are combined with those in Herefordshire. There was only one crushed rock quarry in Worcestershire during the period shown below. This quarry has now been fully worked.

Crushed rock sales for aggregate purposes (million tonnes) (RAWP)

Crushed rock	2005	2006	2007	2008	2009
Herefordshire/Worcestershire	0.29	0.3	0.366	0.216	0.224
Regional Total	4.5	4.3	4.086	3.436	3.03

Crushed rock sales for aggregate purposes (million tonnes) (RAWP)



Crushed rock apportionment 2.8% Regional production	2004-05	2005-06	2006-07	2007-08	2008-09
Worcestershire	Confidential Below 2.8%	Confidential Below 2.8%	Confidential Below 2.8%	Confidential Below 2.8%	Confidential Below 2.8%

Likely evolution:

The likely evolution is unclear at this stage. The target percentage of regional production (currently 2.8%, as set out in the regional

apportionment) is not being met. The development of the Minerals Development Framework will seek to address this issue.

Role of MLP: The MLP will seek to ensure that an adequate supply of crushed rock is extracted in Worcestershire to support the identified need. This need may be the same as the regional apportionment, or research may indicate that a different target is more appropriate.

Data sources: WCC MWDF Annual Monitoring Report 2010/11

CLIMATE CHANGE

CO_2 emissions

Key data:

Data on carbon dioxide emissions, along with a number of other gases, is collected nationally in order to monitor progress towards UK targets (set under the Climate Change Act 2008) to reduce carbon dioxide emissions (CO_2) by 34% by 2020 and by 80% by 2050. The data is broken down by Local Authority area, and is only available on a 2-year time lag; the latest 2012 data therefore represents the situation from 2010.

Latest CO_2 emission figures show that Worcestershire's per capita emissions have reduced by 0.9 tonnes compared with a 2005 baseline, equating to an 11% reduction.

CO_2 emissions per capita, 2005-10

	2005	2006	2007	2008	2009	2010
Bromsgrove	9.9	10.0	9.7	9.4	8.7	9.0
Malvern Hills	9.4	9.8	9.7	9.4	8.7	8.9
Redditch	7.0	7.1	6.9	6.7	5.8	6.0
Worcester	6.7	6.4	6.1	5.9	5.3	5.6
Wychavon	12.0	12.4	11.9	11.6	10.8	11.2
Wyre Forest	7.0	7.0	6.8	6.5	5.7	6.1
Worcestershire	8.8	8.9	8.7	8.4	7.6	7.9
West Midlands	8.3	8.4	8.2	7.9	7.1	7.4
National	8.8	8.7	8.5	8.2	7.4	7.6

Total CO_2 emissions, 2005-2010

	2005	2006	2007	2008	2009	2010
Bromsgrove	904	916	899	878	813	837
Malvern Hills	691	727	724	701	652	673
Redditch	548	555	539	524	454	476
Worcester	621	596	574	557	506	533
Wychavon	1,386	1,432	1,387	1,346	1,260	1,308
Wyre Forest	686	682	668	637	562	598
Worcestershire	4,837	4,907	4,791	4,643	4,246	4,424

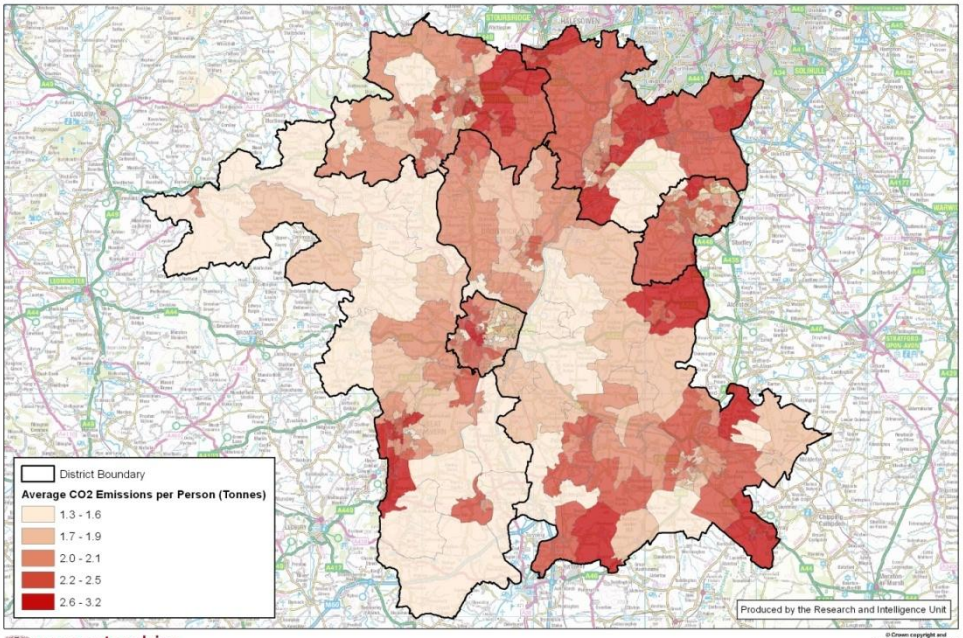
CO_2 emissions data is split by three sectors: industrial and commercial, domestic, road transport (excluding motorway emissions), and land use, land use change and forestry. The percentage splits between these sectors is shown below.

Amount (t) and Proportion (%) of Worcestershire CO_2 emissions by sector, 2010

	Industry and commercial	Domestic	Road Transport	LULUCF
Amount (t)	1,370	1,346	1,660	49
Proportion (%)	31	30	38	1

Carbon emissions are not evenly spread across the County. The map below shows the concentration of CO_2 emissions across the county for 2009. Higher emissions are focussed around the urban areas and main motorway links. In areas it is clear that the higher concentrations are near the centre of settlements, reflecting the areas which are more densely built up.

CO_2 emissions for Worcestershire 2010.



Worcestershire districts nearest neighbour analysis for per capita CO_2 emissions in 2009.

Area	t per capita CO_2 2010	% reduction 2005-2010
Worcestershire	7.9	10%
Staffordshire	8.7	9%
Gloucestershire	7.7	9%
Warwickshire	11.6	8%
National	7.6	14%

A British Geological Society (BGS) working group has examined certain minerals activity. They estimate "the annual production of CO_2 to be in the order of 4 million tonnes per annum, of which 1.29 million tonnes (about 32.2%) is from off-site transport and moving coal imports that compete with UK production. This research does come with caveats (the BGS state that extrapolating from aggregates data should as soon as practicable be replaced by validated mineral-specific assessments. Further work is needed to check whether non-excavation emissions on mineral sites (for example the carbon released from generating the energy used in water and liquid waste pumping, crushing and screening, site lighting, offices and workshops, wheel and road washing) have been properly assessed). However, the BGS research group confirmed the UK Mineral Forum's view that the biggest carbon emission and reduction issues in the UK's onshore mineral production and use arise not from extraction and initial transport but in downstream processing of mineral products. Some of this is very energy intensive. That is why cement, brick and gypsum production, together with china clay and potash extraction, are already covered by formal carbon reduction measures such as the EU's Emissions Trading Scheme and the UK's Climate Change Agreements".

Matrix for assessing UK Minerals sector carbon emissions (operational)

Mineral Sector	2007 data			
			Assumed non-product ratio to product or feedstock used to calculate total extraction	
		CO2 emissions		
	Excavated Volume	Operational		*Assumed*
	tonnes	tonnes (estimated)	Product:non-product	*Kg CO2 per tonne*
Aggregates				
Crushed Rock	157,143,000	628,572	21:1	*4*
Sand and Gravel	94,562,000	378,248	16:1	*4*
Industrial limestone	22,000,000	88,000	21:1	*4*
Silica sand	6,933,600	41,602	05:01	*6*
Coal Open Cast	115,110,000	491,136	1:15	*4*
Coal Deep Mined	11,821,333	47,285	3:1	*4*
Clay and Shale	13,333,000	53,332	3:1	*4*
Chalk	7,752,000	31,008	21:1	*4*
Ball Clay	3,066,000	12,264	1:2	*4*
Barytes	56,000	224	21:1	*4*
China Clay	16,710,000	66,840	01:09	*4*
Fireclay	200,000	800	1:0	*4*
Fluorspar	47,000	188	21:1	*4*
Gypsum	1,781,000	7,124	21:1	*4*
Peat	1,536,000	6,144	1:0	*4*
Potash	2,506,000	10,024	1:2.5	*4*
Rock Salt	2,000,000	8,000	1:0	*4*
Salt	3,800,000	15,200	1:0	*4*
Slate	9,515,000	38,060	1:10	*4*
sub total		1,924,051		
Asphalt		716,094		*27*
Ready mixed concrete		90,000		*1.8*
		0		
TOTAL		**2,730,145**		

Notes on table:
1 Emissions data calculated on the basis of mineral excavation, not sold production, in order to capture emissions related to moving overburden, soils, non-product material etc. This is likely to underestimate total emissions, e.g. on crushing/screening, pumping water and liquid wastes, site lighting, energy use in buildings/workshops, wheel and road washing. This is an area requiring further work.

2 CO_2 emissions data is available for Crushed Rock and Sand and Gravel, same operational figure applied to almost other minerals (4 kg CO_2/tonne of output). Minerals specific emissions data for these other minerals is another area requiring further detailed survey work. Deep mining is unlikely to have the same profile as surface quarrying.
3 Other kg/CO_2 figures (Asphalt, ready mixed concrete) from QPA survey data. Silica sand data supplied by Sibelco
4 Sales volumes from AMRI/BGS Yearbook
5 Product/non-product ratios based on information from relevant trade associations and BGS
6 Clay and shale (row 18) is used to make bricks, pipes, tiles and cement. Some goes direct into construction. See BGS Yearbook

The BGS group notes that "Transporting minerals from source to users is clearly carbon-intensive. The group estimated that haulage accounts for just over 32% of the embodied carbon in the extraction and initial movement to first point of UK land-won minerals, and coal imports (the main import in competition with domestic mineral production). While minimising haulage distances and costs is desirable in itself, and may be driven by business pressures, it may not be practicable for wider reasons to locate processing closer to mineral sources. And cutting the initial transport distance may simply add distance to the movement of products to market after processing".

Likely evolution: Reductions in CO_2 emissions will depend on a number of factors, including successful action on energy efficiency (such as delivering the Green Deal and ECO schemes), sustainable transport measures (such as the Choose How You Move 2 project in Redditch), and educational programmes (such as EcoSchools). Local actions can play a big part (for example, Worcestershire County Council has a Carbon Management Plan in place until 2016). Whilst all these factors have a role to play, as long as economic growth remains inextricably linked to fossil fuels, the wider economy is probably the greatest single influence on CO_2 emissions.
In terms of CO_2 emissions from minerals operations, the BGS group statistics suggest that: "as the economy recovers from recession, the decreases in CO_2 emissions seen over recent years may be reversed (2010 data is already showing an upward trend on 2009). There is already a wealth of site-based examples in energy management in the extraction, processing and movement of material, including action on energy monitoring, audit of motor ratings, pumping, conveyors, and fuel-efficient driver training. However [there is] a need to spread awareness, broaden company commitment and ensure action is followed through across the whole of the UK minerals sector".

Role of MLP: The MLP has the potential to influence CO_2 emissions in a number of ways (e.g. the type of minerals being won, the methods used for extraction, the methods used for transporting goods, and the construction and operation of the site plant, buildings and processing operations).
The MLP will provide a framework for the winning of energy minerals, including coal, the burning of which creates substantial CO_2 emissions. Whilst the coal resources in the county are limited, and are not considered to be of marketable value, in facilitating developments for energy minerals, the MLP could be seen to be allowing continued growth in fossil fuel usage. It would not be practicable for the MLP to seek to prevent such developments.
Policies in the MLP should seek to ensure that CO_2 emissions from plant and buildings are minimised through requiring sustainable construction. Residual emissions can be mitigated through requiring on site renewable energy or, where this is demonstrated as unfeasible, requiring contributions to off-site provision.

Data sources: DECC 2010 Local Authority Carbon Dioxide Figures (updated August 2012)
BGS: UK Minerals Forum: Carbon and Proximity in Minerals Working Group, Report on Work Programme 'Living with Minerals 3'

Ecological Footprint (Global Hectares per Person)

Key data:

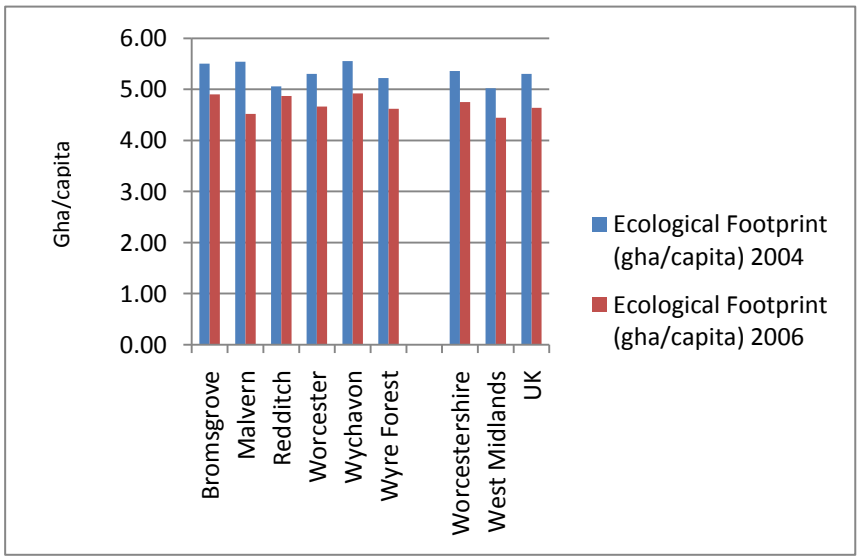
Ecological-Footprint data is published by the Stockholm Environment Institute as part of the Resources and Energy Analysis Programme (REAP). It is a means of measuring how much environmental impact an area makes as a result of the people who live and work there. Globally, the eco footprint is 2.7 hectares per person (2.6 gha in 2006) while on average there is only 1.8 hectares of biologically productive surface for each person on Earth (the biocapacity). This means that the global ecological footprint is greater than the available productive land, with a 0.9 biocapacity deficit. This is called *overshoot* and is the result of the use of natural resources more quickly than they can replenish. Today, globally we use the equivalent of 1.4 planets annually to provide our resources and absorb our waste. This global overuse of resources has been around since the 1990s when global population reached over 5 billion. Prior to this, records indicate humanity's demand on resources was manageable.

