

WORCESTERSHIRE COUNTY COUNCIL

**Worcestershire Minerals Local Plan
Second Consultation Draft Initial Sustainability Appraisal**

November 2013

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1. Non-Technical Summary

1.1 Introduction

- 1.1.1 This non-technical summary has been produced to accompany the Sustainability Appraisal (SA) of the Second Consultation Draft of the emerging Worcestershire Minerals Local Plan (MLP). The purpose of this summary is to provide an accessible account of the SA process and to set out how far the emerging MLP will enable environmental, economic and social development in Worcestershire.
- 1.1.2 The emerging Minerals Local Plan will guide how and where minerals will be worked in Worcestershire. It is being developed by Worcestershire County Council to replace the current Plan, which dates from 1997. In accordance with legal requirements, a Sustainability Appraisal is being produced to accompany the MLP. The Sustainability Appraisal should help to maximise the positive impacts of the Plan and to minimise the negative impacts, through assessing how well each part of the Plan performs against a series of criteria. The SA provides recommendations for how the Plan should develop.

1.2 The Minerals Local Plan

- 1.2.1 Once adopted by the County Council, the Minerals Local Plan will be a Development Plan Document which will be used to determine planning applications. It establishes a Vision of what mineral provision and restoration will 'look like' in the county in the next 15 years, and proposes a series of draft objectives for making the Vision a reality.

Minerals Local Plan Second Consultation Draft: Vision

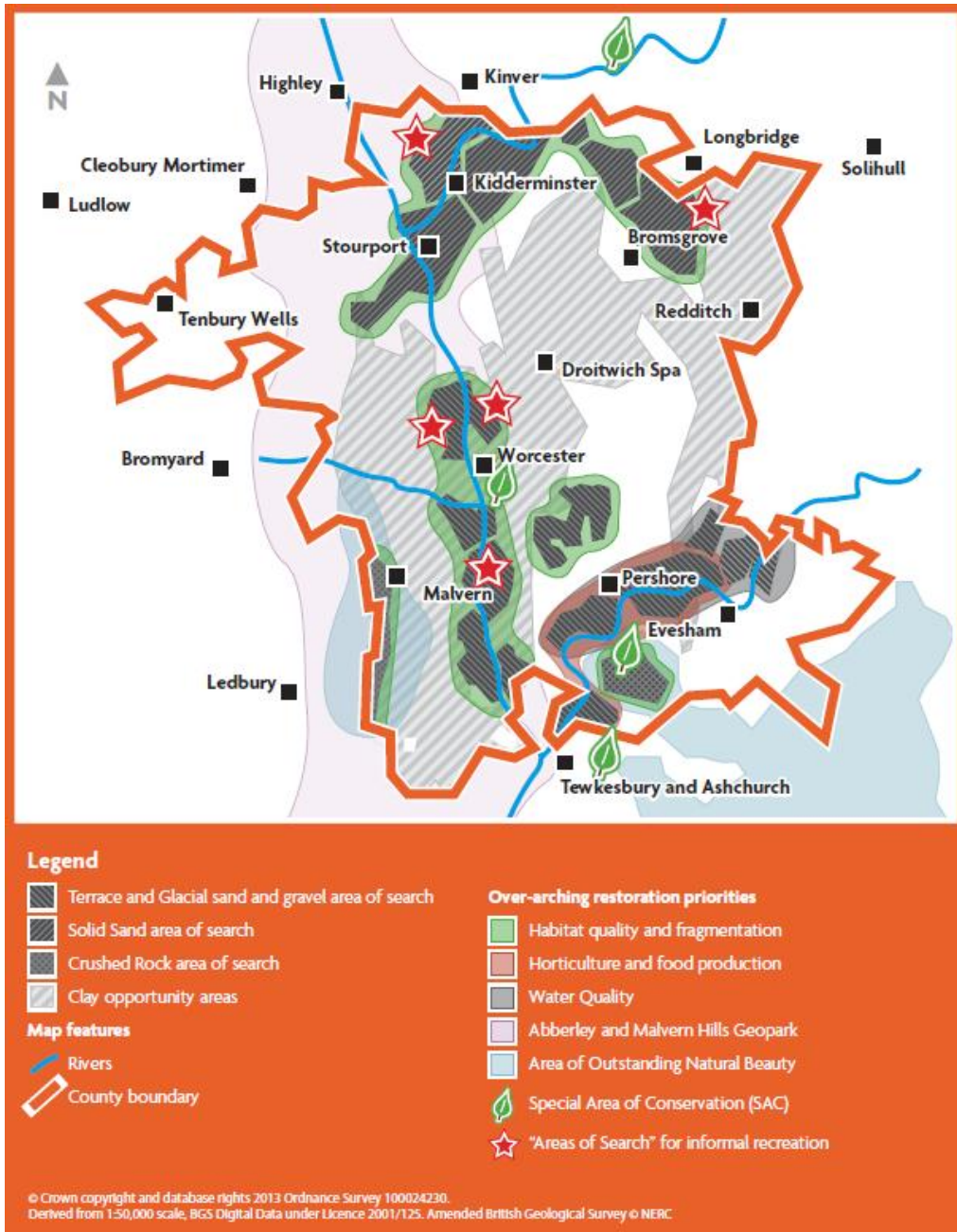
The Minerals Local Plan will deliver sustainable minerals development in Worcestershire up to 2030 and beyond.

In order to support a sustainable economy and to maintain and foster local distinctiveness, mineral provision in Worcestershire will be adequate to contribute to national and local needs, enabling the contribution of at least 18.54 million tonnes of sand and gravel and 3.92 million tonnes of crushed rock to national supply, and enabling the provision of industrial and energy minerals and local building stone where appropriate. Annual requirements for minerals will be met and reserves replenished to ensure the delivery of minerals throughout the life of the plan and beyond. To enable sustainable supply in the long-term, reserves of aggregates will meet minimum landbank targets by halfway through the plan-period; nationally and locally important mineral resources will be safeguarded for future use; and the use of secondary and recycled materials will be encouraged.

Minerals will be worked and located in a socially and environmentally sustainable way that takes account of the health and amenity of local people, the vitality of the local economy, the integrity of the environment and the value of local features and characteristics. Mineral workings will be restored to maximise social, environmental and economic gains, through coordinated restoration that delivers networks of green infrastructure in an integrated way.

These economic, social and environmental achievements will be delivered through the Spatial Strategy (Figure 7) [reproduced below for this SA report] which drives development to the locations where the working of viable mineral resources will meet market demand and enable the delivery of the strategic restoration priorities identified.

Figure 1: Minerals Local Plan Second Consultation Draft: Spatial Strategy



Minerals Local Plan Second Consultation Draft: Objectives

- 1: Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan.
- 2: Ensure the long term sustainability of supply of minerals resources.
- 3: Protect and enhance Worcestershire's key economic sectors.
- 4: Ensure mineral operations are resilient to and mitigate the impacts of climate change.
- 5: Utilise mineral restoration to enhance climate change resilience of the county.
- 6: Protect and enhance the natural and historic environment.
- 7: Protect and enhance health and amenity.
- 8: Involve all those affected as openly and effectively as possible.

1.2.2 The main issues which the MLP considers, and which will be developed into policies as the Plan progresses, are:

- How much mineral resource should be provided
- When minerals will be worked
- When Worcestershire's reserves will meet national targets
- How minerals will be worked
- Where minerals will be worked
- How constraints will be taken into account
- Site-specific location policies
- How mineral workings will be restored
- How minerals will be safeguarded for future use

1.2.3 Plan preparation began with publication of a first-stage consultation document in November 2012. This set out the issues which need to be considered in the MLP. These issues have now been worked up into broad policy directions in the current 'Second Consultation Draft'. Following this, a more focussed draft MLP will be produced during 2014, before being finalised and submitted to the government for 'examination'. If the plan is approved, the County Council can formally adopt it as planning policy for Worcestershire.

1.2.4 Throughout all these stages, there are opportunities for people to get involved and share their views. Each iteration of the MLP is accompanied by an SA document (in the form of a Scoping Report at the earliest stage, and SA Reports at subsequent stages).

1.3 Sustainability Appraisal: Background and Process

- 1.3.1 Sustainability Appraisal (SA) of the emerging plan is a statutory requirement under section 19(5) of the Planning and Compulsory Purchase Act 2004. SA also addresses the requirements of European Directive 2001/42/EC (known as the Strategic Environmental Assessment Directive). The appraisal is designed to ensure that the social, environmental and economic impacts arising from the plan are fully considered 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 Minerals Local Plan. It must be recognised, however, that the level of detail provided in the emerging plan is not sufficiently advanced for all policy options to allow for a full, in-depth appraisal at this stage; as the MLP develops through subsequent iterations, the SA will be refreshed alongside it to assess the more detailed options and policies.
- 1.3.2 This non-technical summary accompanies the 'Initial SA report', which represents the second stage in the SA process. It is a high-level appraisal of the broad policy options proposed in the Minerals Local Plan Second Consultation Document. This SA builds upon the earlier SA Scoping Report that was consulted upon alongside the 'First Stage Consultation' Minerals Local Plan in 2012. The Scoping Report was amended to reflect consultation comments, providing a framework that has been used in this SA report to assess the 'Second Consultation Document' Minerals Local Plan.
- 1.3.4 The sustainability objectives which underpin the SA framework are shown below:

Sustainability Appraisal Objectives

Landscape: Safeguard and strengthen landscape character and quality.

Biodiversity, Geodiversity, Flora and Fauna: Conserve and enhance Worcestershire's biodiversity and geodiversity.

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

Material assets: Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.

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

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

Energy: Promote energy efficiency and energy generated from renewable energy and low-carbon sources.

Flooding: Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.

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

Health: Improve the health and well-being of the population and reduce inequalities in health.

Waste: Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.

Traffic and Transport: Reduce the need to travel and move towards more sustainable travel patterns.

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

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

Participation by all: 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.

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

Population (skills and education): Raise the skills levels and qualifications of the workforce.

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

1.4 Sustainability profile of Worcestershire

1.4.1 The SA has been informed by the identification, at Scoping Report stage, of a series of significant environmental, social and economic issues for Worcestershire (including environmental 'problems' requiring identification under the SEA Directive). 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'.
- Although regional and national comparators are not yet known, too few local wildlife and geological sites in Worcestershire 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.
- Following year-on-year falls since 2005, CO₂ emissions increased in 2010. Per capita CO₂ 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).
- Air quality in some areas of the county is improving, but in others is decreasing. The number of Air Quality Management Areas in Worcestershire is increasing.
- The rate of new business enterprises in Worcestershire has fallen by 10.1% from 2007-2008, which is a greater fall than regionally or nationally.
- Worcestershire's GVA per resident head is below both England and the West Midlands, and evidence suggests the gap is widening.
- County housing affordability is far worse than the regional average.
- Worcestershire is slightly under-performing against the regional and national averages in the percentage of young people achieving a level 2 qualification by the age of 19.

- 1.4.2 These issues, together with those identified through a review of plans, policies and programmes relevant to the MLP (and any other issues which emerged through complementary research) have informed the 'SA framework' set out in the SA Scoping Report. The main part of the framework is a set of 18 SA objectives (see overleaf), which are used to judge how far each part of the MLP provides for each identified element of sustainable development in Worcestershire.
- 1.4.3 Where the MLP has proposed alternative potential approaches, each approach has been assessed. Where the MLP has not put forward alternatives, the SA has sought to identify the relative sustainability of the proposals through comparison with a 'business as usual' approach; this means comparing the impacts of the proposed MLP to the impacts likely to arise under a continuation of the current Local Plan from 1997.
- 1.4.4 Overall, the SA results indicate that the proposed policy directions in the MLP perform well against the SA objectives. The green infrastructure-led restoration approach means that the MLP scores particularly well in relation to Landscape, Biodiversity, Geodiversity, Flora and Fauna; Cultural heritage, architecture and archaeology; Material assets; Natural Resources; and Climate Change.

1.5 Short, medium and long-term effects

- 1.5.1 Many of the effects of the MLP could differ over the short, medium and long term. Safeguarding policies could have short-term negative effects on those SA objectives furthered by development taking place (especially *growth with prosperity for all*, and *provision of housing*), as safeguarding could delay or even prevent such development occurring. Over the longer term however, the protection of resources could eventually help to facilitate such development and so have a positive impact on these SA objectives. Some negative environmental effects, especially on the SA objectives for *landscape* and *cultural heritage, architecture and archaeology*, are likely to arise in the short term from mineral workings. In the longer term, however, sensitive restoration is likely to lead to positive effects, as sites are restored to their former condition (or restored to exceed their former environmental value).

1.6 Initial SA findings

- 1.6.1 This section gives a summary of the main identified sustainability findings from the more detailed appraisal in Appendix Two. Overall, the MLP provides a sustainable approach to minerals development, but there are some improvements which could be made to improve sustainability performance in future iterations of the Plan.
- 1.6.2 The matrix below is a very high-level summary of the overall impacts of the MLP's proposed approach on each of the SA objectives. It is important to note that this broad summary, including SA ratings, does not reflect all of the particular impacts of the MLP, and that this SA should be read as a whole.