The latest available data (from 2008) suggests that the UK has a much larger footprint than the global average. The table below indicates the latest eco footprint data comparing 2004 and 2006 results. The data indicates a reduction in the eco footprint for all Worcestershire districts and the county as a whole.

Eco footprint in Worcestershire, 2004 and 2006

Area	gha/capita 2004	gha/capita 2006
Bromsgrove	5.50	4.90
Malvern	5.54	4.52
Redditch	5.06	4.87
Worcester	5.30	4.66
Wychavon	5.55	4.92
Wyre Forest	5.22	4.62
Worcestershire	5.36	4.75
West Midlands	5.02	4.44
UK	5.30	4.64

Change in Eco Footprints between 2004 and 2006



Worcestershire has a larger ecological footprint than the West Midlands and UK average. All Worcestershire districts individually have a larger ecological footprint than the West Midlands average of 4.44gha/capita. In the West Midlands, Wychavon has the third largest eco footprint behind Stratford-upon-Avon (5.09 gha/capita) and Warwick (4.94 gha/capita). The smallest eco footprint in the West Midlands is Sandwell (4.05 gha/capita) which is 0.70 gha/capita lower than the eco footprint for Worcestershire.

Likely evolution: Worcestershire's ecological footprint is expected to decrease in future years. This will depend in large part on the effectiveness of behavioural change campaigns to encourage residents to take positive steps towards living more sustainably. Transition towns across Worcestershire are working towards reducing resource use in their local areas and reducing dependency on fossil fuels.

Role of MLP: The MLP's role here is limited, as the eco footprint is essentially a measure of the sustainability of an individual's personal lifestyle. However the ethos behind the measure, in terms of reducing CO_2 emissions and considering waste and sustainability, can be applied to minerals development, as discussed under the relevant indicators in this Scoping Report.

Data sources: Worcestershire Partnership State of the Environment Report

Predicted impacts of climate change

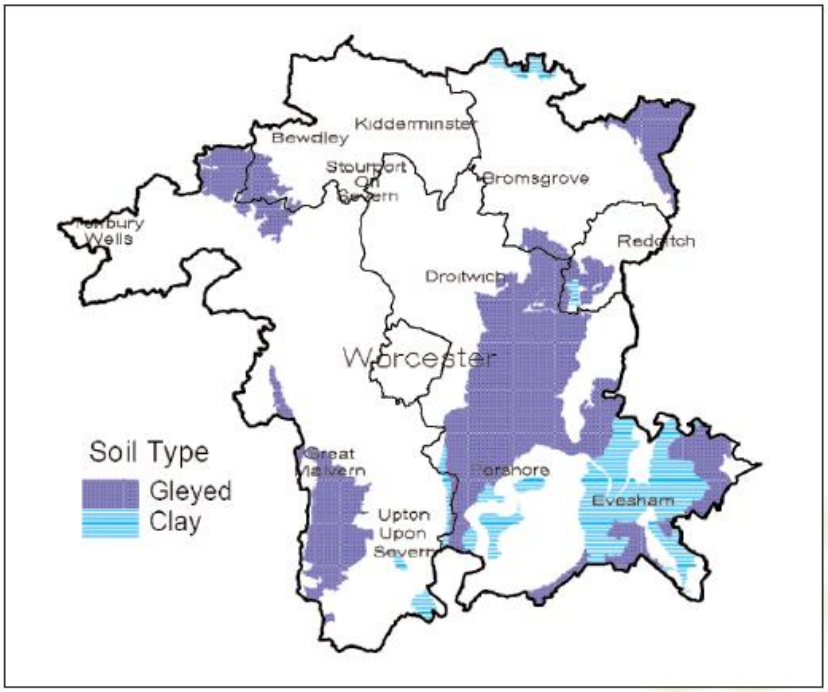
Key data:

Worcestershire's climate is changing. We now have shorter milder winters, but increasingly extreme weather. Such changes will impact on Worcestershire's environment, economy and society. For example:

- Biodiversity: Changing conditions may be beneficial to some species but harmful to others. For example, some species may be lost due to wetland habitats changing and drying up.
- Geodiversity: Changing soil types and structures; soil erosion, leading to loss of peat soils and subsequent release of carbon dioxide; changes to streams and rivers.
- Agriculture: Problems of drought, flooding and new crop pests.
- Transportation: Roads may be less affected by frost and freeze/thaw but may be closed and damaged more often due to flooding. Higher temperatures likely to affect road and rail.
- Health Services: More heat related summer deaths and cases of food poisoning; fewer cold related winter deaths.

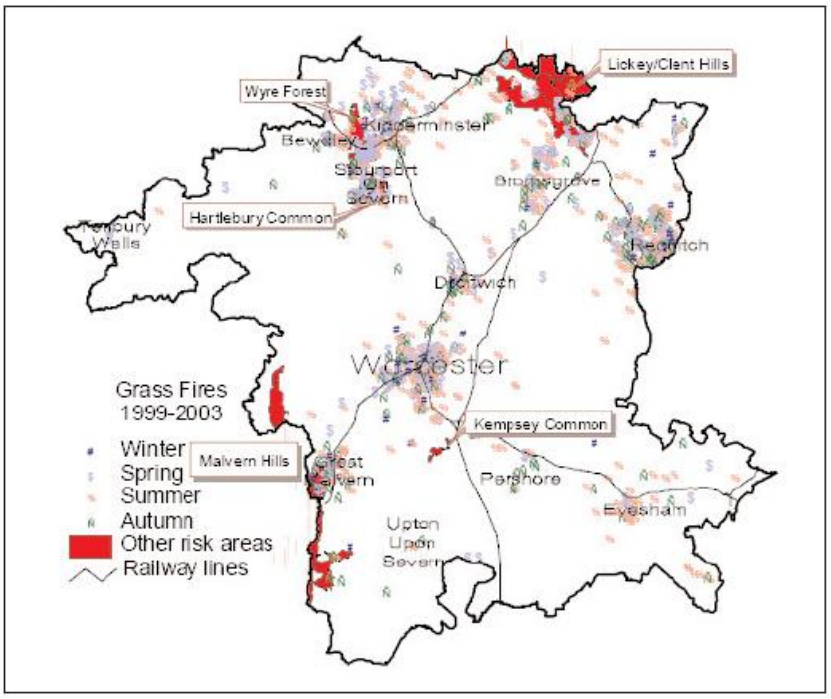
Alongside these threats, there are opportunities for individuals to reduce energy consumption in their homes and save money on fuel bills. Lifestyle changes such as reducing car use and switching to walking or cycling can contribute to health improvements. There are opportunities for business in the so called "green economy" developing new products and services that respond to the need to reduce use of fossil fuels and subsequent CO_2 emissions and adapt to the changing climate. Leisure and tourism are important industries for the county. People may take more day trips and holidays in the UK due to the warmer weather and the worldwide global downturn. This could mean more spending at local businesses. The challenge is to ensure that this does not further threaten Worcestershire's environment.

Map of increased risk of subsidence in Worcestershire



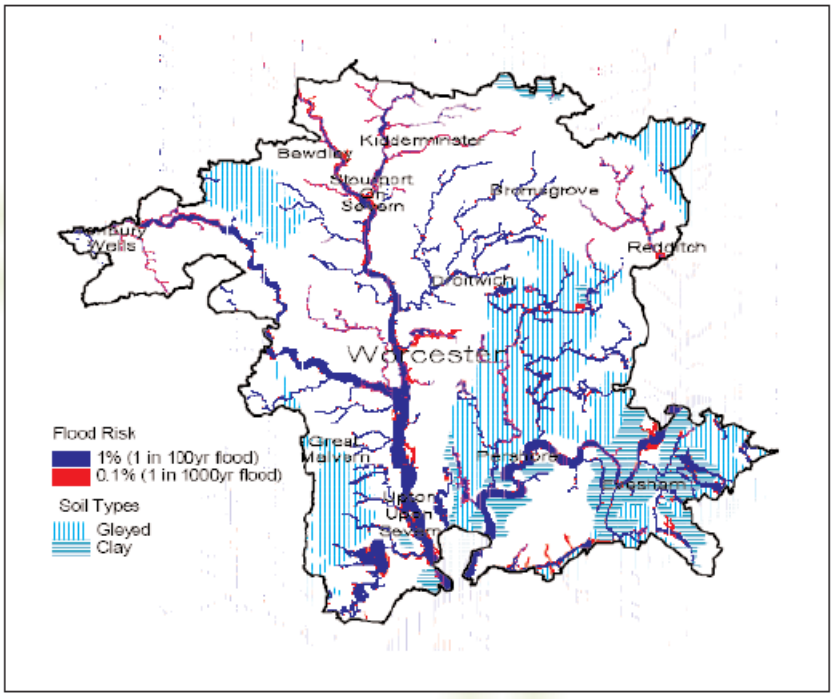
Source - Worcestershire Climate Change Impacts Study

Map of areas at risk from outdoor fires in Worcestershire



Source - Worcestershire Climate Change Impacts Study

Map of areas at risk of flooding in Worcestershire



Source - Worcestershire Climate Change Impacts Study

Likely evolution: In the next decade and beyond it is predicted there will be further climate change and the incidence of extreme weather will increase. Such changes will impact on Worcestershire's environment, economy and society. Worcestershire residents believe that many of the impacts of climate

change are already being felt in the County and where this is not already the case that they will do so in the future.

Role of MLP: The MLP has a major role to play in both mitigating climate change, and in adapting to its unavoidable impacts.

The MLP has the potential to influence CO_2 emissions in a number of ways (e.g. the type of minerals being won, the methods used for extraction, the methods used for transporting goods, and the construction and operation of the site plant and buildings).

The MLP will provide a framework for the winning of energy minerals, including coal, the burning of which creates substantial CO_2 emissions. In facilitating developments for energy minerals, the MLP could be seen to be allowing continued growth in fossil fuel usage. However, it would not be practicable for the MLP to seek to prevent such developments.

Policies in the MLP should seek to ensure that CO_2 emissions from plant and buildings are minimised through requiring sustainable construction. Residual emissions can be mitigated through requiring on site renewable energy or, where this is demonstrated as unfeasible, requiring contributions to off-site provision.

The restoration of mineral sites can provide a valuable biodiversity resource that could help species to move in line with the changing climate, as part of a wider network of green infrastructure. Restoration can also provide a recreational resource that could form part of the local tourism offer, capitalising on then projected increase in local temperatures and associated increase in holiday visitors.

The MLP will need to include policies to ensure mineral operations are resilient to the predicted climate change impacts, including flooding and subsidence concerns.

Data sources: Worcestershire Partnership Climate Change Strategy, Review 2009

G Cavan, Worcestershire Climate Change Impacts study, 2004

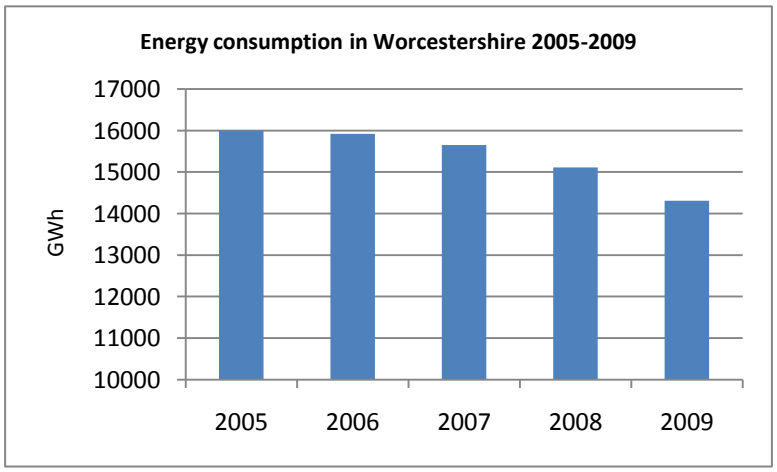
ENERGY

Total final energy consumption by local authority (kilo-tonnes of oil equivalent)

Key data: Worcestershire consumed a total of 14,309.4 GWh of energy in 2009, down from 15,110 GWh in 2008. The district breakdown is as follows:

Total sub-national final energy consumption 2005-2009 in GWh

	2005	2006	2007	2008	2009
Bromsgrove	3,069.1	3,071.9	3,024.3	2,962.4	2,795.4
Malvern Hills	2,322.3	2,391.6	2,367.8	2,302.9	2,228.6
Redditch	1,999.9	1,961.7	1,921.9	1,829.1	1,696.1
Worcester	2,005.1	1,893.8	1,836.7	1,786.2	1,683.7
Wychavon	4,483.2	4,538.3	4,459.4	4,301.3	4,124.3
Wyre Forest	2,117.1	2,067.1	2,038.4	1,928.1	1,781.3
Worcestershire	15,996.6	15,924.5	15,648.5	15,110.0	14,309.4



Likely evolution: Worcestershire's energy consumption is expected to continue to decrease. There is expected to be greater delivery of renewable energy for all areas of the UK, including Worcestershire.

Role of MLP: Minerals operations can be energy-intensive. The MLP can help to mitigate energy use through guiding development to sustainable locations, to minimise the need for high-energy transport. Energy use can be minimised through requiring plant and buildings to be sustainably designed and constructed.

Data sources: DECC Total final energy consumption at sub-national level, 2005-09

FLOODING

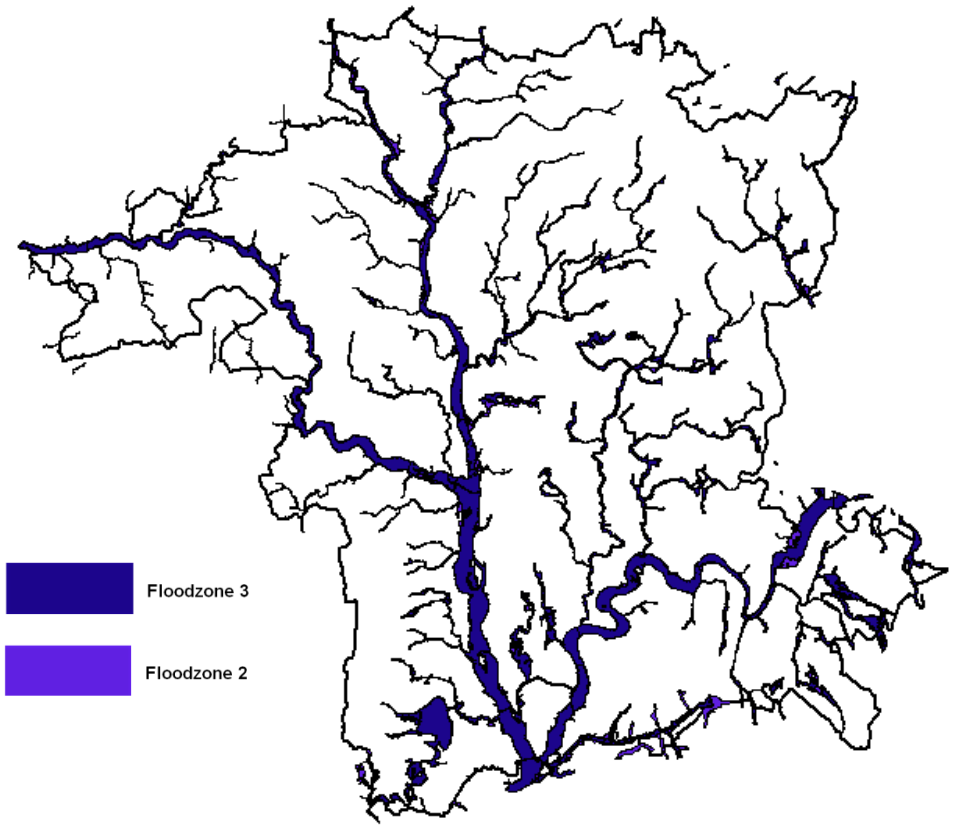
Properties at risk of flooding

Key data:

Flooding is considered to be a major issue for Worcestershire. Over the years floods have occurred as a result of rivers including the Severn, Avon and Teme bursting their banks and through surface water flooding as a result of intense rainfall. During severe flooding in 2007, the cost to Worcestershire from closures and disruption has been estimated at £6.4m/week.

Information relating to the number of properties in Worcestershire at risk from fluvial flooding and surface water flooding is provided by the Environment Agency. The properties at risk data is updated following a flood event, and covers residential and non-residential properties in Worcestershire. Data provided by the Environment Agency for properties at risk of flooding accounts for properties that appear in the relevant flood zones and represents the situation without flood defences. From 2011 onwards, data has also been available on properties at risk of surface water flooding.

Flood Zones in Worcestershire



Worcestershire has the second largest percentage land area at risk of flooding in the West Midlands Region (approximately 10%), but in terms of numbers of households at risk is performing better than the national average.

It is estimated that in the West Midlands, 6.5% of land has a 1% chance of flooding in any one year. This puts around 4% of properties in the region at risk of flooding. Around 80,000 of these properties at risk are thought to be residential. In England and Wales, 9% of people live or work in properties at risk of flooding.

Fluvial Flooding

In Worcestershire, 2012 figures show that 3.2% of properties are at risk from fluvial flooding (1 in 1000 year event). 1.7% of properties are at risk from a smaller, 1 in 100 year flood. There has been no change in the number of properties believed to be at risk from fluvial flooding since 2010.

Number of properties at risk of fluvial flooding, 2009-12

	2009	2010	2011	2012
1 in 100 year flood	4,900	4,700	4,700	4,700
1 in 1000 year flood	10,000	9,000	9,000	9,000
Surface water flooding	No data available	No data available	18,600	18,600

Surface water flooding

Following the introduction of the Flood and Water Management Act 2010, surface water flooding has been mapped. Currently, 7% of properties in Worcestershire are at risk of surface water flooding. Worcestershire County Council, as Lead Local Flood Authority, is developing a Surface Water Management Plan. The figure for properties at risk of surface water flooding may therefore change once the evidence behind this has been collated and more detail becomes available. More than twice as many properties are at risk of surface water flooding than are at risk of fluvial flooding in Worcestershire.

Likely evolution: It is hoped that with more stringent planning policy and greater investment in flood defence projects in Worcestershire, the number of properties at risk of flooding will decrease. However, the climate is expected to change, leading to an increased frequency and intensity of extreme weather events such as heavy rainfall, and it is likely Worcestershire will see more flooding incidents and floodplains could increase.

Following the introduction of the Flood and Water Management Act in 2010, Worcestershire County Council was named as a Lead Local Flood Authority, thus having increased responsibility for managing flood risk in our area. A Strategic Flood Risk Management Group and Land Drainage Partnership have been set up under the Council's leadership. Funding has been secured to aid improvement

works to local drainage systems to alleviate surface water flooding issues. There have been a range of flood defence projects in Worcestershire in recent years including defences at Powick (protecting 19 properties from a 1 in 75 year flood) and a raised embankment and flood gate in Upton upon Severn (protecting 54 residential and commercial properties from a 1 in 150 year flood).

Role of MLP: Mineral operations, depending on their size, nature and location, have the potential to influence flooding through changes to the landform and the water table. The MLP may be able to help alleviate flooding by providing for the mineral resources needed for flood defence works, and some mineral sites may be able to act as water storage in times of flood, or offer landscaping to slow the run-off of storm water in times of heavy rainfall.

Data sources: Worcestershire Partnership State of the Environment Report
Environment Agency – 'flooding and coastal erosion'

ACCESS TO SERVICES

Access to information: Satisfaction rates regarding Minerals & Waste planning policy

Key data: Satisfaction Surveys were undertaken in 2007/8 and 2009/10. This survey is biennial and has therefore not been updated for the current monitoring year.

Satisfaction survey results, 2007/08 – 2009/10

2007/8:	125 responses	Very satisfied	14.4%
		Satisfied	38.4%
		Neither satisfied nor dissatisfied	38.4%
		Dissatisfied	7.2%
2009/10:	95 responses	Very satisfied	11.6 %
		Satisfied	44.2 %
		Neither satisfied nor dissatisfied	26.3 %
		Dissatisfied	9.5 %
		Very dissatisfied	8.4 %

There was an increase in the proportion of respondents satisfied or very satisfied with access to information from 52.8% in 2007/8 to 55.8% in 2009/10.
The SCI did not set specific targets. This will be considered when the SCI is updated. Work on this is likely to commence in the next monitoring year.

Likely evolution: It is unclear how performance against this indicator will evolve. Consideration will be given to the merits of the monitoring this indicator, including any changes needed, as part of the updating of Worcestershire County Council's Statement of Community Involvement from 2013.

Role of MLP: The MLP can seek to ensure that development proposals provide for full pre-application consultation where appropriate, including making available information to allow those affected by proposals to be fully informed.

Data sources: Worcestershire Minerals & Waste Annual Monitoring Report 2010/11

Accessibility to Worcestershire acute hospitals

Key data: For residents of Worcestershire, the most accessible hospital is the Worcestershire Royal (in the City of Worcester) by modes of car, public transport and cycle. Kidderminster General Hospital has the highest levels of accessibility on foot.

However, in the weekday evening and Sunday periods, access by public transport to the Worcestershire Royal Hospital is markedly poorer and Kidderminster General Hospital becomes the most accessible location.

Particular accessibility issues to healthcare services exist in the rural districts of Bromsgrove, Malvern Hills and Wychavon. For residents of Bromsgrove town, access to Redditch Alexandra Hospital is good (at least accessible to most) in the weekday periods, but is noticeably poorer in the Sunday periods.

A similar pattern is seen for residents of Malvern Hills District, where access to the Worcestershire Royal Hospital is reduced noticeably during Sunday periods. In particular, residents of Wychavon district suffer the greatest accessibility issues, with limited access in any period by public transport to acute healthcare services. This supports previous work completed during the LTP2 plan period, which identified accessibility issues for this area in relation to access to hospitals. The true extent of this issue is not made clear in this study, as the role which the smaller community style hospitals act to provide healthcare services in these areas is unknown.

Likely evolution: It is unclear how performance against this indicator will evolve.

Role of MLP: No role for the MLP identified.

Data sources: Worcestershire Acute Hospitals Accessibility Study January 2010

HEALTH

Health ACORN categories

Key data: Health Acorn provides an indication of the likely health of the population in an area. The latest available figures are from 2011/12.

Health ACORN categories

Classification	Worcestershire %
Population classified as 'Healthy' (2012)	37.6
Population classified as 'Possible Future Concerns' (2012)	40.4
Population classified as 'Future Problems' (2012)	10.0
Population classified as 'Existing Problems' (2012)	11.0
Population 'Unclassified' (2011)	0.9

Source: Health ACORN, CACI, 2011

The population recognised by Health Acorn as 'Healthy' are described as being a younger demographic, meaning the proportion of people with high blood pressure, high cholesterol, heart, respiratory and digestive problems are lower than average. This group is more likely to take exercise and less likely to smoke or be overweight, as well as eating a balanced diet.

The 'Possible Future Concerns' group has lower levels of smoking and generally below-average incidence of illnesses. They are less likely to be obese but this demographic may be overweight.

Those falling within the 'Future Problems' group do not generally have a very high incidence of existing illnesses. Exceptions to this are depression, asthma, insomnia, migraine, anxiety and stress disorders, which occur more in this group than any other. However they have the highest incidence of smoking and obesity of all four groups.

Health Acorn describes those within the 'Existing Problems' group as 50% more likely to have angina or suffer from a heart attack than the national average. There is also a higher chance of people suffering from high blood pressure, high cholesterol and diabetes.

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: Access to the natural environment can reduce stress levels and encourage people to become more active, helping to tackle obesity, coronary heart disease and mental health problems[6]. During operation some mineral workings may impact on public rights of way, including footpaths and bridleways. Depending on how these public rights of way cross the site, it may be possible in some cases to work around them. In other cases this would result in sterilising significant mineral deposits and diversion or closure of public rights of way may be more appropriate.

[6] Natural Environment White Paper

There are significant opportunities for the restoration of mineral workings to improve public access to the natural environment. In the past, workings in Worcestershire have been restored to include public footpaths and nature trails, bird hides and other recreational facilities, such as fishing and water sports. However, the potential to achieve such gains will often depend on the specific site and the landowner.