➤ Summary of sustainability implications of the MLP Second Consultation Draft

Significant positive impact	++	Neutral/no impact	0	Minor negative impact	-
Minor positive impact	+	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	<p>Landscape character should be safeguarded through policies guiding the location and operation of mineral workings, but could be compromised under the higher levels of extraction, especially those proposed for sand & gravel under Option A.</p> <p>The landscape impacts of associated transport and infrastructure should be considered, and the MLP should be informed by the Worcestershire Landscape Character Assessment Supplementary Guidance.</p> <p>The MLP recognises that a policy response to minerals extraction in AONBs is needed.</p> <p>Landscape should be specifically identified in the MLP Vision.</p>
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	+	<p>The MLP's focus on green-infrastructure means that biodiversity, geodiversity, flora and fauna are generally given full consideration. The higher levels of proposed landbank are more likely to have negative impacts on this SA objective. The restoration policies seek enhancement of assets, but this could also be brought out more fully in the operational and locational policies.</p> <p>Any policy to reduce the risk of bird strike should not be at the expense of biodiversity aims.</p> <p>Geodiversity should be specifically recognised in the Vision.</p>
<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	+	<p>This SA objective is, in the main part, addressed comprehensively through the MLP's approach to green infrastructure. Although the MLP Objectives recognise the importance of enhancement as well as protection, this is less evident in the policies themselves. The approach to archaeology should also take into account the significance of assets.</p>
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	+	<p>Agricultural and green belt land is more likely to be adversely affected under the higher proposed landbank figures. More attention should be paid throughout the MLP to the need to use all resources more efficiently.</p> <p>Recognition of the potential of offsetting to prevent net loss of soil quality arising from minerals development is welcome, although the value of soil as a carbon sink should also be included. Caution is recommended over equating 'horticulture and food production' with soil quality, as this risks overlooking the valuable role of other factors (such as water</p>

		quantity, access to infrastructure, market demand, etc.).
5: Natural Resources Protect and enhance water, soil and air quality.	+	The MLP should help to deliver this SA objective, but it must ensure that air quality and dust are not considered solely in terms of minerals sites themselves, but that the impacts of associated infrastructure, such as transport, are taken into account. Water quality is a strategic restoration priority, but the MLP should recognise the interlinked nature of watercourses and rivers, and should be clear that a catchment-based approach is needed.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	+	The MLP provides a generally positive approach to climate change, but the higher levels of extraction under the larger landbanks could have negative impacts on CO ₂ emissions. The MLP should be informed by the latest UK Climate Projections (UKCP09). The impacts of climate change on land stability also need to be considered. The need to mitigate and adapt to climate change should be expressly recognised in the Vision.
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	?	While the MLP does not specifically promote the extraction of fossil fuels, it will provide a framework for their extraction if required. The scope for renewable energy associated with mineral workings extends beyond just the building-mounted solutions during the site's lifetime; the MLP recognises that restored sites could afford opportunities to develop large-scale renewable or low-carbon generation. There is a need for energy efficiency to be recognised.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	+	This SA objective is well provided for in the MLP, but consideration should be given to whether the proposed approach of defining flooding as a 'significant component' in restoration within Environment Agency 'Policy 3' areas may be unnecessarily restrictive.
9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	No significant sustainability impacts are anticipated to arise from the MLP in relation to this SA objective, although the consideration of the need to add to or enhance the Public Right of Way network in the restoration section is welcomed.
10: Health Improve the health and well-being of the population and reduce inequalities in health.	0	No significant health implications have been identified. The higher landbank levels could lead to increased minerals activity and a consequent risk of increased disturbance, although the risk of physical or mental health being compromised through excessive noise, light pollution, odour, or reduced air quality should be minimised through the MLP's approach to operational policies. Many of the issues will directly or indirectly ensure that health is safeguarded, and

		enhancements could be achieved in the longer term if a net improvement in access and recreation opportunities arises from restored sites.
<p>11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.</p>	+	<p>The MLP's proposed approach should help to deliver this SA objective, and the link to the Waste Core Strategy is welcomed.</p> <p>The Vision should seek maximised use of recycled aggregates, rather than just encouraging such use.</p> <p>The higher levels of landbank could compromise the waste hierarchy through discouraging more efficient use of existing materials and recycling. There could be some minor positive impacts arising from a lower minimum provision, which would help to focus on recycling and re-use of minerals.</p>
<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	+	<p>The MLP should help to deliver this SA objective, but there is a need to ensure that future approaches seek to reduce, rather than simply to manage, the need to travel.</p> <p>An increased provision of minerals under the higher landbank levels could lead to traffic and transport impacts through increased HGV movements.</p> <p>The restoration section's assertion that transport issues will be very site specific may underplay the potential impacts on the wider transport network, depending on the final use of the site.</p>
<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	+	<p>The MLP provides a generally positive approach to delivering this SA objective, although the risk of limiting economic growth to only those sectors supported by the LEP should be avoided.</p> <p>Higher volumes of minerals (under higher landbanks) would tend to support economic growth through providing a local supply of minerals for building. Failure to provide sufficient resources could compromise delivery and push investment out of the county.</p> <p>The MLP's strategic restoration priorities make provision for economic development including horticulture and food production (which is a key economic sector in Worcestershire).</p>
<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	0	<p>Whilst the MLP will help to enable house-building through ensuring local building material are available, no significant impacts on this SA objective have been identified. Higher volumes of minerals (under higher landbanks) would offer the greatest support to house-building. Failure to provide sufficient resources could compromise housing delivery.</p>
<p>15: Participation by all 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.</p>	0	<p>When addressing how minerals will be worked, community engagement is currently only "encouraged"; consideration should be given to a more robust approach. Similarly, in the cross-cutting site restoration policies, the current wording is of encouragement of pre-application discussion and</p>

		community liaison groups, rather than requiring such opportunities; a stronger stance should be considered.
16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	No significant implications have been identified in relation to this SA objective, although in setting out policy proposals for how minerals will be worked, the MLP seeks to promote high-value, low-impact technologies.
17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	No significant sustainability impacts have been identified in relation to this objective.
18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	No significant sustainability impacts have been identified in relation to this objective.

➤ **Vision**

1.6.2 The Vision provides a valuable overview of the aspiration for minerals development in Worcestershire, and sets out in broad terms how the MLP can contribute to sustainable development. The Vision could be strengthened by recognising the social dimension of minerals provision in supporting quality of life.

The approach to green infrastructure (GI)-based restoration is welcomed, although greater emphasis could be placed on the role of GI in determining appropriate development locations. The clear importance of the MLP to geodiversity deserves specific recognition, and consideration should be given to identifying landscape as a key issue.

Use of secondary and recycled materials should be "*maximised*" rather than just "*encouraged*", in line with the Worcestershire Waste Core Strategy.

As the minerals industry is so resource-intensive, the Vision should include the need to mitigate and adapt to climate change and to reduce energy and water consumption. Reference should also be made to maximising the use of sustainable transport.

➤ **Objectives**

1.6.3 The Draft Objectives should provide a largely effective context in which the more detailed policies of the MLP can be taken forward.

Consideration should be given to including efficiency of resources in all its forms (including efficiency of transport, land, assets, energy, etc.) to support the Vision and complementary plans and strategies.

There could be a role for the Objectives to include broad direction on where development should be focussed.

Inclusion of enhancement as well as protection of the natural and historic environment is welcomed, and the SA objective on *climate change* is strongly supported at both operational and restoration stages. The SA objective on *participation by all* is also specifically supported. The MLP Objective to 'Protect and enhance Worcestershire's key economic sectors' should seek to ensure that it is not only those economic opportunities identified by the LEP that are supported.

➤ **How much mineral resource will we make provision for?**

1.6.4 The three options for the size of the crushed rock and sand & gravel landbanks could have markedly different sustainability impacts. Potential environmental degradation – especially in the short term - increases with higher levels of mineral extraction. Higher levels could therefore lead to negative impacts on *landscape, climate change, natural resources, and biodiversity, geodiversity, flora and fauna*, although geodiversity impacts could be negative (through greater risk of destroyed/compromised assets), or positive (greater likelihood of revealing/safeguarding assets).

Option A is likely to lead to a minor over-provision of sand and gravel, meaning negative sustainability impacts on, e.g. *flooding*, would be felt most strongly around sand and gravel developments.

Cultural heritage, architecture and archaeology is likely to be best protected through Option C. Maintenance of local character and distinctiveness is likely to rely more upon building stone, which is not provided for in this policy.

Higher levels of resources would place greater pressure on agricultural and green belt land where a lack of alternative land is available, but could deliver flooding benefits from restored sites, through providing water storage and aiding flows.

The most significant negative *traffic and transport* impacts would arise under Option A, as increased levels of development and associated infrastructure would generate increased HGV movements. Opportunities to exploit sustainable transport are likely to be limited, based on Worcestershire's distribution of minerals in relation to railheads and water access.

The higher volume of minerals under Option A would have generally positive impacts on *growth with prosperity for all* and *provision of housing*, through providing for sufficient minerals to facilitate economic growth and house-building. Failure to provide sufficient resources could compromise delivery and push investment out of the county, although the level in Option C is only a minimum, so further extraction could occur if necessary.

No significant impacts on the *waste* SA objective have been identified, but some minor negative impacts could occur through Option A's slight over-provision of sand and gravel, which could compromise the waste hierarchy through discouraging more efficient use of existing materials and recycling. There could be some minor positive impacts arising from a lower minimum provision, which (although not restricting additional extraction) could lead to a greater focus on recycling and re-use of minerals, thereby supporting the waste hierarchy.

No significant *health* implications have been identified, although under the higher levels of resources there is more risk of dust and noise emissions.

No significant sustainability impacts are anticipated to arise from any of the three options in relation to *access to services, participation by all, technology, innovation and inward investment, population (skills and education), and population (crime & fear of crime)*.

Consideration could be given to separating out the sand & gravel and crushed rock elements of the aggregate provision into separate strands, to more easily identify each landbanks' particular sustainability impacts.

Consideration should also be given to including a target for recycled/secondary aggregates. Whilst the level of such aggregates is currently built into the Options, a

clearly expressed target could raise the profile of the need to minimise new resources.

➤ **How will minerals be worked?**

1.6.5 This section of the MLP sets out a list of issues which, if addressed appropriately, will help to ensure negative sustainability impacts are minimised during the operational phases of mineral workings and that where possible, net benefits are secured for the economy, environment, and communities. However, whilst the individual components of green infrastructure are covered, the holistic consideration of GI as a positive enabler, could be strengthened.

Landscape character and quality should be safeguarded and strengthened, although the consideration of visual intrusion should extend to that arising from transport and associated infrastructure, and to the importance of viewpoints.

Biodiversity, geodiversity, flora and fauna are generally well catered for by the issues, although there is scope to move from simply conserving assets and satisfying legal requirements, to seeking enhancement (in line with the positive green infrastructure approach of the Vision). The potential to reveal new geodiversity features is also missing. The role of biodiversity offsetting should be explored.

Local character and distinctiveness should be maintained, but the consideration of archaeology should include the *significance* of assets to better satisfy the SA objective on *cultural heritage, architecture and archaeology*. Consideration should be given to highlighting distinctive characteristics and features in the county (some of which are discussed in the Spatial Portrait).

The issues should help to deliver the *material assets* SA objective, and the link to the *Waste Core Strategy* is welcomed. Efficient resource use also extends to buildings, and provision of minerals to repair historic buildings can help sustain and rejuvenate under-utilised historic buildings.

Delivery of the *natural resources* SA objective will be helped by the issues.

There should be greater ambition for the use of renewable energy, as the scope for its application extends beyond simply building-mounted solutions; restored minerals sites may be suitable for large-scale renewables installations.

The risk of physical or mental health being compromised through excessive noise, light pollution, odour, or reduced air quality should be minimised through the issues identified.

The issues will help to meet the *traffic and transport* objective, but further consideration is recommended on whether the issues will be "*very site specific*".

Participation by all should be fostered, but community engagement is currently only "*encouraged*"; consideration should be given to a more robust approach.

High-value, low-impact technologies should be promoted through the issues, helping to deliver the *technology, innovation and inward investment* objective.

None of the issues specifically relate to the *growth with prosperity for all* or *provision of housing* objectives, but the issues collectively provide an effective framework for minerals which will foster economic and social development.

➤ **Issues to be addressed by the site-specific location policies**

1.6.6 The issues will help to deliver the safeguarding/preserving elements of the *landscape, biodiversity, geodiversity, flora and fauna, and cultural heritage*,

architecture and archaeology SA objectives, although (excepting geodiversity), insufficient consideration is given to the potential for enhancement.

The water and soil elements of the *natural resources* objective will be met in part, although as with the issues above, enhancement is not considered. None of the issues specifically consider the air quality element of the objective, but this will largely be governed by operational policies, rather than those guiding site locations.

The main aspects of *climate change* are generally well-covered. The MLP should be informed by the latest climate change projections available through UK Climate Projections 2009 (UKCP09).

The SA objective on *flooding* is provided for fully in the issues (recognising the particular classification of mineral workings in national policy on flooding).

➤ **Alternative approaches to driving the delivery of the restoration priorities for each area of search and the opportunity area for clay**

1.6.7 The MLP places the environmental side of restoration ahead of economic and social imperatives, although the approach will deliver benefits against all three strands of sustainable development; there will be complementary and joined-up benefits, especially as a green infrastructure approach will provide the right environment in which businesses can grow.

The SA objectives on *biodiversity, geodiversity, flora and fauna* and *landscape* are generally well covered through all of the options, although a fuller appraisal will not be possible until more detailed information (for example on the likely impact of mineral workings on landscape character in each area of search) becomes available in the next version of the MLP. There is not currently a proposed landscape policy response to minerals development in AONBs.

Allocating the greatest efforts/resources to maintaining the least fragmented landscapes should ensure that high quality areas are maintained, but this approach excludes opportunities to improve poorer-quality (highly-fragmented) landscapes. On balance, this is considered necessarily pragmatic, as limited resources dictate a need to focus on achievable aims; improving the most fragmented sites may amount to a relative waste of resources if these sites would remain isolated and fail to make a valued contribution to a wider network. A similar approach is proposed for biodiversity, for which Alternatives B and C would ensure consideration of biodiversity in the site's wider context.

In terms of the SA objective on *cultural heritage, architecture and archaeology*, 'Historic environment' is identified as a high-level strategic restoration priority, but is not an over-arching priority in the Spatial Strategy as no 'meaningful and coherent corridors' have been identified.

Caution is recommended over the approach of Alternative C to biodiversity, geodiversity, the historic environment and water quality. Publication of the evidence bases for each of these issues on a spatial master plan calls into question by what mechanism, and at what time, such a master plan would be updated to ensure continued accuracy. WFD monitoring, for example, is carried out in accordance with the provisions of *River Basin Management Plans*. It is unclear how such dynamic records could be reflected within the MLP policy or mapping. It may be better to cross-refer to the relevant data sources which can then be consulted for each application. Maintaining the proposed approach could risk assets identified following publication being overlooked and potentially compromised.

Equating 'horticulture and food production' with soil quality fails to recognise the role of water quantity, access to infrastructure, market demand, etc.

Water quality is a strategic restoration priority, but the MLP should clarify whether the WFD assessment provides comprehensive coverage of Worcestershire's watercourses, and should detail the approach to be taken if it does not. The MLP should also recognise the interlinked nature of watercourses and rivers, and should be clear that a catchment-based approach is needed. It is not only the immediate surroundings of a site that should be considered, but also the impacts on the area of search and beyond.