Data sources: Health ACORN
Worcestershire County Council Research & Intelligence Local Area Profiles

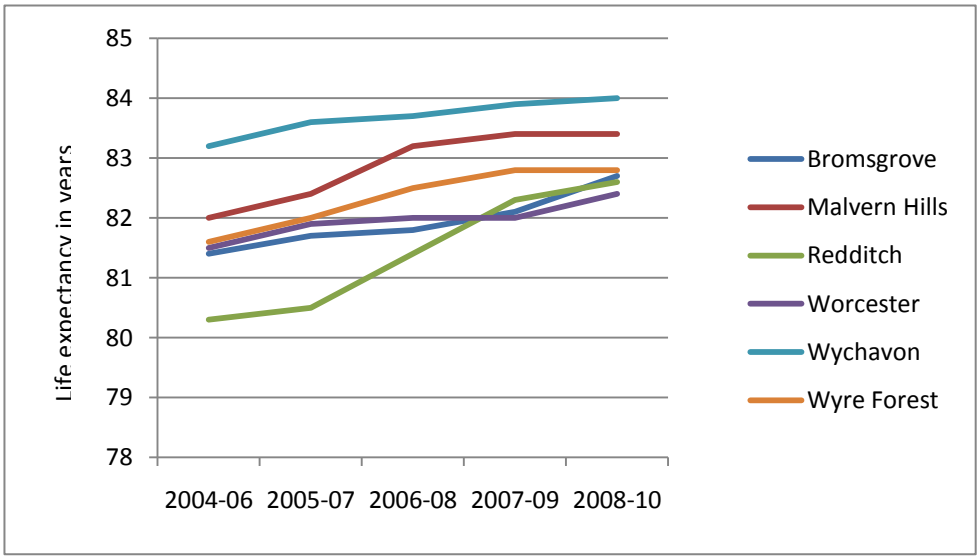
Female life expectancy at birth

Key data: Female life expectancy at birth in Worcestershire between 2008-10 was 83.0 years, an increase on the period from 2007-09 (82.7 years). This is a continuation of the upward trend in life expectancy since 2004-06. The average life expectancy of females in Worcestershire has consistently exceeded that of the UK since 2004-06.

The data reveals significant differences in life expectancy within Worcestershire. Whilst Wychavon district is ranked 64th nationally for female life expectancy, Worcester is ranked 224th.

Female life expectancy at birth

	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	Rank (out of 404) (2008-10)
Bromsgrove	81.4	81.7	81.8	82.1	82.7	203
Malvern Hills	82.0	82.4	83.2	83.4	83.4	133
Redditch	80.3	80.5	81.4	82.3	82.6	215
Worcester	81.5	81.9	82.0	82.0	82.4	224
Wychavon	83.2	83.6	83.7	83.9	84.0	64
Wyre Forest	81.6	82.0	82.5	82.8	82.8	185
Worcestershire	81.7	82.1	82.5	82.7	83.0	N/A
UK	81.3	81.5	81.7	82.0	82.3	N/A



Likely evolution: The likely direction of performance is a continual increase in life expectancy for females.

Role of MLP: No role for MLP identified.

Data sources: ONS: Male and female life expectancy at birth and at age 65: by rank order of local areas in the United Kingdom, 2004-06 to 2008-10

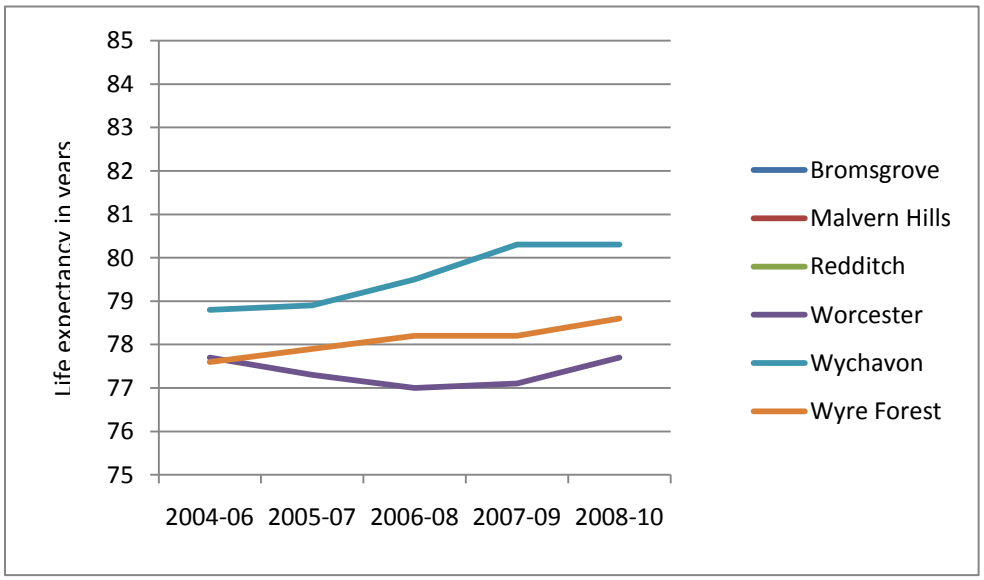
Male life expectancy at birth

Key data: Male life expectancy at birth in Worcestershire between 2008-10 was 79.1 years, an increase on the period from 2007-09 (78.8 years). This is a continuation of the upward trend in life expectancy since 2004-06. The average life expectancy of males in Worcestershire has consistently exceeded that of the UK since 2004-06.

The data reveals significant differences in life expectancy within Worcestershire. Whilst Wychavon district is ranked 73rd nationally for male life expectancy, Worcester is ranked 267th.

Male life expectancy at birth

	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	Rank (out of 404) (2008-10)
Bromsgrove	78.6	79.1	79.6	79.4	79.6	126
Malvern Hills	78.5	78.6	79.2	79.1	79.8	112
Redditch	76.8	77.2	77.5	77.9	78.0	238
Worcester	77.7	77.3	77.0	77.1	77.7	267
Wychavon	78.8	78.9	79.5	80.3	80.3	73
Wyre Forest	77.6	77.9	78.2	78.2	78.6	207
Worcestershire	78.1	78.3	78.6	78.8	79.1	N/A
UK	77.0	77.3	77.5	77.9	78.2	N/A



Likely evolution: The likely direction of performance is a continual increase in life expectancy for males.

Role of MLP: No role for MLP identified.

Data sources: ONS: Male and female life expectancy at birth and at age 65: by rank order of local areas in the United Kingdom, 2004-06 to 2008-10

WASTE

Household waste produced per head of population

Key data:

The amount of controlled waste generated in Worcestershire is reducing, and the position is improving.

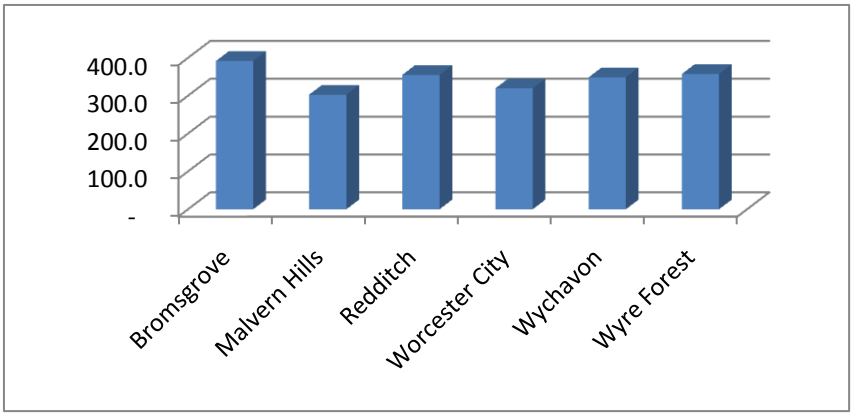
Waste can be broken down into four broad categories: local authority collected waste (formally known as 'municipal' or 'household' waste); commercial and industrial waste; construction and demolition waste; and hazardous waste. The monitoring regimes differ for each waste stream, and so while some of the data reproduced here is regularly updated, other data relies on older studies.

According to the ADAS 'Study into Commercial and Industrial Waste Arisings' ('the ADAS study', April 2009), 568,199 tonnes of commercial and industrial waste were generated in Worcestershire in 2006/7:

Standard Industrial Classification Sector	Tonnes of waste produced
Food, drink & tobacco	29,116
Textiles/ wood/ paper/ publishing	48,763
Power & Utilities	5,618
Chemical/ non-metallic minerals	72,825
Metal manufacturing	62,223
Machinery & equipment (other manufacturing)	44,998
Retail & wholesale	127,287
Other services	127,524
Public sector	49,845
Total	568,199

There has been a major reduction in Household Waste generated in Worcestershire over the last six years. 256,990 tonnes were generated in 2010/11 compared to over 291,000 tonnes in 2004/05. This means Worcestershire residents produced, on average, 459.8kg each in 2010/11, down from 468kg each in 2009/10, showing a continued reduction on previous years. The chart below shows the origins of household waste collected by district councils at kerbside and bring banks in Worcestershire in 2010/11. Bromsgrove produced the most waste per person, and Malvern Hills produced the least.

Kg of Household Waste per head of population: 2010/11



Source: Waste Management Services, Worcestershire County Council, 2012

The West Midlands region produced 11.4 million tonnes of waste in 2009, compared to 13.6 million tonnes in 2007. The *Defra Survey of Commercial and Industrial Waste Arisings 2010* shows that the amount of commercial and industrial waste produced in England has fallen significantly since 2002:

Estimate of total C&I waste and sub-sector totals, England, 2009

	Industrial sector	Waste 2009 ('000 tonnes)	% change 2002/3 to 2009	Recycling rate (inc re-use) (%)
Industrial sector	37,587	24,173	-35.7	51.1
Commercial sector	30,320	23,844	-21.4	52.8
ENGLAND TOTAL	67,907	48,018	-29.3	52.0

Source: Defra *Survey of Commercial and Industrial Waste Arisings 2010*

The reviewed Joint Municipal Waste Management Strategy (agreed by all 7 Worcestershire and Herefordshire Councils) is based on the assumption that household waste generated per household will remain stable but that the number of households will increase and that household waste will therefore increase over the life of the JMWMS (currently to 2034).

The National Waste Strategy currently assumes that Commercial and Industrial waste is made up of 48% industrial waste (which will increase at 0% p.a.) and 52% Commercial waste (expected to increase at a rate of 0.5% p.a.) up to 2019/20. The County Council currently expects Construction and Demolition waste generated in the county to remain stable and Hazardous waste to see a small increase from changes in the number of households. The net effect is that a small but consistent rate of waste increase is predicted in Worcestershire for the foreseeable future.

Projected waste arisings: Worcestershire (tonnes per annum)

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

Likely evolution: New legislation and policy initiatives are expected in the next few years to reflect the Revised Waste Framework Directive and the government's green ambitions. In practice these increases in arisings do not appear to be happening, as a result of the economic downturn and/or as a result of policy initiatives to reduce waste

and increase awareness. There could, at the least, be a stabilisation of waste generated.

Role of MLP: The MLP has a role to play in promoting the reduction, re-use and recycling of some waste streams, such as construction, demolition and excavation wastes, but has no direct impact of the levels of household waste produced.

Data sources: Worcestershire Partnership State of the Environment Report
DEFRA Sustainable Development Indicators 2010

Percentage/Amount of household waste recycled or composted

Key data:

The amount of household waste recycled in Worcestershire is good, and improving. Worcestershire is aiming to recycle and compost as much household waste as possible through kerbside collections, household recycling centres and treatment processes. The national target for recycling and composting of household waste is 45% by 2015 and 50% by 2020. In 2010/11, 75,815 tonnes (29.5%) of household waste was recycled in Worcestershire. In the same period, 34,107 tonnes (13.3%) of green waste was composted.

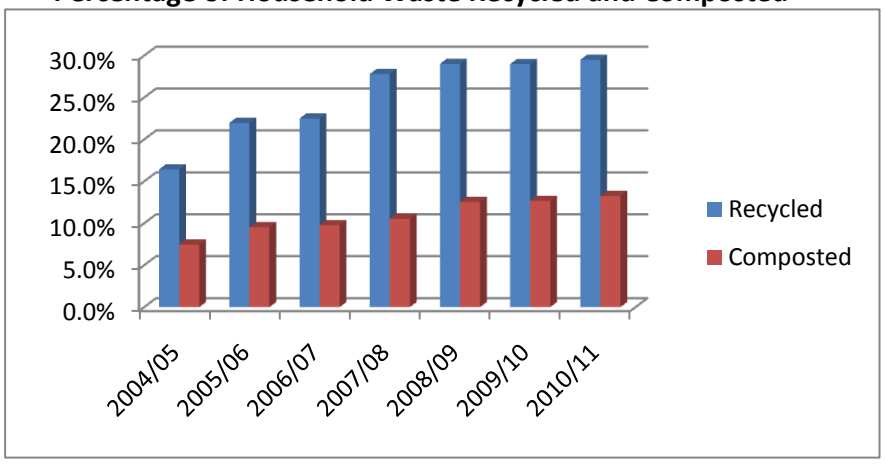
Tonnes of Household Waste Generated, Recycled and Composted

	Household Waste (tonnes)	% Change	Recycled (tonnes)	% Change	Composted (tonnes)	% Change
2004/05	297,937	+3.3	48,995	+23.42	22,268	+46.2
2005/06	290,944	-2.3	63,952	+30.5	27,752	+24.6
2006/07	287,833	-1.1	64,762	+1.3	28,155	+1.5
2007/08	272,356	-5.4	75,739	+16.9	28,702	+1.9
2008/09	267,038	-1.95	77,494	+2.3	33,503	+16.7
2009/10	258,516	-0.03	74,950	-0.03	32,796	-0.02
2010/11	256,990	-0.59	75,815	+0.01	34,107	+0.04

Source: Waste Management Services, Worcestershire County Council, 2012

In 2010/11 Worcestershire reused, recycled or composted 42.8% of household waste.

Percentage of Household Waste Recycled and Composted



Source: Waste Management Services, Worcestershire County Council, 2012

Household recycling rates are available for local authority level. In Worcestershire, the combined recycling and composting rates are as follows:

Combined Recycling and Composting Rates by Local Authority

	2009/10	2010/11	Change
Bromsgrove	37.37%	40.55%	3.18
Malvern Hills	28.10%	31.67%	3.57
Redditch	29.10%	28.56%	-0.54
Worcester	33.60%	36.16%	2.56
Wychavon	42.40%	43.69%	1.29
Wyre Forest	26.50%	27.58%	1.08

Source: Waste Management Services, Worcestershire County Council, 2012

The table shows some variation between the six local authorities, but overall Worcestershire is improving its levels of recycling and composting.

It is also possible to monitor how extensive kerbside collections of household waste are in each Local Authority. By 2010/11 all of the Local Authorities collected materials from the kerbside of more than 94.8% of their households.

% of households with kerbside recycling collections by Local Authority, 2010/11

Bromsgrove	97.3%
Malvern Hills	100.0%
Redditch	94.8%
Worcester	98.8%
Wychavon	100.0%
Wyre Forest	99.4%

In 2006/07, the latest year for which figures are available, Worcestershire's 32.3% of household waste recycled/composted was slightly above the corresponding figure of 28.6% for the West Midlands region.

Likely evolution: New 'Envirosort' facility will allow greater range of materials to be recycled, so should help recycling rates to increase further.

Role of MLP: The MLP has a role to play in promoting the reduction, re-use and recycling of some waste streams, such as construction, demolition and excavation wastes, but has no direct impact of the levels of household waste recycled.

Data sources: Worcestershire Partnership State of the Environment Report
DEFRA Sustainable Development Indicators 2010

TRANSPORT

Working age people with access to employment by public transport (and other specified modes)

Key data: For calendar year 2008, 79% of Worcestershire's working age people had access to employment by public transport.
The figure for 2008 is the same as that for 2007.

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: No role for MLP identified.

Data sources: Former National Indicator NI176 - Worcestershire Partnership

Access to services and facilities by public transport, walking and cycling

Key data: The 2008/09 performance figure is 93%, compared to the 2008/09 LAA target of 93%. Performance has been maintained against the 2007/08 LAA baseline.
In satisfying the LAA target, Worcestershire is performing well. As these are the first year's indicator results, a trend cannot yet be identified.

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: During operation some mineral workings may impact on public rights of way, including footpaths and bridleways. Depending on how these public rights of way cross the site, it may be possible to work around them. If rights of way cannot be moved or re-routed, this could result in the sterilisation of significant mineral deposits, and diversion or closure of public rights of way may be more appropriate.

There are significant opportunities for the restoration of mineral workings to improve walking and cycling networks. However, this will often depend on the specific site and the landowner. In addition, mineral sites tend to be in rural areas which are less well served by public transport.

Data sources: Former National Indicator NI 175 (Worcestershire Partnership)

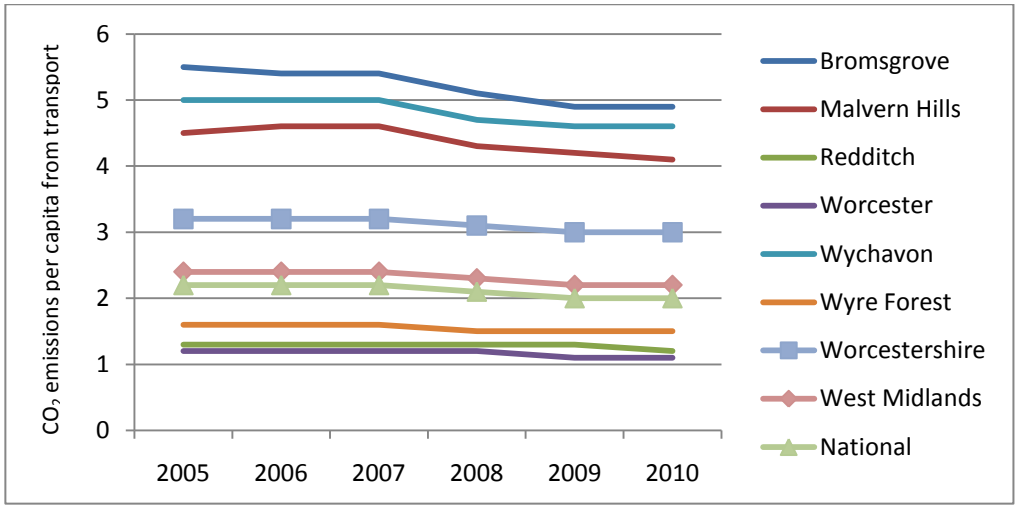
CO_2 emissions in the county per capita arising from road transport

Key data: In 2010, CO_2 emissions from road transport in Worcestershire were 3 tonnes per capita. This is the same as 2009, but shows a steady decline from 2005 levels (3.2 tonnes per capita).

Per capita CO_2 emissions estimates for road transport (t/capita)

	2005	2006	2007	2008	2009	2010
Bromsgrove	5.5	5.4	5.4	5.1	4.9	4.9
Malvern Hills	4.5	4.6	4.6	4.3	4.2	4.1
Redditch	1.3	1.3	1.3	1.3	1.3	1.2
Worcester	1.2	1.2	1.2	1.2	1.1	1.1
Wychavon	5.0	5.0	5.0	4.7	4.6	4.6
Wyre Forest	1.6	1.6	1.6	1.5	1.5	1.5
Worcestershire	3.2	3.2	3.2	3.1	3.0	3.0
West Midlands	2.4	2.4	2.4	2.3	2.2	2.2
National	2.20	2.20	2.20	2.10	2.00	2.00

In 2010, CO_2 emissions from road transport in the West Midlands region were 2.2 tonnes per capita, the same as in 2009, but a steady decrease since 2005 (2.4 tonnes per capita). National emissions from road transport were 2 tonnes per capita in 2010, a steady decrease since 2005 (2.2 tonnes per capita).



Worcestershire's CO_2 emissions from road transport are significantly higher than both the national and regional averages.

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: The extraction of minerals often involves substantial vehicle movements, including HGVs to transport plant and extracted material. Additionally, vehicle emissions can come from staff commuting, visitors, etc. As minerals can only be extracted where they are found, this result in long-distance transporting of material to where it is needed. The MLP can seek to influence mineral site selection by guiding operators to sites with the potential to make use more sustainable transport modes, including rail and water-borne transport. If possible,

the MLP could also encourage the use of local minerals close to where they are extracted. The MLP can also develop policies to require sites to have green travel plans in place.

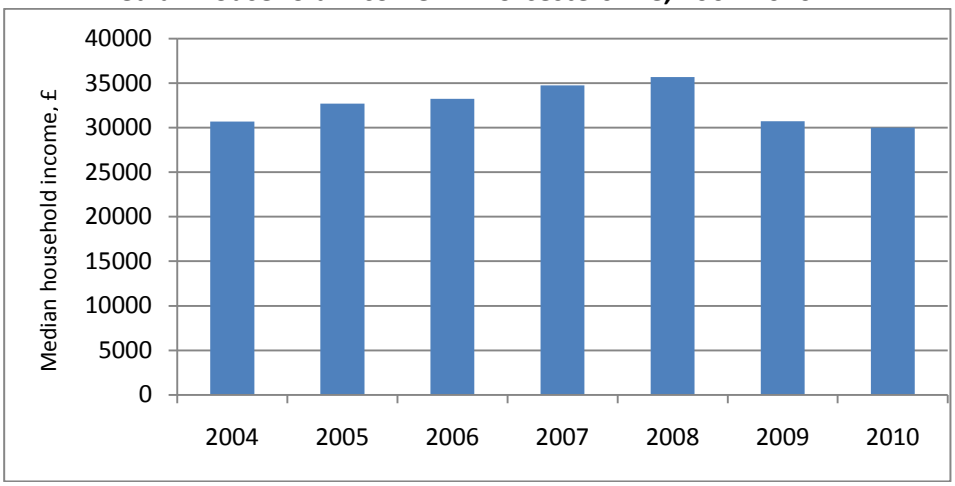
Data sources: DECC Local and regional CO_2 emissions estimates, 2005-2010

GROWTH WITH PROSPERITY FOR ALL

Average Worcestershire household income

Key data: Median household income in Worcestershire in 2010 was £30,009, slightly below the figure in 2009 of £30,700.
Median household income in the West Midlands in 2010 was £26,601, down from the 2009 figure of £27,896.
Median household income in England in 2010 was £28,909, down from the 2009 figure of £29,722.

Median household income in Worcestershire, 2004-2010



Worcestershire's median household income is higher than both the national and regional averages. Although it increased consistently for 4 years, it has since been declining since 2009, probably due to the national and global recession.

Likely evolution: It is expected that as Worcestershire recovers from the recession, average income might increase.

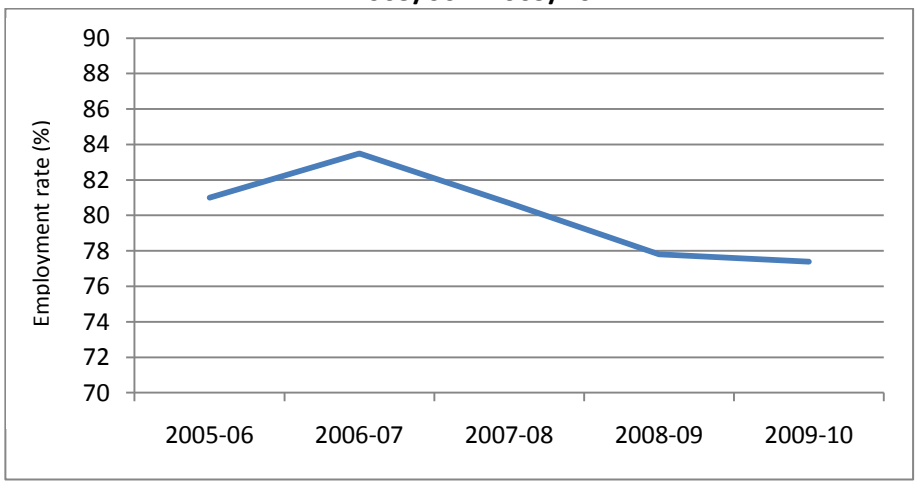
Role of MLP: Minerals development can provide skilled jobs within the county and help to increase average household income. A high quality natural environment, including a high quality landscape, has been demonstrated to attract businesses and employees to an area. The MLP, through requiring high-quality restoration of minerals sites, can help to contribute to ensuring the right conditions for attracting investment.

Data sources: Worcestershire County Economic Assessment 2010-11

Percentage employment rate (working age)

Key data: Between April 2009 and March 2010 the employment rate for working age people in Worcestershire was 77.4%. This is a slight fall from the period April 2008- March 2009, when the rate was 77.8%.
Between April 2009 and March 2010 the employment rate for working age people in the West Midlands was 68.5%. This is a slight fall from the period April 2008-March 2009, when the rate was 71.3%.
Between April 2009 and March 2010 the employment rate for working age people in England was 70.5%. This is a fall from the rate in the period April 2008-March 2009 (74.0%).

Employment rate of working age population in Worcestershire, 2005/06 – 2009/10



The employment rate in Worcestershire is better than both the national and regional averages, but has shown decline over the past three years.

Likely evolution: The likely direction of performance is unclear at this stage, and will be governed to a large extent by national and global economic conditions.

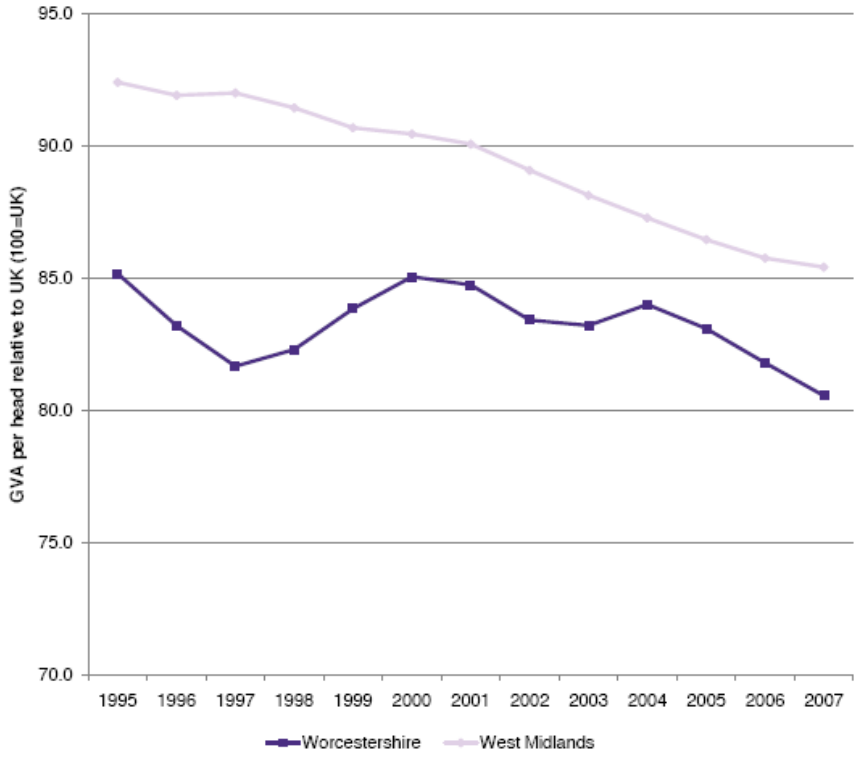
Role of MLP: Mineral operations do not tend to have high levels of employment, but a limited role for the MLP has been identified, through helping to maintain a high quality environment to attract investment.