Encouraging food production and horticulture on restored land could potentially discourage the growing of energy crops, thereby compromising delivery of the SA objective on *energy*, but this is not considered a significant negative impact, as energy crops are not specifically excluded from consideration.

The MLP's strategic restoration priority on 'Flood alleviation' will help to deliver the SA's *flooding* objective. However, defining flooding as a 'significant component' in restoration within Environment Agency 'Policy 3' areas may be unnecessarily restrictive; consideration should be given to moving Policy 3 and 4 areas down to priority levels 3 and 2, respectively.

Successful delivery of the strategic restoration priorities will support economic development including horticulture and food production (a key economic sector in Worcestershire), thereby helping to deliver the SA objective on *growth with prosperity for all*.

➤ **Cross-cutting site restoration policies**

- 1.6.8 Restoration should seek to go beyond minimising negative impacts, to enhancement of character and quality wherever possible.

Landscape considerations should be informed by Worcestershire's Landscape Character Assessment (LCA), and *LCA Supplementary Guidance*.

The relationship between the *protection and enhancement of internationally, nationally and locally designated sites, habitats and species* and *aviation safety* requires careful consideration to ensure that potential conflicts are avoided; the need to minimise bird strike risk should not compromise biodiversity aims.

Issue (i) could clarify that staged restoration of agricultural land should be undertaken as soon as possible (if this is the most sustainable outcome).

Efficient use of land and safeguarding of mineral reserves is well catered for.

The MLP's recognition of the potential of 'offsetting' as a means of ensuring no net loss (and possibly some net gain) where site soil cannot be restored to its original quality is welcomed. The issue could also recognise the degradation that occurs in stored soils over time; simply removing the soil and then replacing once mineral operations are completed is likely to lead to a net loss in soil quality that should be mitigated by positive measures. The value of soil as a carbon sink could also be mentioned here.

Consideration of air quality and dust should not be restricted to just the immediate impacts in and around the restored site, but should also factor in air quality issues arising from transport to and from the site, depending on final use.

Issue (j) on land stability and subsidence fails to recognise the impact of climate change on land stability. Research undertaken for Worcestershire County Council by Gina Cavan (reproduced in the *Worcestershire Partnership Climate Change*

Strategy) has mapped subsidence risk for gleyed and clay soils, and this could be overlain with other data to inform the MLP.

The assertion that transport issues will be very site specific may underplay the potential impacts on the wider transport network, depending on the end-use of the site.

The issue's identification of renewable energy schemes and environmental technologies is welcomed, as this recognises the potential for such development to come forward on restored sites. There are numerous examples of successful energy-generating projects in former mineral workings around the country, and such sites often perform well against visual impact criteria because they are often well-screened.

The particular provision within Issue (f) for adding to or enhancing the public rights of way network is welcomed and should help to satisfy the SA objective on *access to services*.

Many of the issues will directly or indirectly ensure that health is safeguarded, and enhancements could be achieved in the longer term if a net improvement in access and recreation opportunities arises from restored sites.

The SA objective on *traffic and transport* is generally well provided for, but the current focus is on managing, rather than reducing, the need to travel.

Nothing in the overarching restoration section directly contributes to meeting the SA objective on *growth with prosperity for all*, and there may be scope to include economic development in the issues to be considered.

No specific issues have been identified as contributing directly to meeting the SA objective on *provision of housing*. Issue (w) on built development does not expressly mention housing as a potential use for restored sites, but this is an option which cannot be discounted.

Issues (u) on pre-application discussion and (v) on community liaison groups provide positive means of delivering against the *participation by all* SA objective, although the current wording is of *encouragement*, rather than *requiring* such opportunities, and a stronger stance should be considered.

1.7 Difficulties encountered

➤ Lack of detail

1.7.1 Because the MLP is at an early stage of development, for most issues only a broad policy direction has been set out. While the SA speculates on the likely significant effects arising from these policy directions, the lack of detail means that the conclusions reached are necessarily 'broad-brush'. In general, the appraisal has drawn qualitative, rather than quantitative, conclusions. Many of the impacts of the MLP will not be known until more detail is available. Future versions of the MLP will produce more refined policy options that should allow a greater degree of certainty in the SA. It must be recognised, however, that the MLP is a *strategic* document, and the nature of SA is to identify *significant* effects; many of the impacts will not be known until site-specific proposals are developed and implemented, and there is a valuable role for more detailed appraisal regimes (such as Environmental Impact Assessment) to ensure development is truly sustainable.

➤ Lack of evidence

1.7.2 The MLP is informed by the best available evidence, but there are inevitably some issues and/or locations for which there is no (or limited) data. Where the evidence base is unavailable or incomplete, this has been identified in the MLP. For example, the Historic Environment Assessment covers five Worcestershire districts, but not Wyre Forest; the MLP proposes a 'precautionary principle' in its approach to identifying restoration priorities within this district to ensure that the historic environment is not overlooked. None of the evidence gaps are considered to be so serious that they undermine delivery of the MLP Vision and Objectives, or to raise significant sustainability issues.

➤ Lack of alternatives

1.7.3 In order to identify the most sustainable options for incorporation within the MLP, the SA would ideally compare the relative sustainability performance of a range of options. Where the MLP proposes alternatives, these have been appraised, but where this is not the case the SA has sought to draw conclusions based on the comparison (stated or implicit) of that option against a business-as-usual 'baseline'. There are some proposed policies in the MLP for which no alternative can reasonably be considered.

1.8 Monitoring

1.8.1 The sustainability impacts arising from implementation of the MLP will be monitored through a series of existing monitoring regimes, including the Worcestershire Partnership's annual *State of the Environment Report*, and the *Annual Monitoring Reports* prepared to support the *Worcestershire Minerals and Waste Local Development Scheme*. Future SA work, in particular new or revised Scoping Reports, will update the SA evidence base to ensure that indicators and environmental issues are reflected in the appraisal. Amendments to the SA framework are not anticipated (the framework has been designed to take account

of all relevant issues that may arise in the environmental, social and economic spheres), but if new evidence emerges that suggests changes are needed, this will be duly considered.

➤ **SA Framework Indicators**

- Percentage of Total New Homes Built on Brownfield Land
- Condition of the Landscape
- Planted ancient woodland sites restored to native woodland
- European nature conservation sites
- Condition of SSSIs
- Management Status of Local Sites
- Key Breeding Birds Population Numbers
- Number of grade I and II* listed buildings 'at risk'
- Proportion of undesignated heritage assets at risk
- Amount of land falling within Agricultural Land Classifications (hectares)
- Hectares of Green Belt land
- 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)
- CO₂ emissions per head
- Ecological Footprint (Global Hectares per Person)
- Total final energy consumption by local authority (kilo-tonnes of oil equivalent)
- Properties at risk of flooding
- Access to information: Satisfaction rates regarding Minerals & Waste planning policy
- Accessibility to Worcestershire acute hospitals
- Health ACORN categories
- Female life expectancy at birth
- Male life expectancy at birth
- Household waste produced per head of population
- Percentage/Amount of household waste recycled or composted
- 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
- Average Worcestershire household income
- Percentage employment rate (working age)
- GVA per Worcestershire resident head
- New affordable homes built
- Relationship between average salary and average house prices
- Waste Core Strategy consultation response rates
- Percentage of properties provided with kerbside household recycling collection
- New business enterprises

- 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
- Crimes per 1,000 people
- Perceptions of anti-social behaviour

➤ **Relevant Minerals & Waste Annual Monitoring Report Indicators**

- Production of secondary and recycled aggregates
- Annual production of primary land won aggregates
- Landbank of permitted sand and gravel reserves
- Landbank of permitted crushed rock reserves
- Landbank of permitted clay reserves
- Other Non Aggregate Minerals
- Sufficient productive capacity for sand and gravel supply and crushed rock
- Sufficient productive capacity for clay supply
- New mineral development in 'preferred areas'

1.9 Next Steps

- 1.9.1 Following the current consultation period for the MLP Second Consultation Draft, responses will be considered and the MLP will be refined. The conclusions of this Initial SA will help to inform the next iteration of the MLP, which will be the 'Draft Plan' document. This document will be accompanied by a more detailed SA report. The final MLP should be adopted in 2015, alongside an SA statement explaining the difference that the SA process has made.

2. BACKGROUND

2.1 The Minerals Local Plan in context

- 2.1.1 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"). 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.
- 2.1.2 The emerging plan is being developed through co-operation with partner organisations and seeks 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 allow the suitability of proposals brought forward to be assessed against relevant considerations, to enable a steady supply of minerals whilst safeguarding Worcestershire's environment and communities.

2.2 The need for Sustainability Appraisal

- 2.2.1 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 make sure that plans take sustainability considerations into account, and that where there is the potential for negative effects, these effects are 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 Minerals Local Plan.
- 2.2.2 This initial SA report represents the second stage in the Sustainability Appraisal (SA) process, building upon the earlier SA Scoping Report that was consulted upon alongside the 'First Stage Consultation' Minerals Local Plan in 2012. The Scoping Report was amended to reflect consultation comments, providing a framework that has been used in this SA report to assess the 'Second Consultation Document' Minerals Local Plan. This report is a high-level appraisal of the broad policy options proposed in the Minerals Local Plan Second Consultation Document.
- 2.2.3 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 the Strategic Environmental Assessment or SEA Directive) must be addressed. The objective of the 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)

2.2.4 The SEA requirements within the Directive have been transposed in the UK through the Environmental Assessment of Plans and Programmes Regulations, 2004¹. These environmental requirements, if addressed with sufficient rigour, can be considered alongside the assessment of economic and social considerations through a single SA process. In line with Government guidance, the SEA has therefore been combined with the SA, and subsequent reference to SA also refers to SEA. As part of a quality assurance process, a checklist is included in Appendix 1 signposting where the SEA requirements are addressed within the SA process.

2.3 Related assessments

2.3.1 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)

2.3.2 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".

2.3.3 A HRA Screening Report has been produced alongside this Initial SA, and will be provided to the Government's advisor, Natural England, in order to assess whether or not a full Appropriate Assessment is required.

2.3.4 The need for a Strategic Flood risk Assessment is being explored as part of MLP preparation, and discussion with the Environment Agency should clarify the approach to be taken to ensure that the MLP takes full account of flood risk.

¹ The Environmental Assessment of Plans and Programmes Regulations 2004, SI 2004/1633

3. THE MINERALS LOCAL PLAN

3.1 The role of the Minerals Local Plan

- 3.1.1 A wide range of legislation, policy and guidance is informing production of the MLP. 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 ensure that sufficient mineral resources are available in the right locations to enable this sustainable growth, whilst seeking to protect the environment and quality of life in the county.
- 3.1.2 Minerals planning policy in Worcestershire plays a vital role in ensuring there are sufficient minerals for our needs now and in the future. The MLP will set out guidelines for the quantity of minerals which should come from Worcestershire over the next 30 years. It must also balance the need for minerals and the benefits sites can bring against the likely impact of their development. To do this, the MLP will include policies to make sure that development happens in the right places, in the right way, and with appropriate restoration once mineral operations are completed.
- 3.1.3 Once adopted, the MLP will be used by the County Council to make decisions about planning applications for mineral extraction and processing in the county. It may also be relevant in the decision-making of the city, borough and district councils in Worcestershire, as well as surrounding authorities.

3.2 Outline of the Minerals Local Plan

- 3.2.1 It is anticipated that the following minerals requirements will be needed and planned for:

Table 1: Anticipated minerals requirements to 2030

Aggregates	
Sand and gravel	At least 18.54 million tonnes
Hard (crushed) rock	At least 3.61 million tonnes
Industrial Minerals	
Silica sand	No target (MLP suggests there are already sufficient permissions)
Clay	No target (MLP suggests there are already sufficient permissions)
Salt	No target (MLP suggests resources are not viable)
Energy Minerals	
Coal	No target (MLP suggests resources are not viable)

- 3.2.2 The MLP includes a spatial strategy to guide where minerals development should happen. This is based on working viable resources in areas where there is the

greatest ability to achieve green infrastructure restoration priorities. The MLP does not identify specific sites. It includes:

- 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.

3.2.3 The MLP encourages use of recycled minerals and includes policies to “safeguard” mineral resources to ensure they remain available when needed in years to come.

3.2.4 The MLP seeks to protect Worcestershire's environment (including habitats, species, landscape, archaeology, historic environment, surface and ground water) and to minimise adverse impacts from minerals operations on those nearby (including impacts from noise and dust, vibrations, and visual impacts).

3.2.5 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 at www.worcestershire.gov.uk/mineralsbackground

3.2.6 A suite of background documents is being prepared which sets out the evidence upon which the Minerals Local Plan will be based and identifies key matters which the plan must take into account. These are technical documents (resource assessments, methodologies, legislative restrictions, and maps) to help inform the policy direction of the MLP. Their preparation and review is on-going as the plan develops. The suite of documents currently comprises the following:

What minerals are found in Worcestershire and why we need them:

- A map of all mineral workings in Worcestershire since 1954; and maps of
 - Aggregate minerals;
 - Industrial minerals;
 - Energy minerals; and
 - Sand & gravel.

These latter three maps are based on British Geological Survey data.

Alongside these maps, there is also an 'Analysis of mineral resources in Worcestershire' document.

Background consultation papers on specific minerals:

- Building stone in Worcestershire;
- Coal in Worcestershire;
- Salt and Brine in Worcestershire;
- Clay in Worcestershire;

How much of each mineral we need to make provision for and when:

Background consultation documents to forecast the level of provision that the Minerals Local Plan will need to make:

- The Local Aggregates Assessment for Worcestershire (June 2013);
- Draft Local Aggregates Assessment for Worcestershire (October 2012);
- Ensuring adequate and steady supply of industrial and energy minerals.

How and where minerals sites should be worked and restored:

- Background documents will be prepared to address economic and environmental considerations and any other relevant issues.

Appraisal of the Minerals Local Plan for sustainability, habitats and equality:

- Sustainability Appraisal Scoping Report and SA Report;
- Habitats Regulations Assessment Scoping Report;
- Equality Impact Assessment Desktop screening.

Background documents to address other relevant local issues. Currently:

- Contributing towards Worcestershire's priorities (sets out how the MLP could contribute towards the Council's corporate priorities and those of the Sustainable Community Strategy);
- Minerals and Climate Change;
- The Malvern Hills Acts (regarding the unique legislative framework for mineral working in the Malvern Hills).
- Profile documents for the Environmental Character Areas.