Data sources: Worcestershire County Economic Assessment 2010-11

GVA per Worcestershire resident head

Key data:

GVA per resident head for Worcestershire is £16,074.
GVA per resident head for the West Midlands is £17,044.
GVA per resident head for England is £20,458.
Worcestershire's GVA per resident head is below the average for both England and the West Midlands, and evidence suggests the gap is widening.



The Minerals and Waste Annual Monitoring Report records the increase in GVA in Worcestershire from waste management and minerals (due to the low numbers of people employed in the minerals and waste industry, both sectors are combined).

GVA from Waste Management and Minerals

	2007	2008	% change
Waste management and minerals GVA* (£m)	61.6	62.3	1.18%
Worcestershire GVA (£m)	4,119	4,078	-0.05%
% contribution from waste management and minerals	1.50%	1.53%	

* The following sectors are included: 07: Mining of metal ores; 08: Other mining and quarrying; 09: Mining support service activities; 37: Sewerage; 38: Waste collection, treatment and disposal activities; materials recovery; and 39: Remediation activities and other waste management services. This division includes the provision of remediation services, i.e. the cleanup of contaminated buildings and sites, soil, surface or ground water.

The GVA from waste management and minerals is only a small part of Worcestershire's GVA, but this increased between 2007 and 2008. Furthermore, whilst overall GVA for Worcestershire declined during this period, GVA from waste management and minerals actually increased.

Likely evolution: The likely evolution is unclear at this stage.

Role of MLP: The MLP can help to continue the upward trend in GDP arising from mineral and waste sectors through guiding new development to bring wealth into Worcestershire.

Data sources: Worcestershire County Economic Assessment 2010

Indices of multiple deprivation

Key data:

Deprivation covers a broad range of issues and refers to unmet needs caused by a lack of resources of all kinds, not just financial. The English Indices of Deprivation attempt to measure a broader concept of multiple deprivation, made up of several distinct dimensions, or domains, of deprivation. These domains are: Income Deprivation, Employment Deprivation, Health Deprivation and Disability, Education Skills and Training Deprivation, Barriers to Housing and Services, Living Environment Deprivation, and Crime.

The data below are taken from the overall summaries in the latest available statistics (2010). Worcestershire's overall county deprivation ranking is 112 (where a rank of 1 is the most deprived, and 149 the least deprived). This means that, on a broad level, Worcestershire is not very deprived relative to most of England. Of its surrounding counties, only Gloucestershire is less deprived overall.

Deprivation in Worcestershire and neighbouring authorities

County Name	Rank of Income Scale	Rank of Employment Scale	Rank of Average Rank
Worcestershire	35	33	112
Gloucestershire	37	36	126
Staffordshire	15	12	111
Shropshire	107	99	101
Herefordshire	136	134	93
Birmingham	1	1	13

At a district level, deprivation ranges from a rank of 1 (the most deprived authority area in England) to 326 (the least deprived). Worcestershire districts range from the 168th to the 286th least-deprived authorities in England.

Deprivation in Worcestershire and neighbouring authorities

LA NAME	Rank of Income Scale	Rank of Employment Scale	Rank of Average Rank
Bromsgrove District	286	273	280
Malvern Hills District	277	285	223
Redditch District	205	209	131
Worcester District	189	192	156
Wychavon District	209	213	226
Wyre Forest District	168	173	128
Rank of adjacent authorities, for comparison			
Birmingham District	1	1	13
Herefordshire	121	129	145
Shropshire	80	72	166
Stratford-on-Avon District	244	249	271
Dudley District	33	34	113
Cotswold District	295	301	263
Forest of Dean District	241	236	164
Tewkesbury District	285	290	275
South Staffordshire District	227	223	247

The deprivation rankings demonstrate a significant gulf between the best and worst-performing authorities in Worcestershire. It is notable that Bromsgrove district is the least deprived not just in Worcestershire, but of all the neighbouring authorities, too. The most deprived Worcestershire district, Wyre Forest, is still less deprived than Dudley, and significantly less deprived than Birmingham.

Likely evolution: The likely evolution is unclear at this stage.

Role of MLP: No role for MLP identified.

Data sources: DCLG: The English Indices of Deprivation 2010: Local Authority District Summaries

PROVISION OF HOUSING

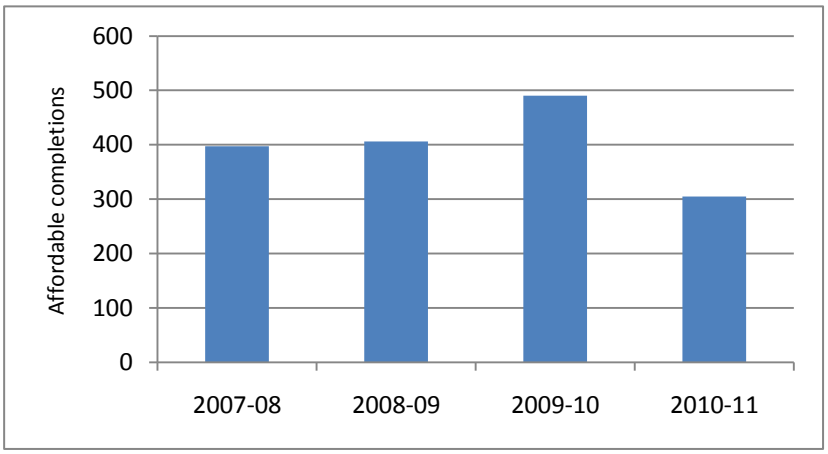
New affordable homes built

Key data: 305 affordable homes were built during 2010-11.
During 2007/08 (the latest period for which statistics have been published), the total number of affordable homes built in the West Midlands was 4,047.

Affordable housing completions by district, 2007/08 – 2010/11

Area	2007-08	2008-09	2009-10	2010-11
Bromsgrove	63	31	98	65
Malvern Hills	20	72	91	78
Redditch	78	10	144	63
Worcester	88	147	82	13
Wychavon	64	47	0	57
Wyre Forest	84	99	75	29
Worcestershire	397	406	490	305

Affordable housing completions in Worcestershire



Likely evolution: The likely direction of performance is unclear at this stage. Affordable housing has traditionally been delivered through agreements with developers of market housing schemes. Changing market conditions have meant that, as market housing completions have fallen, so too have affordable homes. National policy has led to many agreements being renegotiated, with affordable housing requirements being relaxed. It is unclear whether government support for affordable housing will offset this loss from traditional sources.

Role of MLP: In making adequate provision for aggregates, the MLP can make sure that local materials are available for the provision of new homes. With lower transport costs, viability of affordable homes could potentially be improved.

Data sources: District Annual Monitoring Reports
West Midlands RSS Annual Monitoring Report 2009

Relationship between average salary and average house prices

Key data: The affordability of housing is an important factor in ensuring businesses can attract an appropriately skilled workforce. Across Worcestershire, median house prices were 7.12 times median earnings in 2009. This compares to 5.67 times for the West Midlands and 6.27 times for England. There is a very clear distinction in Worcestershire between the more affordable authorities of Redditch, Worcester City and Wyre Forest, and the less affordable Bromsgrove, Malvern Hills and Wychavon. Affordability ratios have generally worsened over time, particularly during the years of rapid house price growth. Although ratios have improved during 2008 and 2009, it cannot be said it has become easier to access the housing market due to the reduction in lending for house purchases, and higher deposits required by banks, which are a particular obstacle for younger buyers. Lower quartile affordability ratios illustrate a similar pattern to median prices, but at slightly higher ratios of 7.27 for Worcestershire, 5.82 for the West Midlands and 6.28 for England in 2009. Improving access to the housing market, either for purchase through improved lending conditions, or for intermediate rent, will be important in ensuring that businesses in Worcestershire can attract and retain employees, and will be particularly significant as the county looks to encourage graduates and young people to remain in the county.

Ratio of median house prices to median earnings, 1997-2009

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: No role for MLP identified.

Data sources: Worcestershire County Economic Assessment 2010/11

PARTICIPATION BY ALL/RESPONSIBILITY

Waste Core Strategy consultation response rates

Key data: Response rates are lower in later stages of the development of the Waste Core Strategy than at earlier stages. There could be two alternative explanations for this:
Front-loading of the process may have been effective and stakeholders may be satisfied that their concerns have been addressed at an early stage.
Stakeholders may be suffering consultation fatigue

Response rates to M&WDF consultations

	Emerging Preferred Options - 2009	First Draft Submission - 2010	Publication - 2011
Consultees informed directly	1205	1211	1155
Responses received	120	95	89
Consultation response rates	10.03%.	7.8%.	7.7%

Likely evolution: No role for MLP identified.

Role of MLP: The MLP will aim to front-load the process of plan development and ensure that every consultation stage is meaningful. By providing feedback, consultees will be able to understand that their responses are valued and they will be able to see how they have been taken into account.

Data sources: Worcestershire Minerals and Waste Annual Monitoring Report 2010-11

Percentage of properties provided with kerbside household recycling collection

Key data: For 2008-09:

Bromsgrove: 93.9%
Malvern Hills: 100%
Redditch: 98.5%
Worcester: 96.5%
Wychavon: 99.8%
Wyre Forest: 98.6%

All Worcestershire districts have met and exceeded their targets for the proportion of properties provided with kerbside recycling and performance continues to be strong.

Likely evolution: Recycling performance is expected to improve in the coming years.

Role of MLP: No role for MLP identified.

Data sources: Worcestershire Minerals and Waste Annual Monitoring Report 2010-11

TECHNOLOGY, INNOVATION & INWARD INVESTMENT

New business enterprises

Key data:

2,455 new enterprises recorded in Worcestershire in 2008.
20,750 new enterprises recorded in the West Midlands in 2008.
238,895 new enterprises recorded in England in 2008.
The rate of new business enterprises in Worcestershire has fallen by 10.1% from 2004-2008, which is a greater fall than regionally or nationally.

New business enterprises in Worcestershire

Area	2004	2005	2006	2007	2008	% change 2007-08
Bromsgrove	460	535	475	515	475	-7.8
Malvern Hills	380	415	415	365	375	2.7
Redditch	290	390	305	315	330	4.8
Worcester	380	355	400	375	350	-6.7
Wychavon	630	650	650	740	545	-26.4
Wyre Forest	370	440	370	420	380	-9.5
Worcestershire	2,510	2,785	2,615	2,730	2,455	-10.1
West Midlands	23,010	23,115	21,025	22,805	20,750	-9.0
England	248,450	241,410	225,120	246,700	238,895	-3.2

Likely evolution:

The likely evolution is unclear at this stage.

Role of MLP:

There are few independent operators in the minerals industry, and the role of the MLP may be quite limited in this regard. The MLP could consider the opportunities for new enterprise when balancing the benefits of extending existing sites (where there is a benefit for existing operators) against the development of new sites (where it may be easier for new operators).

Data sources:

Worcestershire County Economic Assessment 2010-11

POPULATION: DEMOGRAPHICS, LEARNING AND SKILLS

Population

Key data:

Population figures taken from the mid-year estimates for the county are presented here. The 2010 mid-year estimates were released in June 2011. The mid year figures for 2001-2009 are also shown for comparison purposes. Figures quoted here are for Quinary (5-year) age groups, and are in thousands.

ONS Mid 2010 Population Estimates for Worcestershire County by 5-year Age Group

Worcestershire	Persons	Males	Females
0-4	30.9	15.9	15.0
5-9	30.1	15.5	14.7
10-14	32.9	17.1	15.7
15-19	34.3	17.6	16.7
20-24	28.1	14.6	13.4
25-29	28.2	14.7	13.5
30-34	29.1	14.4	14.7
35-39	35.7	17.5	18.2
40-44	43.2	21.2	22.0
45-49	42.3	21.1	21.2
50-54	37.7	18.4	19.3
55-59	36.8	18.1	18.7
60-64	40.8	20.3	20.5
65-69	32.3	15.9	16.4
70-74	25.7	12.5	13.2
75-79	20.0	9.2	10.8
80-84	14.8	6.1	8.6
85-89	9.7	3.4	6.3
90+	5.0	1.4	3.6
All Ages	557.4	274.9	282.5

Source - ONS mid-year estimates, 2010

The 2010 mid-year estimate for the county was 557,400. This compares with the 2001 estimate of 542,200 and the 2009 mid-year estimate of 556,500. The population of Worcestershire County is tending to increase, at an average rate of 1,700 per annum over this 9-year period.

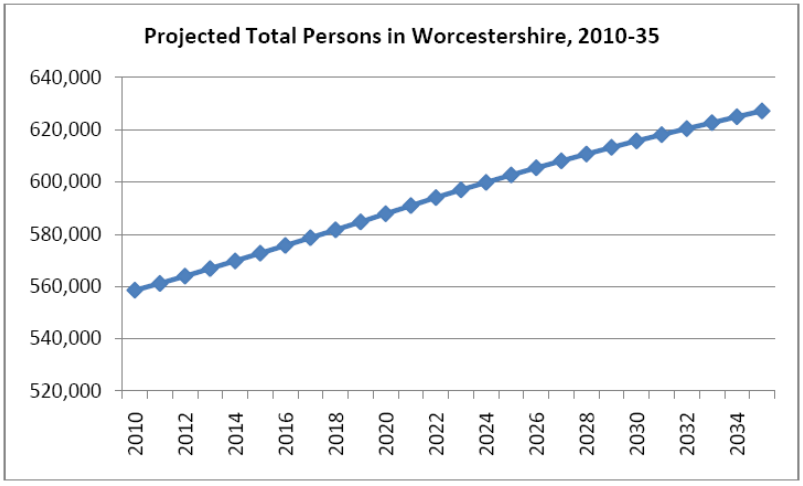
In 2010 there were an estimated 114,900 children in Worcestershire, representing almost 21% of the total population. The number of people aged 65-plus in the county is 107,400, representing over 19% of persons.

The number of children in Worcestershire has fallen by around 4,300 in the 2001-10 period, with the decrease particularly noticeable since 2007. In contrast the number of people aged 65 and over has risen by around 18,300, an increase of over 20%. A small rise of around 1,400 is estimated in the 18-64 age group over

the whole time period although the numbers have fallen slightly since a peak in 2007.

ONS Mid 2010 Population Estimates

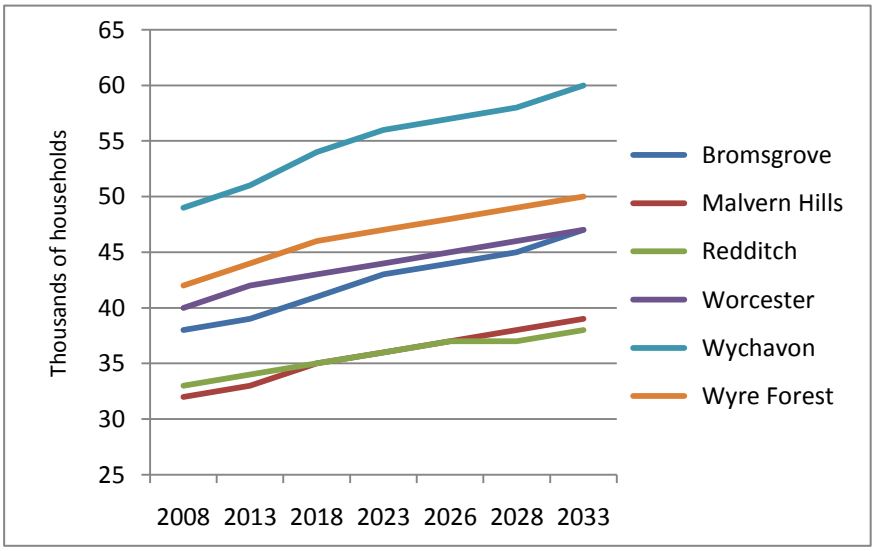
District	Total Population
Bromsgrove	93,400
Malvern Hills	75,400
Redditch	78,700
Worcester	94,800
Wychavon	117,000
Wyre Forest	98,100
Worcestershire	557,400



DCLG, Household Projection by District (thousands)

	2008	2013	2018	2023	2026	2028	2033
Bromsgrove	38	39	41	43	44	45	47
Malvern Hills	32	33	35	36	37	38	39
Redditch	33	34	35	36	37	37	38
Worcester	40	42	43	44	45	46	47
Wychavon	49	51	54	56	57	58	60
Wyre Forest	42	44	46	47	48	49	50

Source: DCLG Household Projection by district, England, 1991-2033



Likely evolution: Latest population projections shown above demonstrate that the number of households in Worcestershire is expected to increase over the timeframe of the Minerals Local Plan. According to the BIS report referred to below, this population increase will lead to "more competition for land use and more demand for mineral-based products, particularly construction minerals for housing and associated infrastructure". The BIS report estimates that an average house needs 400 tonnes of aggregate. Across Worcestershire, the increase in households between 2013 and 2033 would be 38,000, equating to an aggregate requirement of 15,200,000 tonnes. This is before any associated business and infrastructure development which will accompany the new homes.

Role of MLP: The MLP has a major role to play in supporting Worcestershire's growing population. This means ensuring a sufficient proportion of minerals production to allow the homes, offices, factories, commercial and leisure buildings and attendant infrastructure to be built.

Data sources: WCC Research and Intelligence Unit 2012
BIS: Digging the backyard: Mining and quarrying in the UK and their impact on future land use, Land Use Policy Journal, 2009
DCLG, Household Projection by district, England, 1991-2033

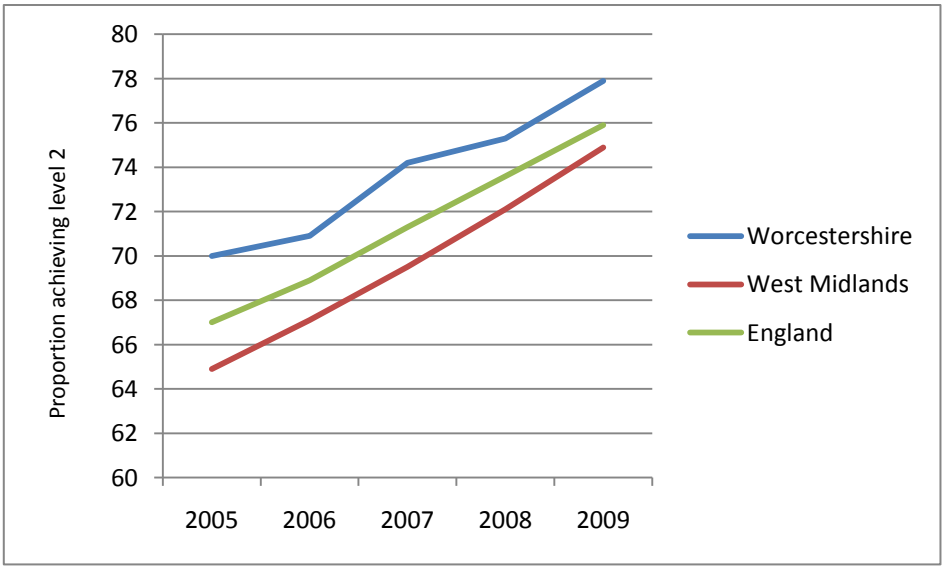
Proportion of young people achieving a level 2 qualification by the age of 19

Key data: 77.9% of young people in Worcestershire achieved a level 2 qualification in 2009 (the latest year for which information is available), which was above both the regional and national results.

Proportion of young people reaching level 2 by age 19, 2005-09 (%)

Area	2005	2006	2007	2008	2009
Worcestershire	70.0	70.9	74.2	75.3	77.9
West Midlands	64.9	67.1	69.5	72.1	74.9
England	67.0	68.9	71.3	73.6	75.9

A level 2 qualification is equivalent to 5 GCSEs at grade A* to C or an NVQ at level 2. National target 2010/11 is 82%. Source: Worcestershire County Council, 2010.



Likely evolution: The likely direction of performance is unclear at this stage. Whilst results have improved year-on-year for some time now, criticism of 'grade inflation' has led the government to introduce new measures of assessment, including new qualifications for some subjects.

Role of MLP: No role for the MLP has been identified.

Data sources: Worcestershire County Economic Assessment 2010/11

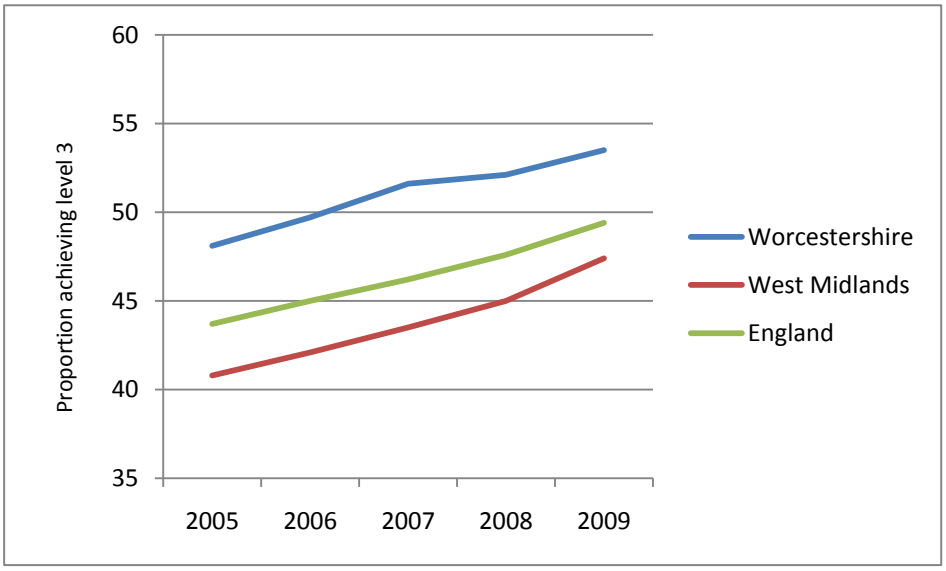
Proportion of young people achieving a level 3 qualification by the age of 19

Key data: 77.9% of young people in Worcestershire achieved a level 2 qualification in 2009 (the latest year for which information is available), which was above both the regional and national results.

Proportion of young people reaching level 3 by age 19, 2005-09 (%)

Area	2005	2006	2007	2008	2009
Worcestershire	48.1	49.7	51.6	52.1	53.5
West Midlands	40.8	42.1	43.5	45.0	47.4
England	43.7	45.0	46.2	47.6	49.4

A level 3 qualification is equivalent to 2 A levels or NVQ at level 3. National target 2010/11 is 54%. Source: Worcestershire County Council, 2010.



Likely evolution: The likely direction of performance is unclear at this stage. Whilst results have improved year-on-year for some time now, criticism of 'grade inflation' has led the government to introduce new measures of assessment, including new qualifications for some subjects.

Role of MLP: No role for the MLP has been identified.

Data sources: Worcestershire County Economic Assessment 2010/11

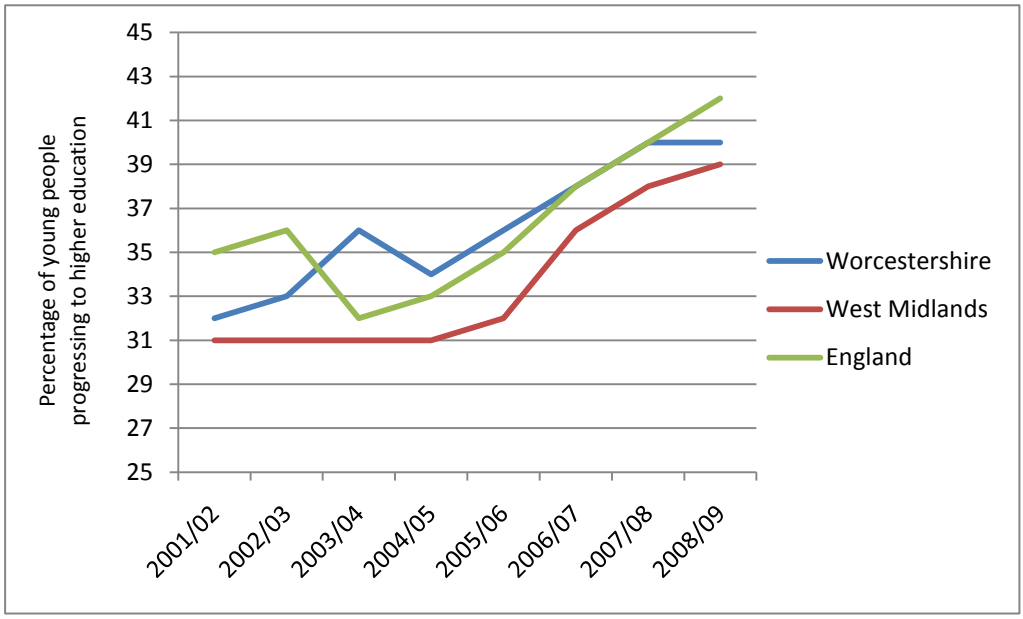
Progression to higher education

Key data: The proportion of Worcestershire residents progressing to higher education is above the proportion for the West Midlands, but is below that of England.

Progression to Higher Education of Worcestershire residents from all schools, 2001/2 - 2008/9

Progression to HE	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Worcestershire %	32	33	36	34	36	38	40	40
West Midlands %	31	31	31	31	32	36	38	39
England %	35	36	32	33	35	38	40	42

Number of first year students on HESA records expressed as a percentage of 16 year olds 2 years earlier.
Source: Higher Education Statistics Agency (HESA)



Likely evolution: The likely direction of performance is unclear at this stage. There has been an overall increase over recent years, and the University of Worcester has increased in size (the university's website states that over the past seven years, the number of people applying to study at Worcester has increased seven times faster than the national average). However, recent changes to university fees are likely to curtail this growth, at least in the short term. UCAS data from 2012 showed that applications to university had fallen by 10% in England since the fee increases, and this is likely to be reflected in local figures.

Role of MLP: No role for the MLP has been identified.