4. THE SUSTAINABILITY APPRAISAL PROCESS SO FAR

4.1 The SA Scoping Report

- 4.1.1 The SA process began with a Scoping Report, produced at the earliest evidence-gathering stage of MLP plan-making. The Scoping Report established the sustainability issues of importance for Worcestershire upon which the MLP could have an influence. The issues were identified through an extensive review of policies, plans, and programmes, and an analysis of the best available baseline data.
- 4.1.2 Policies, plans and programmes at the European, national, regional and local level were considered, although it was assumed that national and European PPPs had been incorporated into the content and strategic direction of regional and locally-based documents. Only European and national documents of greatest relevance to the emerging plan and to sustainability were reviewed. The purpose of the review was not to highlight every detail from every document, but to identify the key implications for the SA. The date of publication/period of validity, key objectives/targets, and potential implications for the Minerals Local Plan were recorded for each document reviewed. As the review is a dynamic process, revisions have been made as new documents have emerged or have been revised, and as new plans are adopted.
- 4.1.3 The key points emerging from the document review that the Minerals Local Plan may be able to positively influence (either directly or indirectly) are outlined below:

- Social**
- Enabling communities to participate in and contribute to the issues that affect them.
 - Addressing health inequalities.

- Environmental**
- Increasing the use of renewable energy: 10% of the UK electricity should be coming from renewable energy sources by 2010 and 20% by 2020.
 - Encouraging and promoting land use activities which will lead to an improvement in the quality of natural resources.
 - Development should be informed by, and sympathetic to, the landscape character of the locality.
 - Protection of the county’s natural and cultural heritage.

- Economic**
- Ensuring prudent and efficient use of natural resources.
 - Ensuring the efficient transportation of freight within the county, so as to support a strong long economy, but ensuring the environmental impacts are minimised.
 - Enabling wider development, through ensuring minerals requirements can be met as far as possible from within Worcestershire. Viability and deliverability of development could be threatened if minerals have to be imported over longer distances.

4.1.4 The above points were then expanded through a consideration of baseline data. Baseline data plays a fundamental role throughout the appraisal, providing the evidence base from which to predict and monitor the effects of the MLP. 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. The Directive also requires a summary of "any existing environmental problems", especially those relating to European sites. These issues are set out in full in the Scoping Report, but 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'.
- Although regional and national comparators are not yet known, too few local wildlife and geological sites in Worcestershire 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 they may fail to reach Water Framework Directive standards. Their condition is significantly worse than the overall picture in the region and in the country as a whole.
- Following year-on-year falls since 2005, CO₂ emissions increased in 2010. Per capita CO₂ 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).
- Air quality in some areas of the county is improving, but in others is decreasing. The number of Air Quality Management Areas in Worcestershire is increasing.

4.1.5 Alongside identification of environmental problems required by the SEA Directive, a series of additional social and economic problems have emerged, which can be summarised as follows:

- The rate of new business enterprises in Worcestershire has fallen by 10.1% from 2007-2008, which is a greater fall than regionally or nationally.

- Worcestershire's GVA per resident head is below both England and the West Midlands, and evidence suggests the gap is widening.
- County housing affordability is far worse than the regional average.
- Worcestershire is slightly under-performing against the regional and national averages in the percentage of young people achieving a level 2 qualification by the age of 19.

4.1.6 These issues, together with those identified through the review of plans, policies and programmes (and any other issues which emerged through complementary research) informed the 'SA framework' proposed in the Scoping Report. This framework set the approach which has been used to test the sustainability of the MLP in this Initial SA report. It will also be used in subsequent iterations of the SA, as the MLP progresses to adoption. The framework includes objectives and decision-making questions under a variety of topics covering the MLP's social, environmental and economic impacts. The approach proposed in the MLP can then be assessed to determine how far it satisfies each objective, and this process highlights particular problems and opportunities for each specific issue, to build a picture of the overall sustainability of the MLP.

4.1.7 The approach proposed in the Scoping Report has been considered by the statutory agencies (English Heritage, the Environment Agency and Natural England) through a consultation which ran alongside that of the 'First Stage Consultation' on the MLP from October 2012 to January 2013. The consultation provided constructive feedback on how the proposed approach could better reflect sustainability issues. This included signposting to additional plans, policies and programmes which should be reviewed, and suggesting amendments and additions to the proposed SA framework to allow a more nuanced consideration of particular issues which might otherwise have been lost within too broad an analysis.

4.1.8 The SA Scoping Report is available on the MLP background documents web page here: www.worcestershire.gov.uk/mineralsbackground

5. METHODOLOGY

5.1 Structure of the SA and links to the MLP


5.1.1 A variety of guidance has been used to inform the preparation of this Sustainability Appraisal, including the *Practical Guide to Strategic Environment Assessment* and DCLG's online *Plan-Making Manual*. 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 SA report falls under stages B and C of the process: 'Developing and refining options and assessing effects'; and 'Preparing the sustainability appraisal report'.

5.1.2 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.

5.2 Timetable

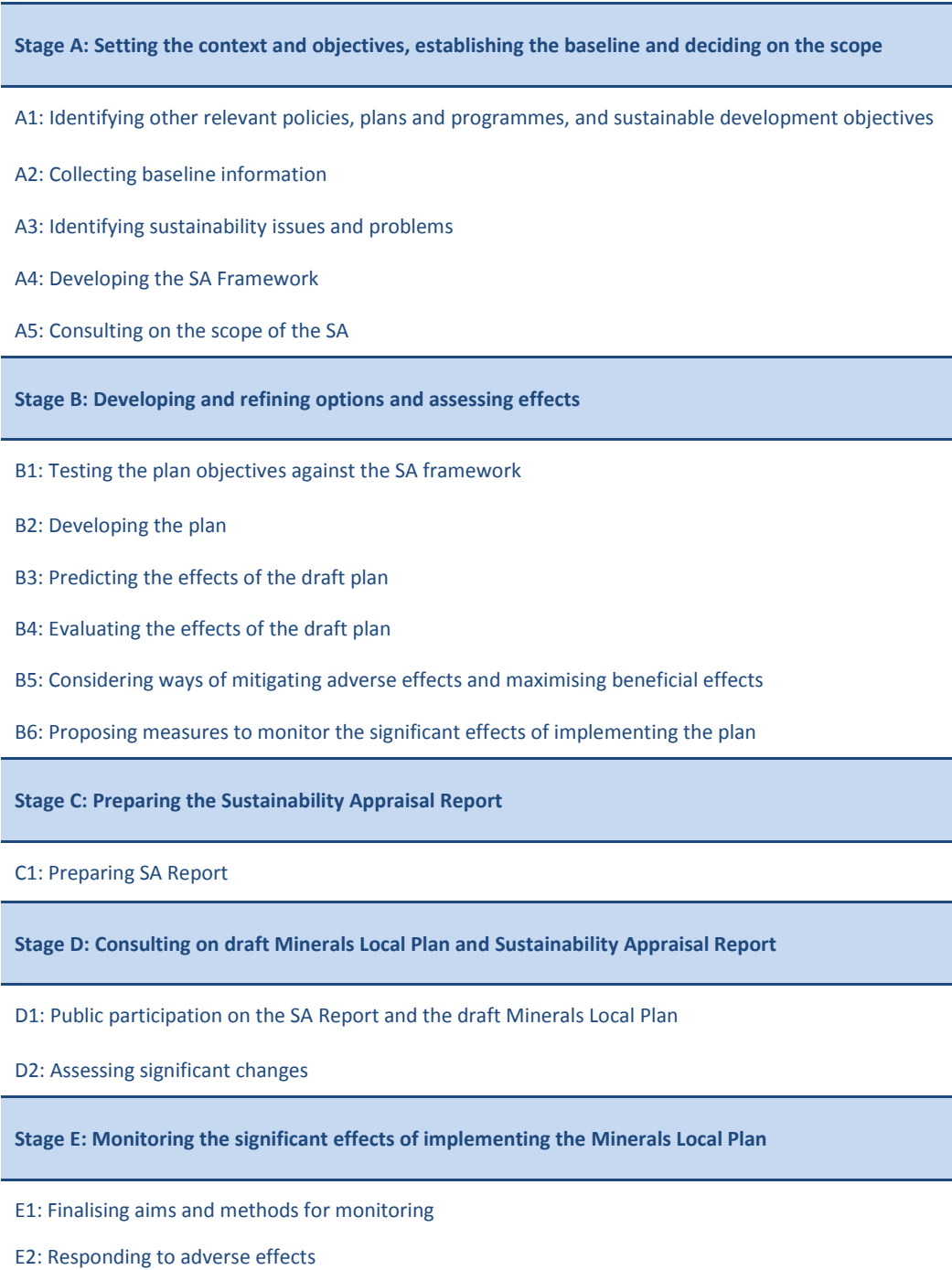
5.2.1 This Initial SA report has been produced to accompany the Minerals Local Plan Second Consultation Document. As an early version of the MLP, the Second Consultation Document sets out a proposed approach in broad terms and offers a range of different options. The MLP is being consulted upon alongside this SA and the responses to the consultation will help to inform subsequent iterations of the MLP, each of which will be accompanied by a revised SA as the MLP moves from broad options towards more specific policies. The current programme for MLP preparation is as follows:

Table 2: Minerals Local Plan and SA co-ordination

What?	When?	SA Stage
First stage consultation	autumn/winter 2012	SA Scoping Report
 Second stage consultation	autumn/winter 2013	This Initial SA
Draft policy framework	summer 2014	Full SA Report
Pre-submission	winter 2014	SA Report Update
Submission	winter 2014/summer 2015	SA Report Update
Adoption	winter 2015	SA Statement
Monitoring & review	ongoing	SA monitoring

5.2.2 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.

Figure 1: The SA Process



5.2.3 Although the Sustainability Appraisal does 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, provides a commentary on the plan's potential social, environmental and economic effects.

The final SA will describe the process undertaken, including potential alternatives; gives reasons for any decisions made; and state the predicted implications (positive and negative) of the preferred approach advanced within the MLP.

5.3 Level of detail in the SA

- 5.3.1 Where possible, the effects of the MLP upon each of the sustainability objectives is considered in terms of short, medium and long-term impacts, as well as their secondary, cumulative and synergistic² effects. It must be recognised, however, that the level of detail provided in the emerging plan is not sufficiently advanced for all policy options to allow for a full, in-depth appraisal at this stage; as the MLP develops through subsequent iterations, the SA will be refreshed alongside it to assess the more detailed options and policies.
- 5.3.2 The limitations of SA as a strategic tool to aid policy-making are clear; SA cannot provide a full, site-level consideration of every impact of every policy. More localised assessments, such as assessments made through the planning application process (including Environmental Impact Assessments) will be crucial in making sure that the sustainability of any particular development is given due consideration. Other regulatory regimes (for example Environment Agency permitting, Lead Local Flood Authority sustainable drainage approval, etc.) will also play a role in ensuring that development is appropriately planned and managed.

² '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

6. THE SUSTAINABILITY APPRAISAL FRAMEWORK

6.1 Developing the SA Framework

6.1.1 The Sustainability Appraisal Framework is at the heart 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.

6.1.2 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 PPP, with particular regard being given to the Sustainable Community Strategy and Regional Sustainable Development Framework;
- Review of the sustainability characteristics and issues; and
- Analysis of baseline data.

6.1.3 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.

6.2 The SA Objectives

6.2.1 The draft objectives for each of the sustainability issues are set out below.

Objective 1	Landscape
	Safeguard and strengthen landscape character and quality.

Objective 2	Biodiversity, Geodiversity, Flora and Fauna
	Conserve and enhance Worcestershire's biodiversity and geodiversity.

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

Objective 4	Material assets
	Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.

Objective 5	Natural Resources Protect and enhance water, soil and air quality.
Objective 6	Climate Change Reduce causes of and adapt to the impacts of climate change.
Objective 7	Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.
Objective 8	Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.
Objective 9	Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.
Objective 10	Health Improve the health and well-being of the population and reduce inequalities in health.
Objective 11	Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.
Objective 12	Traffic and Transport Reduce the need to travel and move towards more sustainable travel patterns.
Objective 13	Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.
Objective 14	Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.
Objective 15	Participation by all 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.
Objective 16	Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.

Objective 17	Population (skills and education)
	Raise the skills levels and qualifications of the workforce.
Objective 18	Population (crime & fear of crime)
	Reduce crime, fear of crime and antisocial behaviour.

6.3 Testing the MLP through appraisal matrices

6.3.1 The proposed approach put forward in the Minerals Local Plan Second Consultation Document has been tested by considering how each proposed policy approach could impact the above objectives. Some of the approaches will have a major impact, whilst others may be totally irrelevant, or of such a small scale as to produce no significant effects. To identify the most sustainable approach for the Plan, the SA considers the approach set out in the Plan alongside other options either put forward as part of Plan preparation, or proposed separately through this SA. This comparison of alternatives is an essential part of the SA process; where no clear alternatives are set out in the Plan, the SA is free to propose alternatives. Alternatives tested through SA generally include a 'business as usual' option to identify whether it would be better, in sustainability terms, to not have the plan in place. Government guidance³ states that *"Only reasonable, realistic and relevant alternatives need to be put forward"*. As such, the appraisal has avoided considering alternatives which would clearly not happen for technical, political or other reasons (a proposal which is clearly contrary to national policy would not be considered acceptable).

6.3.2 The detailed appraisal itself is recorded through a series of matrices which use symbols to identify the likely effects of each proposed approach (and any further alternatives) on each SA objective. This allows the performance of each proposed policy approach to be easily understood and highlights any approaches which are particularly beneficial or damaging in SA terms.

Symbols and colours used in the SA matrices

Significant positive impact	++
Minor positive impact	+
No impact	0
Unknown impact	?
Minor negative impact	-
Significant negative impact	--

6.3.3 A significant positive impact against an SA objective does not imply that the MLP approach is the best it can be. The role of this SA is to identify opportunities to optimise the environmental, social and economic performance of the MLP, and it is therefore possible to award a very positive rating where further improvement is still possible (or, conversely, a very poor rating where some elements of an SA objectives are fully met, but others seriously lacking).

³ A Practical Guide to the SEA Directive, Appendix 6 (2005)

7. INITIAL APPRAISAL FINDINGS

7.1 Introduction

- 7.1.1 This SA has sought to test all the main components of the emerging MLP. As the Plan is still at a relatively early stage, many of the policies are yet to be fully completed; the MLP presents proposed 'policy approaches' that will be strengthened and refined in the next iteration of the MLP. Some sections of the MLP can therefore be considered, to an extent, to be 'open-ended'. The SA has assessed all key elements of the Plan, but has not considered the more 'contextual' sections (such as the Spatial Portrait) in detail. Where appropriate, this SA provides observations or recommendations on such sections of the Plan, but they have not been scrutinised to the same degree as the emerging policies.
- 7.1.2 This section of the Interim SA considers the sustainability implications of each of the MLP sections in turn. These findings are mainly taken from the more detailed appraisal matrices found in Appendix Two, which records the application of the SA framework to the emerging options. Where the MLP section does not include specific options (for example, the more contextual commentary at the beginning of the Plan), the SA is restricted to more general observations on sustainability.

7.2 Compatibility testing of the MLP Draft Objectives

- 7.2.1 An important part of the SA is appraising the compatibility of the MLP's Draft Objectives. It is important that the adopted MLP presents a unified, coherent strategy and delivery mechanism for minerals planning. As such, no part of the MLP should directly conflict with any other. It is recognised that the three elements of sustainable development – the environment, the economy, and society – can lead to competing approaches, and that pragmatism dictates a need to achieve a workable balance between all three. In line with the SA's role in identifying *significant* effects, this SA has considered whether any of the Draft Objectives could be so conflicting as to be incompatible.
- 7.2.2 The summary diagram overleaf indicates that the draft objectives are likely to be largely compatible with each other, but that there is the potential for some degree of incompatibility depending on how each objective is achieved. No clearly incompatible objectives have been identified. At this stage of the plan-making process there is insufficient certainty to establish the nature and extent of potential conflicts, meaning that the assessment must necessarily be high-level and, to an extent, speculative. As the plan proceeds towards more definite policies, a more refined update of this compatibility assessment can be undertaken.
- 7.2.3 Potential compatibility issues arise largely between the economic imperative of providing resources and fostering growth, and the environmental imperative of protecting vulnerable receptors from the consequences of such growth. The duration of any disturbance is also important; while many minerals sites can be worked and restored relatively quickly, others may take decades to complete,

and so the full restoration opportunities may only be realised beyond the plan period. Similarly, potential incompatibilities may be short term in nature.

Compatibility matrix of emerging Minerals Local Plan Draft Objectives

		Draft Objectives							
		1	2	3	4	5	6	7	
Draft Objectives	1	Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan							
	2	Ensure the long term sustainability of supply of minerals resources	✓						
	3	Protect and enhance Worcestershire's key economic sectors	✓	✓					
	4	Ensure mineral operations are resilient to and mitigate the impacts of climate change	?	-	?				
	5	Utilise mineral restoration to enhance climate change resilience of the county	?	?	✓	✓			
	6	Protect and enhance the natural and historic environment	?	?	?	?	✓		
	7	Protect and enhance health and amenity	?	?	✓	✓	✓	✓	
	8	Involve all those affected as openly and effectively as possible	-	-	-	✓	✓	✓	✓

Key to symbols and colours

Compatible	✓	Potentially compatible	?	Incompatible	✗	No significant linkages	-
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Objective 1 (Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan)

- **Objective 2** (Ensure the long term sustainability of supply of minerals resources) is likely to be supported by Objective 1, as mineral sites guided by the MLP are likely to produce supplies beyond the plan period. Objective 1 seeks to make 'adequate' provision for Worcestershire's needs, which should prevent the over-exploitation of resources (for example, seeking to make provision for a far greater level of minerals for export) which could compromise future deliverability.
- **Objective 3** (Protect and enhance Worcestershire's key economic sectors) should also be supported by Objective 1. Evidence⁴ shows that whilst the most obvious 'traditional' sector reliant on minerals (construction) accounts for a relatively low proportion of

⁴ Worcestershire County Council, County Economic Assessment 2010-2011.

Worcestershire's GVA, the sectors accounting for most of the county's GVA (business services & finance; public administration, education, health & other services; and distribution, transport & communication) are all key drivers behind building projects, and growth in any one of these areas will need a ready supply of minerals.

- **Objective 4** (Ensure mineral operations are resilient to and mitigate the impacts of climate change) may be supported by Objective 1, depending on how the operations are carried out. Mineral extraction, however, is a carbon-intensive process and even where emissions are minimised, a net gain in emissions is likely. However, this must be offset against the alternative of sourcing provision elsewhere, either nationally or internationally, and the associated transport costs and local emissions this could create.
- **Objective 5** (Utilise mineral restoration to enhance climate change resilience of the county) may be supported by Objective 1, but there will be an obvious limitation on how far minerals sites can enhance resilience depending on when restoration takes place; some restoration schemes may not begin (or be fully realised) until long after the plan period. But in itself this is not a conflict; it just requires a longer timeframe for the objectives to be achieved.
- **Objective 6** (Protect and enhance the natural and historic environment) could be supported by Objective 1 through providing the essential stone and minerals to enable sensitive and appropriate repair and new building in historic areas and landscapes. However, if minerals operations/transport is located such that it impacts negatively on natural and historic environmental assets, there could be a degree of conflict.
- **Objective 7** (Protect and enhance health and amenity) could be supported by Objective 1, but this would depend upon the site-specific impacts of development and transport. If minerals operations generate excessive noise and dust, this could impact negatively on people's physical and mental wellbeing. Looking more widely, the provision of minerals will allow healthcare facilities (and the transport routes to access them) to be built and maintained.
- No significant linkages have been identified between Objective 1 and **Objective 8** (Involve all those affected as openly and effectively as possible).

Objective 2 (Ensure the long term sustainability of supply of minerals resources)

As may be expected, many of the linkages identified between Objective 2 and the other objectives are similar to those identified for Objective 1.

- **Objective 3** (Protect and enhance Worcestershire's key economic sectors) should be supported by Objective 2, which will facilitate the minerals necessary to sustain growth over the longer term.
- The extent to which **Objective 4** (Ensure mineral operations are resilient to and mitigate the impacts of climate change) is supported by Objective 2 will depend on how the operations are carried out. Mineral extraction,

however, is a carbon-intensive process and even where emissions are minimised, a net gain in emissions is likely. However, this must be offset against the alternative of sourcing provision elsewhere, either nationally or internationally, and the associated transport costs and local emissions this could create.

- **Objective 5** (Utilise mineral restoration to enhance climate change resilience of the county) may be supported by Objective 2, but there will be an obvious limitation on how far minerals sites can enhance resilience depending on when restoration takes place; some restoration schemes may not begin (or be fully realised) until long after the plan period. But in itself this is not a conflict; it just requires a longer timeframe for the objectives to be achieved.
- **Objective 6** (Protect and enhance the natural and historic environment) could be supported by Objective 2 through providing the essential stone and minerals to enable sensitive and appropriate repair and new building in historic areas and landscapes. However, if minerals operations/transport is located such that it impacts negatively on natural and historic environmental assets, there could be a degree of conflict.
- **Objective 7** (Protect and enhance health and amenity) could be supported by Objective 2, but this would depend upon the site-specific impacts of development and transport. If minerals operations generate excessive noise and dust, this could impact negatively on people's physical and mental wellbeing. Looking more widely, the provision of minerals will allow the healthcare facilities (and the transport routes to access them) to be built and maintained.
- No significant linkages have been identified between Objective 1 and **Objective 8** (Involve all those affected as openly and effectively as possible).

Objective 3 (Protect and enhance Worcestershire's key economic sectors)

- **Objective 4** (Ensure mineral operations are resilient to and mitigate the impacts of climate change) could be undermined by Objective 3, depending on the precise nature of each minerals development. In order for the impacts of climate change to be mitigated, measures could be necessary that seek to limit activities that would otherwise support economic development (such as processes involving the burning of fossil fuels). However, ensuring minerals operations are resilient to climate change, will help to strengthen the industry and prevent closures and disruption arising from climate change impacts that could otherwise compromise economic development though, for example, delayed deliveries or a temporary interruption to extraction.
- **Objective 5** (Utilise mineral restoration to enhance climate change resilience of the county) should be supported by Objective 3. To achieve sustainable economic development, the county needs to remain 'open for business' even when the effects of a changing climate are being felt. This could include, for example, making provision for flood storage in former mineral workings to allow businesses and transport routes to remain open. There are also wider concerns, such as people's ability to

access essential social and educational services, which can be supported through Objective 5 and these in turn allow the economy to keep functioning.

- **Objective 6** (Protect and enhance the natural and historic environment) could be supported by Objective 3. A healthy natural and historic environment is a major factor in attracting and retaining businesses and employees in Worcestershire, and both aspects of the environment support a significant tourism market. Conflict can, however, arise when economic development is prevented or delayed through the need to protect and enhance the natural and historic environment. Whilst all efforts are made to reduce such situations, the potential for some degree of conflict cannot be discounted altogether.
- **Objective 7** (Protect and enhance health and amenity) would be supported by Objective 3. A strong economy includes high levels of employment, which is a major determinant of people's health⁵, so there should be a minor positive link between these two objectives.
- No significant linkages have been identified between **Objective 8** (Involve all those affected as openly and effectively as possible) and Objective 3.

Objective 4 (Ensure mineral operations are resilient to and mitigate the impacts of climate change)

- **Objective 5** (Utilise mineral restoration to enhance climate change resilience of the county) has a clear positive linkage to Objective 4. In effect, the two objectives represent the opportunities arising at the different stages of minerals development to ensure that climate change is taken into account.
- **Objective 6** (Protect and enhance the natural and historic environment) will be supported by Objective 4. Mitigating the impact of mineral sites will help to reduce negative effects on the natural and historic environment resulting from, for example, poor air quality and flooding.
- **Objective 7** (Protect and enhance health and amenity) will be supported by Objective 4, as reducing the effects of climate change will prevent people suffering from, for example, the health impacts of flooding, overheating, poor air quality, etc.
- No significant linkages have been identified between **Objective 8** (Involve all those affected as openly and effectively as possible) and Objective 4.

Objective 5 (Utilise mineral restoration to enhance climate change resilience of the county)

- **Objective 6** (Protect and enhance the natural and historic environment) will be supported by Objective 5. Mitigating the impact of mineral sites will help to reduce negative effects on the natural and historic environment resulting from, for example, poor air quality and flooding.

⁵ 'Health effects of unemployment', Wirral Performance & Public Health Intelligence Team (H, Moller, 2011), published August 2012

- **Objective 7** (Protect and enhance health and amenity) will be supported by Objective 5, as reducing the effects of climate change will prevent people suffering from, for example, the health impacts of flooding, overheating, poor air quality, etc.
- No significant linkages have been identified between **Objective 8** (Involve all those affected as openly and effectively as possible) and Objective 5.

Objective 6 (Protect and enhance the natural and historic environment)

- No significant linkages have been identified between **Objective 7** (Protect and enhance health and amenity) and Objective 6.
- No significant linkages have been identified between **Objective 8** (Involve all those affected as openly and effectively as possible) and Objective 6.

Objective 7 (Protect and enhance health and amenity)

- No significant linkages have been identified between **Objective 8** (Involve all those affected as openly and effectively as possible) and Objective 7.

7.3 MLP Second Consultation Document, Sections 1-5

- 7.3.1 No significant sustainability implications arising from Section 1 (*What are minerals and why do we need them?*) have been identified. Although implicit in the text, there is potential to strengthen the wording in relation to the MLP's role in helping Worcestershire to fulfil the 'open for business' agenda of Worcestershire County Council's Corporate Plan and to help facilitate sustainable economic development to the county.
- 7.3.2 No significant sustainability implications arising from Section 2 (*What is a Minerals Local Plan and why do we need one?*) have been identified. Greater emphasis could be placed on the risks to society, the economy and the environment from not having an MLP in place, and this section could refer to the more fundamental role of the MLP in contributing to sustainable development, in line with the NPPF. Linkages could be made to the waste hierarchy and the Waste Core Strategy's promotion of the recycling of construction and demolition waste to reduce the need for new minerals extraction.
- 7.3.3 No significant sustainability implications arising from Section 3 (*What is the Council going to do about it?*) have been identified.
- 7.3.4 Whilst no significant sustainability implications arising from Section 4 (*Why should you get involved?*) have been identified, it may be appropriate to clarify that proactive engagement at this stage could help avoid reactive and adversarial responses at the time of applications. The link between high-level strategic documents and actual development impacting on people's homes can easily be missed.
- 7.3.5 No significant sustainability implications arising from Section 5 (*How can you get involved?*) have been identified. It is unclear why the 'Dig Deeper' section appears here, as this is about the content of the consultation, rather than how people can get involved. This list of background documents would more logically appear under section 3.4.

7.4 MLP Second Consultation Document, Section 6: Portrait of Worcestershire

7.4.1 Section 6 of the MLP provides a useful overview of Worcestershire. The focus on green infrastructure is particularly welcomed. The section would benefit from drawing out some of the particular strengths and weaknesses of Worcestershire's economy, society and environment. This could include supplementing the information from 6.19 onwards, which currently shows the overall number of 'assets' such as SSSIs, listed buildings, etc., but provides little insight into the condition of these assets or the contribution they make to the county. Reference could be made to:

- the cultural and economic importance of horticulture;
- demographic pressures (including ageing populations in parts of the county);
- proximity to the proposed HS2 rail line;
- low number of water courses satisfying Water Framework Directive targets;
- affordable housing pressures;
- Neighbourhood Plans and other community initiatives being taken forward;
- the successes of partnership working.

7.4.2 The SA Scoping Report sets out a wide range of relevant baseline information and highlights areas where Worcestershire is performing better or worse than other areas. There may be value in context-setting to reproduce the most relevant of these in this section.