Data sources: Worcestershire County Economic Assessment 2010/10
University of Worcester website

POPULATION: ANTI-SOCIAL BEHAVIOUR & CRIME; LITTER; GRAFFITI

Crimes per 1000 people

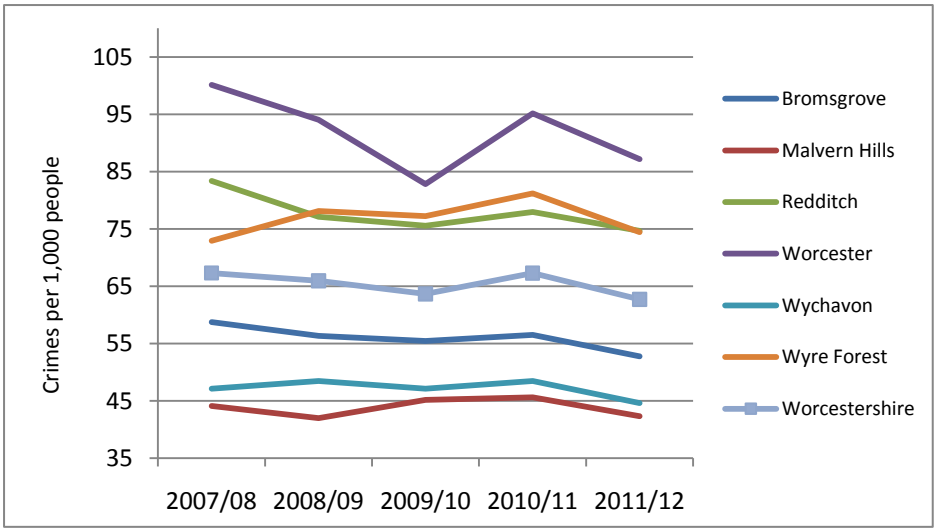
Key data: There has been an overall downward trend in crimes per 1,000 people over the period 2007-2011 across Worcestershire as a whole and across all districts except for Wyre Forest (which has seen a slight increase over the same period).

Total Crime per 1,000 people, per District

District (Sector)	2007/08	2008/09	2009/10	2010/11	2011/12
Bromsgrove	58.7	56.3	55.5	56.5	52.8
Malvern Hills	44.1	42.0	45.1	45.6	42.3
Redditch	83.4	77.1	75.5	78.0	74.7
Worcester City	100.1	94.0	82.8	95.1	87.1
Wychavon	47.1	48.5	47.1	48.5	44.6
Wyre Forest	72.9	78.1	77.2	81.2	74.4
Worcestershire	67.3	65.9	63.6	67.3	62.7

Source: West Mercia Police. Based on ONS mid-year population estimates, 2007 to 2011.

County and district crimes per 1,000 people



Likely evolution: The likely direction of performance is unclear at this stage. Although an overall reduction in crime has been seen over the period 2007/08 – 2011/12, there have been marked variations year-on-year in most districts and it is not possible to predict how this will evolve.

Role of MLP: No role for the MLP has been identified.

Data sources: WCC Research and Intelligence Unit, 2012

Perceptions of anti-social behaviour

Key data: 14.4 % of Worcestershire residents have a high perception that anti-social behaviour is a problem in their local area (NI 17).
For the West Midlands region, 21 % of residents have a high perception that anti-social behaviour is a problem in their local area.
In England 20 % of residents have a high perception that anti-social behaviour is a problem in their local area.

Concern about anti-social behaviour in Worcestershire is relatively minimal, and is beneath both the regional and the national averages

Likely evolution: The likely direction of performance is unclear at this stage.

Role of MLP: The MLP could take this into account and develop policies to ensure that sites are secure during the operation stage and do not become a focus for anti-social behaviour when restored. In other counties some restored sites with bird hides, etc. have attracted under-age drinkers/drug users or have experienced raves etc.

Data sources: Place Survey 2008/WCC Research & Intelligence Unit

APPENDIX 4

OBJECTIVES, INDICATORS AND DECISION-MAKING CRITERIA

Issue	LANDSCAPE
SEA Topic	Yes ~~/ No~~
SA objective	Safeguard and strengthen landscape character and quality.
Potential Indicators	▪ Percentage of Total New Homes Built on Brownfield Land ▪ Condition of the Landscape ▪ Planted ancient woodland sites restored to native woodland
Decision-making criteria	1. Will the plan safeguard and strengthen landscape character and quality? 2. Does the plan have regard to Landscape Character Assessment? 3. Does the plan make use of, and guide others towards, the Worcestershire Landscape character assessment supplementary Guidance?

Issue	BIODIVERSITY, GEODIVERSITY, FLORA & FAUNA
SEA Topic	Yes ~~/ No~~
SA objective	To conserve and enhance Worcestershire's biodiversity and geodiversity
Potential Indicators	▪ Status of European nature conservation sites ▪ Condition of SSSIs ▪ Management Status of Local Sites ▪ Key Breeding Birds Population Numbers
Decision-making criteria	1. Will your plan help to safeguard biodiversity and geodiversity? 2. Will your plan provide opportunities to enhance local biodiversity / geodiversity in both urban and rural areas? 3. Will your plan protect sites and habitats designated for nature conservation? 4. Will your plan help to achieve targets set out in the Biodiversity and Geodiversity Action Plans?

Issue	CULTURAL HERITAGE, ARCHITECTURE AND ARCHAEOLOGY
SEA Topic	Yes ~~/ No~~
SA objective	Conserve and enhance the historic environment and deliver well-designed and resource efficient development which respects local character and distinctiveness.
Potential Indicators	▪ Proportion of undesignated heritage assets at risk ▪ Number of Grade I and II* listed buildings at risk
Decision-making criteria	1. Will the plan conserve, 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? 2. Will the plan help to safeguard Listed, Locally-Listed and other historic buildings and encourage heritage-led regeneration? 3. Will the plan achieve high quality and sustainable design for buildings, spaces and the public realm sensitive to the locality? 4. Will the plan protect, enhance and manage the character and appearance of the townscape/built environment, maintaining and strengthening local distinctiveness and sense of place?

Issue	MATERIAL ASSETS
SEA Topic	Yes ~~/ No~~
SA objective	Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, and land of Green Belt value, whilst maximising use of previously developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure and biodiversity interests.
Potential Indicators	▪ Amount of land falling within Agricultural Land Classifications (hectares) ▪ Hectares of Green Belt land
Decision-making criteria	1. Will the plan safeguard mineral resources? 2. Will the plan help to protect high-quality agricultural land from adverse development? 3. Will the plan preserve the openness of the Green Belt? 4. Will the plan protect and enhance open spaces of recreational and amenity value? 5. Does the plan provide opportunities for sustainable construction? 6. Will the plan maximise the use of previously-developed land?

Issue	NATURAL RESOURCES (AIR, WATER, SOIL, MINERALS)
SEA Topic	Yes ~~/ No~~
SA objective	Protect and enhance water, soil and air quality
Potential Indicators	▪ Number of Air Quality Management Areas (AQMAs) in Worcestershire ▪ Water quality ▪ Water resource availability ▪ Contaminated Land ▪ Annual production of land-won aggregates (sand and gravel) ▪ Annual production of land-won aggregates (crushed rock)
Decision-making criteria	1. Will the plan improve or maintain air quality? 2. Will the plan provide opportunities to improve or maintain water quality? 3. Will the plan encourage measures to improve water efficiency in new development, refurbishment and redevelopment? 4. Will the plan provide opportunities to improve or maintain soil quality?

Issue	CLIMATE CHANGE
SEA Topic:	Yes ~~/ No~~
SA objective	Reduce causes of and adapt to the impacts of climate change
Potential Indicators	▪ CO_2 emissions per head ▪ Ecological Footprint (Global Hectares per Person)
Decision-making criteria	1. Will the plan reduce emissions of greenhouse gases? 2. Does the plan promote patterns of spatial development that are adaptable to and suitable for predicted changes in climate? 3. Does the plan promote measures to mitigate causes of climate change?

Issue	ENERGY
SEA Topic	~~Yes~~ / No
SA objective	Promoting energy efficiency and energy generated from renewable energy and low-carbon sources.
Potential Indicators	▪ Total final energy consumption by local authority (kilo-tonnes of oil equivalent)
Decision-making criteria	1. Will the plan encourage opportunities for the production of renewable and low-carbon energy? 2. Will the plan promote greater energy efficiency? 3. Will the plan encourage opportunities to achieve energy efficiency measures above the minimum standard?

Issue	FLOODING
SEA Topic	~~Yes~~/No
SA objective	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.
Potential Indicators	▪ Properties at risk of flooding
Decision-making criteria	1. Does the plan protect the floodplain from inappropriate development? 2. Does the plan reduce the risk of flooding in existing developed areas? 3. Does the plan promote Sustainable Drainage systems? 4. Does the plan promote patterns of spatial development that are adaptable to and suitable for predicted changes in climate?

Issue	ACCESS TO SERVICES
SEA Topic	~~Yes~~ / No
SA objective	To improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.
Potential Indicators	▪ Access to information: Satisfaction rates regarding Minerals & Waste planning policy ▪ Accessibility to Worcestershire acute hospitals
Decision-making criteria	1. Will the plan enhance the provision of local services and facilities? 2. Will the plan contribute to rural service provision? 3. Will the plan enhance accessibility to services by public transport?

Issue	HEALTH
SEA Topic	Yes ~~/ No~~
SA objective	To improve the health and well being of the population and reduce inequalities in health
Potential Indicators	▪ Health ACORN categories ▪ Female life expectancy at birth ▪ Male life expectancy at birth
Decision-making criteria	1. Will the plan improve access to health facilities? 2. Will the plan help to improve quality of life for local residents? 3. Will the plan promote healthier lifestyles? 4. Does the plan mitigate against noise pollution? 5. Does the plan mitigate against light pollution?

Issue	WASTE
SEA Topic	~~Yes~~ / No
SA objective	To manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal
Potential Indicators	▪ Household waste produced per head of population ▪ Percentage/Amount of household waste recycled or composted
Decision-making criteria	1. Are opportunities to increase recycling encouraged in the plan? 2. Will the plan reduce the production of waste and manage waste in accordance with the waste hierarchy?

Issue	TRAFFIC AND TRANSPORT
SEA Topic	~~Yes~~ / No
SA objective	To reduce the need to travel and move towards more sustainable travel patterns
Potential Indicators	▪ Working age people with access to employment by public transport (and other specified modes) ▪ Access to services and facilities by public transport, walking and cycling ▪ CO2 emissions in the county per capita arising from road transport
Decision-making criteria	1. Will the plan reduce the need to travel? 2. Will the plan provide opportunities to increase sustainable modes of travel? 3. Does the plan focus development in existing centres, and make use of existing infrastructure to reduce the need to travel?

Issue	GROWTH WITH PROSPERITY FOR ALL
SEA Topic	~~Yes~~ / No
SA objective	Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.
Potential Indicators	▪ Average Worcestershire household income ▪ Percentage employment rate (working age) ▪ GVA per Worcestershire resident head
Decision-making criteria	1. Will the plan contribute towards urban and rural regeneration? 2. Will the plan provide opportunities for businesses to develop and enhance their competitiveness? 4. Will the plan help to improve skills levels in the workforce?

Issue	PROVISION OF HOUSING
SEA Topic	~~Yes~~ / No
SA objective	Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments
Potential Indicators	▪ New affordable homes built ▪ Relationship between average salary and average house prices
Decision-making criteria	1. Will the plan provide opportunities to increase affordable housing levels within urban and rural areas? 2. Will the plan provide affordable access to a range of housing tenures and sizes? 3. Does the plan seek to provide high quality, well-designed residential environments? 4. Does the plan provide opportunities for the construction of sustainable homes?

Issue	PARTICIPATION BY ALL
SEA Topic	~~Yes~~ / No
SA objective	To 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.
Potential Indicators	▪ Waste Core Strategy consultation response rates ▪ Percentage of properties provided with kerbside household recycling collection
Decision-making criteria	1. Does the plan proposals incorporate consultation with the local communities? 2. Does the plan promote wider community engagement and civic responsibility?

Issue	TECHNOLOGY, INNOVATION & INWARD INVESTMENT
SEA Topic	~~Yes~~ / No
SA objective	Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.
Potential Indicators	▪ New business enterprises
Decision-making criteria	1. Does the plan encourage innovative and environmentally-friendly technologies? 2. Does the plan promote and support the development of new technologies, of high value and low impact?

Issue	POPULATION 1 (DEMOGRAPHICS, SKILLS AND EDUCATION)
SEA Topic	Yes ~~/ No~~
SA objective	To raise the skills level and qualifications of the workforce
Potential Indicators	▪ Population ▪ Proportion of young people achieving a level 2 qualification by the age of 19 ▪ Proportion of young people achieving a level 3 qualification by the age of 19 ▪ Progression to higher education
Decision-making criteria	1. Will your plan provide opportunities to further develop educational and attainment facilities?

Issue	POPULATION 2 (CRIME & FEAR OF CRIME)
SEA Topic	Yes ~~/ No~~
SA objective	Reduce crime, fear of crime and antisocial behaviour
Potential Indicators	▪ Crimes per 1,000 people ▪ Perceptions of anti-social behaviour
Decision-making criteria	1. Will the plan seek to provide high quality well designed environments? 2. Does the plan promote wider community engagement and civic responsibility? 3. Does the plan promote mixed development that encourages surveillance?