7.5 MLP Second Consultation Document, Section 7: Vision

- 7.5.1 The Vision provides a valuable and commendably succinct overview of the aspiration for minerals development in Worcestershire, and sets out in broad terms how the MLP can contribute to sustainable development. Whilst difficult, a greater degree of local specificity should be sought, as the majority of the Vision could apply equally to any other minerals planning area. This could include naming the main broad locations where different mineral resources may be worked.
- 7.5.2 It should be recognised that the purpose of providing minerals is not simply to support the economy and to maintain distinctiveness; there is a valuable social role to play in ensuring that people's fundamental needs are met. Indeed, the NPPF (paragraph 142) states that "*Minerals are essential to support sustainable economic growth and our quality of life*", and the wording of the Vision should reflect this.
- 7.5.3 Being led by green infrastructure, the Vision should ensure positive impacts, especially in the medium to long term, for the SA objectives on *landscape; biodiversity, geodiversity, flora and fauna; cultural heritage, architecture and archaeology*. There is currently a strong focus on restoration, but less emphasis on the role that GI evidence can play in determining appropriate development locations in the first place. Consideration should be given to including specific reference in the Vision to geodiversity, given the crucial role of the MLP in protecting existing (and guiding provision of new) geodiversity features of cultural and scientific value. It may also be appropriate to explicitly mention landscape in the Vision. The Vision's commitment to ensuring local building stone is available will help to ensure Worcestershire's historic built environment can be conserved and enhanced.
- 7.5.4 To better complement the county's *Waste Core Strategy*, use of secondary and recycled materials should be "*maximised*" rather than just "*encouraged*", in line with the wording in Tables 4 and 5 in MLP Section 10.
- 7.5.5 The Vision refers to general sustainable development aims, but does not explicitly recognise the need to mitigate and adapt to climate change and to reduce energy and water consumption in what is a very resource-intensive industry. The Spatial Portrait refers to climate change being "*of particular concern in the county*", and failing to refer to it in the Vision would be an omission.
- 7.5.6 There is no mention of transport in the Vision; the impact of HGV movements associated with minerals operations can be considerable, and reference should be made to maximising the use of sustainable transport.
- 7.5.7 A minor grammatical revision is recommended in the third paragraph of the Vision; while it is possible to control where mineral workings are located, there is there is no control over the location of the actual deposits. The first sentence of

the third paragraph could be revised to read: "*Minerals operations will be carried out ~~worked~~ and located in a socially and environmentally sustainable way...*"

- 7.5.8 A minor wording change is recommended to clarify that both the sand & gravel and the crushed rock requirements are minima. It is important that this is expressed clearly, to accord with NPPF paragraph 145. It is therefore suggested that a minor amendment is made so that the sentence reads: "*at least 18.54 million tonnes of sand and gravel and at least 3.92 million tonnes of crushed rock*".

➤ **Potential alternatives**

- 7.5.9 A potential alternative would be to not include a Vision. The current adopted *Hereford and Worcester Minerals Local Plan* does not contain a Vision, as it was produced at a time before visions became a standard part of plan-making. This is not a viable alternative for the new MLP, as the NPPF requires "*local and neighbourhood plans [to set] out a positive vision for the future of the area*".

7.6 MLP Second Consultation Document, Section 7: Objectives

- 7.6.1 The Draft Objectives should provide a largely effective context in which to take forward the more detailed policies of the MLP, although some further considerations have been identified which, if included, would provide a more comprehensive framework.
- 7.6.2 The difference between Objectives 1 and 2 is not immediately obvious from the wording, and it may be worthwhile considering re-wording Objective 2 (which currently reads as if it could just be a component of Objective 1).
- 7.6.3 Efficiency of resources in all its forms (including efficiency of transport, land, assets, energy, etc.) is an omission which could compromise delivery of the Vision and delivery of complementary plans and strategies such as the *Worcestershire Waste Core Strategy*, *Worcestershire Local Transport Plan 3*, and *Worcestershire Climate Change Strategy*.
- 7.6.4 The draft MLP Objectives do not currently provide any indication of where development should be focussed. Consideration should be given to the inclusion of new or amended objectives which refer to the appropriate location of mineral operations.
- 7.6.5 There is the potential for some degree of conflict between the *material assets* SA Objective and the MLP ensuring an adequate supply of minerals, which could require development on agricultural or green belt land or on open space. Avoiding such conflict would require more than simply environmental protection, as some valuable resources are not necessarily 'environmental' in nature. The draft Objectives should seek efficiency of land and should seek to minimise use of such land for development.
- 7.6.6 Inclusion of enhancement as well as protection of the natural and historic environment is welcomed, as this stresses the need to seek net benefit rather than just mitigating harm.
- 7.6.7 The *climate change* SA Objective is strongly supported through draft MLP Objectives covering both mitigation and adaptation at both operational and restoration stages. Under the relevant issues for Draft Objective 5 (Utilise mineral restoration to enhance climate change resilience of the county), there may also be a role for recreation.
- 7.6.8 The SA objective on *participation by all* is also specifically supported.
- 7.6.9 Draft MLP Objective 3 to 'Protect and enhance Worcestershire's key economic sectors' concerns those sectors identified in the Worcestershire LEP's Business Plan as a focus for LEP support (namely *manufacturing, cyber security and defence, tourism, horticulture and food production, and environmental technology*). Whilst ensuring consistency between the Minerals Local Plan and the LEP is important, there is a risk that focussing on just those five sectors could compromise the ability of Worcestershire's wider economy to thrive. The most

recently-published Worcestershire Economic Assessment⁶ states that *"The dominant sectors in Worcestershire in terms of employment are Manufacturing, Health, Retail and Education. Manufacturing makes up less than 8% of businesses, but employs almost 16% of the workforce"*. Minerals provision retains a vital role in supporting those sectors which provide employment to the Worcestershire population, and there is a need to ensure that economic opportunities afforded by minerals growth that do not fall within LEP categories are not overlooked.

- 7.6.10 Draft Objective 6 (Protect and enhance the natural and historic environment) includes 'green belt' as one of the issues to be considered. Whilst there are no immediately obvious alternative draft objectives for green belt to fall within, it is important to note that it remains primarily a policy tool, and not necessarily an indicator of environmental quality. There may also be value in including a separate issue of 'locally-distinctive building stone' under this draft objective.

⁶ Worcestershire County Council, Worcestershire Economic Assessment 2010-11

7.7 MLP Second Consultation Document, Section 7: Draft Spatial Strategy

- 7.7.1 At this early stage, the Draft Spatial Strategy is a map-based diagram indicating the broad policy proposals set out in the Plan. It is a visual synopsis of the key environmental features and designations, showing where the areas of search for minerals sites will be located, and what and where the restoration priorities will be. Future versions of the MLP will include further text accompanying the diagram to clarify the overall approach. The Spatial Strategy does not add anything to the content of the MLP, and raises no specific SA issues at this stage, but nevertheless plays a valuable role in ensuring the MLP presents a joined-up and coherent strategy.

7.8 MLP Second Consultation Document, Section 8: How much mineral will we make provision for?

➤ Annual Provision of aggregates

7.8.1 The MLP confirms that the *Local Aggregate Assessment* (LAA) has been adopted by the Council, and has already been used to establish the amount of minerals the MLP should provide for. There is therefore limited scope to consider alternatives to the methodology, although it is appropriate for the SA to identify any more sustainable approaches if possible.

7.8.2 There is no single 'right or wrong' answer to the level of provision; the NPPF confirms that the LAA should be informed not only by sales data, but also by the Aggregate Working Party and any national/sub-national guidelines. In sustainability terms, the level should not be so low that the various benefits arising from minerals provision cannot be realised, nor so high that the negative (mostly environmental) impacts are greater than absolutely necessary. The level should therefore strike an appropriate balance within the potential ranges allowed for by government guidance.

7.8.3 The chosen approach divides the provision within the plan period into two:

- provision up to and including 2016; and
- provision beyond 2016.

The first part of the provision is based on the 'legacy' apportionments agreed by the West Midlands Planning Authorities (which run until the end of 2016). The second part of the provision, which covers the remainder of the plan period, is a simple rolling average of the past 10 years' annual sales levels in the county. The change in methodology after 2016 leads to a decrease in annual provision of both sand & gravel and crushed rock (reductions of 12% and 14%, respectively). The LAA, whilst recognising it is "*notable*", concludes that this disparity is "*not considered to be a matter for concern*".

7.8.4 The simplest approach, for plan making and for interpretation by applicants and others, would be to adopt the 10 years' sales averages as the defining measure throughout the entire plan period. This would have the benefit of avoiding two different calculations and accommodating the changes in provision that arise accordingly. However, this would fail to recognise the more robust, evidence-based apportionments under the RAWP which the MLP accommodates.

➤ Security of future supply

7.8.5 In relation to the landbank of minerals in the county, the MLP suggests that there is a shortfall against the levels required by government policy through the NPPF. To be compliant, Worcestershire needs a sand and gravel landbank of at least 7 years, and a crushed rock landbank of at least 10 years. The current landbanks, at 4.49 and 0 years respectively, fall well below this. It is important to recognise that the data upon which the figures are based - whilst as robust as it

can be - cannot be considered particularly accurate. This is due to the confidentiality of reporting arrangements for crushed rock, which mean that the latest available data, suggesting a landbank of 3.31 years, is from 2008. As the last permitted crushed rock reserve is being restored, there is currently no crushed rock landbank at all.

7.8.6 The Second Consultation Draft puts forward three options for meeting the landbank requirement, each of which could have markedly different sustainability impacts:

- **Option A: Assume there is no permitted landbank at the start of the plan period**
- **Option B: Assume the shortfall in landbank continues at current (published) levels**
- **Option C: Assume there is no shortfall in landbank at the start of the plan period**

To an extent, options B and C are unlikely to be realistic and, as such, may not merit appraisal under the SA framework (see section 6.3.1, above); the MLP confirms that the figures underpinning Option B are "*known to be untrue*", and this qualification would apply equally to Option C. However, due to the inherent difficulties in reaching a robust conclusion on the scale of landbank required, there are no obvious viable alternatives. It may be misleading to refer to the shortfall in Option B continuing at "*current*" levels, as the MLP acknowledges these are *not* the current levels; as a point of clarity, it would be better to refer to this as the "*last publicly available landbank figure*" (to follow the wording used elsewhere in the MLP, for example in section 9.6).

7.8.7 Landbank calculations could be aided by considering the crushed rock and sand and gravel requirements separately. This would allow the greater confidence over likely levels of sand and gravel to be drawn out.

7.8.8 It would be overly-simplistic to suggest that a higher landbank would be less sustainable than a lower landbank. In very broad terms, the amount of mineral resources to be provided should be such that economic and social development is achieved without compromising the environment. In spite of the green infrastructure opportunities afforded by green infrastructure, it is recognised that a greater volume of minerals extraction could increase the potential for negative impacts to arise. Mitigation measures can go a long way to ensuring the acceptability of proposals, but increased minerals provision nevertheless requires more energy and resources for extraction, processing and transportation, and more disruption to local communities.

7.8.9 Failing to provide an adequate landbank in Worcestershire could result in mineral demand locally being met by imports from outside the county. This would fail to satisfy the requirements of national policy and would not be sustainable (although localised impacts of mineral operations could be reduced).

The NPPF states that local planning authorities should aim "*to source minerals supplies indigenously*".

➤ **Sustainability impacts arising from Options A, B, and C**

- 7.8.10 There is greater potential for negative impacts arising from higher levels of resources on the SA objectives *landscape, climate change, natural resources, and biodiversity, geodiversity, flora and fauna*.
- 7.8.11 Impacts on geodiversity could vary; increased mineral extraction could potentially destroy or compromise geodiversity resources, but it could also reveal valuable geodiversity assets that would otherwise remain hidden (and could potentially allow them to remain in-situ as educational and scientific resources following extraction). Policies elsewhere in the MLP will be important in ensuring that site-specific impacts are taken into account.
- 7.8.12 As Option A would be likely to lead to a minor over-provision of sand and gravel, any negative effects arising from the higher levels of provision could be particularly felt around sand and gravel developments. Sustainability impacts associated more with sand and gravel because of the likely location of the resource (such as flood risk) would therefore be more marked under Option A.
- 7.8.13 *Cultural heritage, architecture and archaeology* is likely to be best protected through Option C. Whilst the higher levels of Option A would help to provide sufficient minerals to help ensure that high-quality development can be delivered in the county, the maintenance of local character and distinctiveness is likely to rely more upon building stone, which is not provided for in this policy.
- 7.8.14 The higher levels of resource in Option A may place additional pressure on agricultural land and the green belt. Pressure on the green belt will be greatest where a lack of alternative land is available to meet identified need, meaning that a lower identified need should reduce pressure to identify green belt land for minerals development.
- 7.8.15 The higher level of resources under Option C could have a minor beneficial impact on *energy*, simply because of the increased likelihood of large areas of land potentially being available for renewables development post-extraction. There are numerous examples of such developments around the country.
- 7.8.16 Some flooding benefits could arise from restored sites, as they can provide water storage and aid flows. Although a greater level of minerals provision could potentially increase the likelihood of minerals development being located in higher flood-risk areas, the classification of sand and gravel as "*water compatible*" and of other minerals as "*less vulnerable*" in national policy means this impact is less significant than for most other types of development.
- 7.8.17 The most significant negative *traffic and transport* impacts would result from the larger volumes proposed under Option A, which would require more (and possibly bigger) developments and associated infrastructure, and would

generate an increased number of HGV movements. Whilst sustainable transport would be promoted, the opportunities to exploit such methods (given Worcestershire's distribution of minerals in relation to railheads and water accesses) are unlikely to prevent additional traffic. It is recognised that Option A could actually over-provide slightly for sand & gravel, and could therefore lead to slightly greater traffic impacts than are necessary.

- 7.8.18 The higher volumes proposed under Option A would have generally positive impacts on *growth with prosperity for all* and *provision of housing*, as they are more likely to provide sufficient minerals for development needed for economic growth and for house-building. A failure to provide sufficient resources could compromise delivery of economic development and push investment out of the county. It could also lead to shortages of building materials, delaying or even preventing necessary development such as housing, business parks and factories. However, as the level in Option C is only a minimum, further extraction could be provided for as and when required, without the need for any formal review, through approving additional appropriate minerals developments.
- 7.8.19 No significant implications have been identified in relation to the *waste SA* objective, but some minor negative impacts could occur through the slight over-provision of sand and gravel under Option A; this has the potential to compromise the waste hierarchy through discouraging more efficient use of existing materials and through promoting recycling. There could be some minor positive impacts arising from a lower minimum provision, which (although not restricting additional extraction) could lead to a greater focus on recycling and re-use of minerals, thereby supporting the waste hierarchy.
- 7.8.20 No significant sustainability implications have been identified in relation to the *health SA* objective, although there could be more instances of localised dust and noise emissions from minerals operations and transport under the higher levels proposed in Option A. Any such impacts should be minimised by other MLP policies and will be controlled through planning and pollution regulatory regimes.
- 7.8.21 No significant sustainability impacts are anticipated to arise from any of the three options in relation to *access to services, participation by all, technology, innovation and inward investment, population (skills and education), and population (crime & fear of crime)*.

➤ **Potential alternatives**

- 7.8.23 The levels of aggregates could be expressed as maxima, rather than minima: this could lead to beneficial sustainability impacts for certain environmental indicators, as the risk of environmental degradation arising from minerals development would be limited; however, significant negative impacts would be likely to arise, through the importation of minerals from outside the county, adding to CO₂ emissions and creating unsustainable patterns of development. Limiting aggregate levels could also increase construction costs in

Worcestershire due to scarcity of resources, and compromise delivery of essential economic and social development, and housebuilding.

- 7.8.24 Consideration could be given to separating out the sand & gravel and crushed rock elements of the aggregate provision into separate strands, to enable each landbank's particular sustainability impacts to be identified. This would more accurately reflect the different levels of reliability of data for each category of mineral and could improve sustainability performance by allowing more specific, tailored recommendations to be made.
- 7.8.25 Consideration could also be given to including a target for recycled/secondary aggregates. Whilst the level of such aggregates is currently built into the Options, a clearly expressed target could raise the profile of the need to minimise extraction of new resources and could help increase resource efficiency.
- 7.8.26 The current adopted *Hereford and Worcester Minerals Local Plan* sought to maintain a seven year landbank of both crushed rock and sand & gravel. This was in accordance with national requirements at the time, contained in *Minerals Planning Guidance 6*. This approach is no longer compliant with national policy, as it would result in a shortfall in provision of crushed rock. Having only a seven year landbank for both crushed rock and sand & gravel is therefore not a viable alternative.

➤ **Industrial and energy minerals**

- 7.8.27 The MLP would benefit from a brief rehearsal of the reasoning behind the proposed approach to the non-aggregate minerals. Particular issues of note are:

Silica Sand

- 7.8.28 The WCC background document *Ensuring adequate and steady supply of industrial and energy minerals* states that "*The Council is not aware of any robust methodology for determining need for silica sand*". However, the MLP should provide further explanation of why the methodology for calculating crushed rock and sand & gravel provision cannot be applied here. Average sales tonnages over the last 10 years of sand for non-aggregate purposes (practically equivalent to silica sand) are known, and it is precisely such figures which have been used to determine 'need' for aggregate minerals.

Clay

- 7.8.29 One issue is that the data supporting assumptions on the landbank of clay dates from November 2011, and there may be a need to revisit this evidence base to ensure the MLP is informed by the best available evidence.

Coal

- 7.8.30 Although the background document refers to a BGS opinion that Worcestershire is "*unlikely to attract any further opencast interest*", it would be useful to confirm whether this is also the case for deep mines, given the historic precedent for such workings in the north of the county.

Secondary and recycled aggregates

- 7.8.31 The MLP refers to this issue already being accounted for through the *Waste Core Strategy*, but there may be a valid role for the MLP in providing further information and guidance on the best ways to maximise levels of recycled aggregates. Inclusion of an explicit, positive approach in the MLP will help to strengthen resource efficiency. For clarity, it should be stated which figures have informed the MLP's consideration of this issue, and whether these are the most up-to-date available.

7.9 MLP Second Consultation Document, Section 9: When will minerals be worked and when will our reserves meet national targets?

- 7.9.1 It is stated (in Section 9.9 and elsewhere) that the MLP's identification of significant new areas of search "*will provide an impetus for minerals development in Worcestershire*". The reasoning behind this assumption should be stated (e.g. industry representatives suggesting the lack of an MLP is restricting applications, weight of enquiries from potential operators seeking sites, etc.). In particular, it would be helpful to know the underpinning assumptions behind the statement that "*It is likely that planning applications resulting from the impetus of the new Minerals Local Plan could be determined and implemented within this time-frame*". Given the paucity of minerals development in recent years, this assertion may be open to question.
- 7.9.2 Given the relative urgency in the need to build up minerals stocks (as demonstrated by an assumed landbank of zero), it is unclear why an intervention which could hasten permissions (the preparation of site-specific planning policies) will only being considered if targets are not being met by halfway through (or by the end of) the plan period. This is a reactive approach, and a proactive approach would be more useful.
- 7.9.3 In line with comments made elsewhere in this SA on the MLP's Vision, the risk of ambiguity would be reduced if the words "*at least*" were used before both the sand & gravel and the crushed rock landbanks.
- 7.9.4 When considering by what time permitted reserves should be reached, Option B does suggest a lack of urgency, and an option calling for reserves to be met as soon as possible may be more encouraging. The explanation for Option B also seeks to portray the target as achievable because it would require permissions for only a small proportion of the identified resource; however, when the identified resource is so large, it could be seen as more realistic to consider the targets in terms of past delivery (by comparison with past sales tonnages, etc.)
- 7.9.5 The Second Consultation Draft puts forward three options for when the landbank requirement target should be met:
- **Option A: Aim for permitted reserves that will provide a minimum 7 year landbank for sand and gravel and 10 year landbank for crushed rock throughout the plan period**
 - **Option B: Aim for permitted reserves that will provide a minimum 7 year landbank for sand and gravel and 10 year landbank for crushed rock by halfway through the plan period**
 - **Option C: Aim for permitted reserves that will provide a minimum 7 year landbank for sand and gravel and 10 year landbank for crushed rock by the end of the plan period**

The degree of influence the MLP can have on bringing forward the required landbank is limited, and successful delivery will largely depend on market forces and developer confidence. In seeking to reach a balance between ambition and realism, the MLP proposes a reasonable compromise in Option B. A brief commentary on why the current landbank is so low would be valuable here, as well as an indication of the likely economic/policy drivers needed to reverse what appears to be a recent under-provision in supply.

7.10 MLP Second Consultation Document, Section 10: How will minerals be worked?

- 7.10.1 This section does not give detail on how minerals will be worked, but rather sets out a range of issues that will be addressed through policies in the next iteration of the MLP. At this early stage, therefore, sustainability impacts cannot be appraised in detail, but the SA can provide a broad commentary on the emerging policy direction.
- 7.10.2 This section of the MLP sets out a list of issues which, if addressed appropriately, will help to ensure negative sustainability impacts are minimised during the operational phases of mineral workings and that where possible, net benefits are secured for the economy, environment, and communities.
- 7.10.3 Issues (e) and (bb) should help to ensure that landscape character and quality is safeguarded and strengthened, but issue (e) on visual intrusion should recognise not only those impacts arising from the site, but also those arising from transport (access roads, etc.) and associated infrastructure. The issues here could also refer to the importance of viewpoints. The Malvern Hills AONB Partnership, for example, has published guidance on key views to and from the Hills.
- 7.10.4 Issues (u), (v), (w), (x) and (y) provide a generally comprehensive range of issues which should ensure *biodiversity, geodiversity, flora and fauna* are taken into account. However, the overriding emphasis is currently on 'conserving' assets, rather than 'enhancing' them as part of a GI network. A commitment to "*protect or record*" geological features in issue (u) misses the potential to create new features which could be revealed through mineral workings. Similarly, whilst issues (v) and (w) on European sites and international sites, respectively, focus mainly on legal obligations, there is an opportunity to take a more positive approach (in line with the green infrastructure approach of the Vision). Biodiversity offsetting has not been considered, but could potentially have a role to play in minerals site development and should be included for discussion. Issue (x) suggests that a high level of protection is *encouraged* by national policy. This should be more strongly stated, especially in the case of SSSIs, where national policy *requires* such protection.
- 7.10.5 Issue (s) on Green belt (one of the five purposes of which is "*to preserve the setting and special character of historic towns*") should help to maintain Worcestershire's local character and distinctiveness.
- 7.10.6 Issue (aa) on archaeology could usefully include the same focus on *significance* that is found in issue (z), to meet the SA objective on *cultural heritage, architecture and archaeology* more fully.
- 7.10.7 Inclusion of resource efficiency in issues (l) and (m) is welcomed, and especially valuable is issue (a), which links the MLP to the *Waste Core Strategy*.
- 7.10.8 Issue (bb) also has a role to play in delivering the distinctiveness sought by the SA in those parts of the county within the Cotswolds and Malvern Hills AONBs.

Consideration should be given to highlighting particular Worcestershire characteristics/features that give the county its distinctiveness (some of which are already discussed under the Spatial Portrait).

- 7.10.9 Issues (a), (b), (q) and (s) will help to deliver the SA objective on material resources. The cross-referencing to the *Waste Core Strategy* in issue (a) is welcomed. It should also be noted that the provision of minerals for the repair of historic buildings can help bring under-utilised assets back into use.
- 7.10.10 While the individual components of green infrastructure are covered, the holistic consideration of GI, including its role as a positive enabler, could be strengthened.
- 7.10.11 Issues (d), (l), (q), and (t) should help to deliver the *natural resources* SA objective. Transport will also be key factor in how far this objective is met (especially air quality) and so issue (j) is also relevant.
- 7.10.12 The MLP does not propose a separate *climate change* issue in its own right. This approach is supported, as the cross-cutting nature of climate change means that it will affect – and will be affected by – a wide range of issues. The key issues which will help to deliver this objective are (j), (l), (m), (n), (o), (p) and (r).
- 7.10.13 Issues (m), (n), and (o) consider energy efficiency and the use of and generation of renewable energy. Issue (n) on use of renewable and low carbon energy should recognise that there may be a role for biofuels as well as renewable electricity. Issue (o) should provide greater ambition; it should not focus only on those uses that could be accommodated during the operational phase of mineral sites, but should also recognise the potential offered as part of restoration and after-use. Proposals elsewhere in the UK (such as Newbold Quarry near Burton-upon-Trent), have sought to introduce solar photovoltaic panels into redundant quarry sites. The topography of the sites can be well-suited to minimising the visual impact of panels, as they are often well-screened from surrounding areas.
- 7.10.14 Issue (p) identifies the relevant flood risk considerations that will need to be taken into account. Issues (p)'s recognition that it is not only the impact of flooding on minerals sites that needs to be properly scoped, but also the potential impact of minerals sites on flooding elsewhere, is welcomed. Issue (p) could also recognise the potential water-storage role of mineral sites following extraction.
- 7.10.15 The *health* SA objective should not be compromised by any of the issues, and conditions imposed on minerals operators should prevent any negative health impacts arising. The risk of physical or mental health being compromised through excessive noise, light pollution, odour, or reduced air quality should be minimised through the issues (c), (d), (f), and (g). Issue (c) on noise and vibration could potentially be mitigated through the use of noise-attenuation bunds or planting schemes, but any such measures should be part of an overall scheme that takes into account landscape and biodiversity interests.

- 7.10.16 In terms of the SA objective on *waste*, issue (a) states that future policies will seek to maximise recycled and secondary aggregates. It is unclear whether the MLP is the appropriate place to enable waste management facilities associated with operational mineral workings, as waste developments are covered by the *Waste Core Strategy*. The issues do not mention the potential of landfill to play a part in restoration proposals; although a requirement for additional landfill capacity is not anticipated in the WCS, this could depend upon future waste management policy. Enabling added-value processing plants in issue (b) would be a valuable way of ensuring resource efficiency.
- 7.10.17 The MLP will help to ensure the *traffic and transport* objective is met through issues (i), (j), and (k). However, the assertion that the issues will be very site specific should be reconsidered, as there could well be significant transport issues arising from the MLP. There is the potential for multiple HGV movements (especially when considered cumulatively across a number of different sites) to have a combined effect which is felt more widely. For example, a large number of HGV movements through small settlements could impact on tranquillity; noise, visual intrusion and air quality deterioration, as well as other impacts (e.g. increased carbon emissions, etc.).
- 7.10.18 *Participation by all* should be fostered through issues (cc) and (dd), which specifically recognise the role of communities in influencing proposals and helping to shape operation and restoration of minerals sites. However, the current issues only refer to such community engagement being "*encouraged*", which may not be strong enough to provide the levels of participation envisaged in the SA objective.
- 7.10.19 While there are no issues in this part of the MLP which specifically relate to the SA objectives *growth with prosperity for all* and *provision of housing*, the issues will collectively provide an effective framework for the winning of minerals which will allow for necessary construction to foster economic and social development, including house-building.
- 7.10.20 The MLP issues, in particular (l), (m), (n) and (o), should help to ensure that high-value, low-impact technologies are promoted and supported, which will help to deliver the SA objective on *technology, innovation and inward investment*.
- 7.10.21 It is unclear why Objective 1 has been omitted from Table 4 (page 37), as the issues will be similar to those for Objective 2.
- 7.10.22 The NPPF extract in section 10.10 relating to determining planning applications may be of limited relevance here, as the salient points are covered in the plan-making section reproduced at the start of 10.10.
- 7.10.23 The MLP states on a number of occasions that there is insufficient information available to enable a more refined approach to be taken to certain minerals (for example, clay in section 11.14, coal in 11.19, etc.). There is, however, little discussion of whether any steps are or will be being taken to identify more detailed information and, if so, whether this could affect the proposed approach.

7.11 MLP Second Consultation Document, Section 11: Where will minerals be worked?

- 7.11.1 The MLP does not propose to identify specific minerals sites, but rather to identify broad areas within which development could be appropriate. Previous consultation responses revealed "*mixed opinions*" over this approach, which will fail to provide the level of certainty which many would ideally wish to see. The MLP is proposing to guide development based on two factors: viability of resources and restoration potential.
- 7.11.2 It is not appropriate to consider the performance of this section through the appraisal matrix, as most of the issues assessed under the SA objectives are deliberately left out of this part of the MLP. The issues are covered in the second stage of the approach through the site-specific location policies. Instead, the SA can offer a commentary on the individual and combined sustainability implications of the first stage of the proposed approach.
- 7.11.3 Table 6 in section 11.3 sets out how several of the draft MLP objectives will be delivered through areas of search and site-specific location-criteria policies. It is unclear why only certain objectives have been listed; there are clear linkages, for example, between these location policies and the successful delivery of objective 7 (Protect and enhance health and amenity). These linkages should be made.
- 7.11.4 The overall approach of this section is to identify those areas (or clusters of areas) totalling over 200ha as potential areas of search, whereas those areas smaller than 200ha will be excluded. The justification for this approach (that 200ha areas provide the greatest opportunity to deliver meaningful green infrastructure restoration) is not explained here, and this section would benefit from including some of the text from the restoration chapter, such as that in figure 26 (page 71).
- 7.11.5 Motorways have been excluded from the resource areas because of their 'significance'. The MLP should explain which aspects of motorways render them such significant barriers: is it the size of land-take? The inability to operate mineral workings in such proximity because of safety concerns?
- 7.11.6 The MLP seeks to identify demand for minerals by looking at proposed development set out in district Local Plans (11.42 onwards). This could be broadened by considering how any sub-national or national infrastructure projects might be likely to rely, in part, on minerals from Worcestershire.
- 7.11.7 Step 4 of the areas of search process (designed to ensure that areas of search are best placed to serve likely market need) would benefit from greater refinement. Indeed, the MLP itself acknowledges that the approach to distance from settlements is "*relatively crude*". It is not clear how relevant to Worcestershire the MPA's (unreferenced) finding is that 80% of minerals are used within 30 miles of their respective quarry; different minerals are likely to have their own generally viable distances to market. Further evidence on this issue would be valuable. Similarly, the three proposed distance buffers, based on

the size of development envisaged in Local Plans, are not clearly justified. It would be useful if the MLP presented more information on minerals distribution and end uses, in order to better understand how and where each mineral is used in Worcestershire.

➤ **Conventional and Unconventional Hydrocarbons**

7.11.8 The MLP is being prepared at a time when the issues surrounding these resources – particular unconventional hydrocarbons – are being widely debated. The media focus and political sensitivity surrounding shale gas extraction are likely to raise questions over the likelihood of shale gas exploration and/or commercial extraction taking place in Worcestershire. As such, this section needs to be clear. Detailed information underpinning the approach to energy minerals is contained in MLP background documents, but it would be valuable to summarise the main reasons in the MLP itself (paragraph 1.1 in the *Coal Mining in Worcestershire* background document would be a worthwhile inclusion).

7.11.9 The MLP states that there is *"no evidence to suggest that these [coal bearing and shale strata] contain unconventional hydrocarbons such as shale gas"*. This is ambiguous, as it is not clear whether WCC has simply *not identified* any evidence, or whether there *is* evidence available, but the evidence demonstrates such resources are unlikely.

➤ **Secondary and recycled minerals**

7.11.10 The MLP suggests in section 11.10 that there is unlikely to be a need to revise or add to the Waste Core Strategy policies *"for how and where recycled aggregates should be produced and managed"*. It should be clarified how this approach relates to issue (a) in Table 5 (page 39) which states that *"Provisions might include enabling waste management facilities associated with operational mineral workings"*.

➤ **Compromised resources**

7.11.11 The approach to resources affected by concentrated built development accords the same *"compromised"* status to areas of less than 10ha *not* covered by development, as the portions of those over 10ha which *are* covered by development. This status does not seem to adequately differentiate between what is potentially a very marked difference in viability between these two types of areas.

➤ **Alternatives**

7.11.12 The MLP has proposed a balanced approach which seeks to maximise GI benefits arising from minerals growth. One alternative to this would be for GI to take an even more central role, by identifying where the greatest opportunities for GI restoration are found, and then aligning minerals search areas only to the very best GI opportunities, regardless of whether the minerals are otherwise well-located for extraction. Such an approach is not considered realistic, as this would

fail to deliver the long-term minerals supply required under national policy. In sustainability terms, such an approach could have localised benefits in reducing impacts on the natural and historic, but would lead to unacceptable climate change impacts from importing minerals into the county and could compromise much-needed social and economic development through restricting supply.

7.11.13 A further alternative would be to identify areas of search according to those areas which can best be served by sustainable transport. Although there is some scope for water- and rail-borne transport, this is similarly not considered a realistic alternative. As set out in the MLP's Portrait of Worcestershire, "*there are no major rail freight facilities in Worcestershire and limited opportunities for rail freight transport at present*". This would again lead to a failure to provide sufficient minerals, with similar sustainability impacts as the other unrealistic alternative above.

7.11.14 The MLP could propose cut-offs that are either above or below the currently-suggested 10ha/200ha. The merits of either approach would vary; a smaller cut-off could lead to more areas of search being identified, and potentially lead to a greater number of minerals operations taking place. The risk with such an approach would be isolated pockets of development, spreading the risk of environmental degradation over many small areas, with no opportunity for GI enhancement due to the fragmented nature of the sites. Transport requirements could also be significant, as efficiencies of sale would be lost. Potential benefits arising from a smaller cut-off include a reduced magnitude of environmental impacts from smaller sites (such as on air quality, landscape, biodiversity, noise, etc.). A larger cut-off could threaten deliverability, as the ability to identify much larger sites would be limited by existing environmental constraints, and focussing development in a smaller number of areas is unlikely to demonstrate a strong relationship with market demand and final use of the minerals (although, as suggested in paragraph 7.11.7 above, further evidence of this would be needed before any categorical judgment could be made).

7.11.15 Identifying more specific site allocations (rather than broad areas of search) would have the benefit of providing increased certainty for operators and communities over where development is likely to take place. This alternative, however, is not considered to be realistic; the MLP confirms that evidence on the precise location and extent of mineral deposits is uncertain, and it is therefore impossible to provide site-specific levels of accuracy. The MLP's proposed approach is considered the most appropriate option, as it provides a degree of indication on the likely areas for minerals development, whilst allowing additional evidence to inform more specific locations as and when it becomes available through industry or academic research.

➤ **The consideration of constraints**

7.11.16 It is not clear why the Minerals Local Plan is being used as the starting point for identifying constraints (see MLP section 11.53/54, Appendix 1, and elsewhere). The MLP recognises that the 'old' MLP is out-dated, and there seems little value in justifying the inclusion or exclusion of constraints by reference to the old plan.

It would be better to approach the constraints anew, informed by the relevant up-to-date policy context and local issues, as for other aspects of the MLP.

➤ **Buffers or stand-offs**

7.11.17 The potential of rivers and water courses to provide sustainable transport could be included in the reasons for not buffering development close to river banks.

7.11.18 While identified nature conservation sites may not necessarily be negatively impacted by minerals development, this will depend on the particular sensitivities of the site and its receptors.

7.11.19 The reasons given for not having a buffer around 'Heritage assets and nationally designated landscape areas' are not the positively-worded reasons given for the first two categories, and are more akin to the later criteria-based policies. If this type of feature is to be included, it should state why minerals development can be appropriate in such locations, including the social and economic benefits that can arise, and the potential for long-term improvement of the immediate and surrounding area through GI-led restoration.

7.11.20 Ultimately, the value of the section on buffers and stand-offs is questioned. It would probably be sufficient to briefly state that no buffers or stand-offs are being proposed, because the nature, scale and impact of minerals development will be considered through criteria-based policies. This is especially so given that all the features except properties (which could easily be added) are considered in the subsequent table of 'Issues to be addressed by the site-specific location policies'.

7.12 Issues to be addressed by the site-specific location policies

- 7.12.1 The issues identified will help to deliver the *landscape* SA objective, although issue (o) currently only seeks to *safeguard* landscape character and quality; consideration should be given to long-term impacts, including the potential for enhancement.
- 7.12.2 The *biodiversity, geodiversity, flora and fauna* objective will be met in part by the wide range of issues relating to the natural environment but (with the exception of geodiversity) there is only a limited focus on enhancement. The issues should include the positive opportunities arising from minerals sites in both the short and the long term (post-restoration). Issue j (Geological sites) could refer to the opportunities created by mineral working to expose new geological features - whether designated or not - as a cultural and recreational resource that could be maintained beyond the restoration phase.
- 7.12.3 The *preservation* part of the SA objective on *cultural heritage, architecture and archaeology* is covered by the heritage, conservation areas and green belt issues, with many of the other issues playing a contributory role in maintaining Worcestershire's unique character (including those relating to biodiversity, geodiversity and landscape). However, with the exception of a small part of the archaeology issue, enhancement is not considered.
- 7.12.4 The SA objective on *material assets* will be met primarily through the soil resources and green belt issues. Green infrastructure will be safeguarded through the issues covering each of its component parts (Geological sites, European sites of nature conservation importance, Internationally identified habitats and species, Nationally identified habitats, species and nature conservation sites, Nationally identified habitats, species and nature conservation sites, Landscape character and quality, Heritage assets and their settings, Conservation Areas, and Archaeology. It is inappropriate to include Issue t (Green Belt) under the 'Natural and historic environment' heading; although there one of its five purposes is "*to preserve the setting and special character of historic towns*", the NPPF confirms that "*The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence*".
- 7.12.5 The *natural resources* SA objective includes water, soil and air. The water element of this objective will be satisfied in part through the issue on water quality and quantity, although enhancement is not considered. The soil element will be satisfied in part through the issue on soil resources, although again there is no attention paid to enhancement opportunities. None of the issues specifically consider air quality, but this will largely be governed by operational policies, rather than those guiding site locations. There are linkages, however, through the issue on connectivity to the strategic transport network, which should help to reduce emissions from road transport. Issue (k) on European sites of nature conservation importance will also be important in helping to meet this objective, as this will prevent site development "*in locations that are likely to*

have a significant effect on European sites". The Habitats Regulations Assessment Scoping Report prepared to support the MLP identifies five European sites in and around Worcestershire for which air quality is among the key site sensitivities. The report identifies a potential risk to these sites arising from a breach in "critical air pollution thresholds for vegetation, e.g. by increased oxides of sulphur, nitrogen compounds and/or ozone".

- 7.12.6 There is no single issue in this section of the MLP which addresses the *climate change* SA objective, as climate change impacts upon, and is impacted by, so many issues. The main aspects of climate change are generally well-covered and whilst issue (a)'s focus on alternatives to road transport should help to reduce vehicular emissions, it is clear that this must take into account all relevant issues, as road transport could turn out to be the most environmentally-friendly option in some locations. Issues on subsidence and land stability and flood risk will ensure that the effects of climate change on these aspects will be given due consideration. The MLP should be informed by the latest climate change projections available through UK Climate Projections 2009 (UKCP09).
- 7.12.7 None of the issues relate directly to the SA objective on *energy*, but issue (u) will ensure that *"the location of the proposed development does not compromise the integrity of infrastructure, such as that relating to power..."*. The issues could direct development towards locations where opportunities to be served by, or to generate renewable energy are greatest, but this would not be a practical solution and it would be inappropriate to raise this consideration above other, more relevant locational criteria.
- 7.12.8 Issue (g) on flood risk fully covers the SA objective on *flooding* (recognising the particular classification of mineral workings in national policy on flooding).
- 7.12.9 There are only limited linkages between the issues and the SA objective on *access to services*. The actual mineral workings themselves would not constitute *"local services or facilities"* in the context of this SA objective, so issue (b) on access to the site is not relevant. Issue (d) on congestion will help to ensure people's access to services and facilities is not compromised by minerals development, but there is no consideration of the impact on Public Rights of Way. This may be a localised issue which is best controlled through the site-specific criteria.
- 7.12.10 No direct issues arise in relation to the SA objective on *health*, but some indirect benefits will be provided through the issues on safety, amenity along transport routes, and aviation safety.
- 7.12.11 Delivery of the SA objective on *traffic and transport* should be helped by the issue on connectivity to the strategic transport network. Issue e (Amenity along transport routes) could also refer to the nature of the routes and the likely impact on those along the routes. This will clearly differ between a busy main road and smaller quiet lanes.

7.12.12 None of the issues in the table will directly fulfil the SA objectives on *growth with prosperity for all, provision of housing, or technology, innovation and inward investment*, but the collective issues will provide a framework for the economic growth of the minerals industry. This will, in turn, support wider economic growth throughout the urban and rural areas, through economic multipliers and through the provision of minerals necessary to translate economic strategies into physical development.

7.12.13 No linkages have been identified between any of the issues and the SA objectives relating to *waste, participation by all, population (skills and education), or population (crime & fear of crime)*, all of which will be delivered to a greater or lesser extent through other parts of the MLP.

7.13 MLP Second Consultation Document, Section 12: How will mineral workings be restored?

- 7.13.1 This section establishes that the overall restoration approach of the MLP is to deliver green infrastructure networks, in what amounts to *"a step-change for mineral development in the county"*.
- 7.13.2 In broad terms, the MLP's approach to restoration comprises two elements:
- **Area of search restoration profiles** which seek to bring together a wide range of green infrastructure evidence for each of the identified areas of search, to provide an overall guide to how sites should be restored; and
 - **Site-specific restoration policies** in the form of a long list of issues that must be taken into account to ensure that following completion of (or in the course of) mineral operations, the site is appropriately restored.
- 7.13.3 The issues generally provide for a high level of environmental protection, but there is scope for more focus on opportunities for enhancement. The policies should be positively-worded, in line with the NPPF requirements for positive planning, and should therefore seek to enable development which satisfies the key requirements, rather than preventing development that does not.
- 7.13.4 The Second Consultation Document states that, in response to consultation on the previous stage of the MLP, *"The need for clear restoration plans at application stage was reiterated through several responses as a way of taking into account local considerations, setting clear priorities and aiding on-going monitoring both on and off-site. However the long-term flexibility of such schemes to respond to changing circumstances was also considered key"*. Until recently, restoration conditions attached to many minerals planning permissions allowed for a degree of flexibility, through allowing for changes agreed in writing by the planning authority. Following a series of legal rulings, however, uncertainty over permissions is unlawful and as such, this type of condition is no longer used. This means that adjusting restoration schemes after permission has been granted could only be achieved through a formal variation, and having effective policies in place to shape applications is crucial.
- 7.13.5 The MLP would benefit from an introduction to the broad concept of strategic restoration priorities in advance of Figure 23; there is a need for a simple explanation of the approach before entering straight into the detail.
- 7.13.6 Figure 24 is confusing and generates more questions than answers. It is unclear why some issues are shaded and some are not. For example, horticulture and food production is a function of soil quality, water quantity and quality, etc. It is unclear why landscape character is central and next to, but not within, green infrastructure.
- 7.13.7 The inclusion of Step 4a in Figure 26 may be unnecessary. Although there is an iterative relationship between the Spatial Strategy and the approach to

restoration, it would improve clarity if the detail is seen to emerge 'from' the Spatial Strategy, rather than to shape it as the document progresses. It is therefore suggested that a single Step 4 is used, based on the current Step 4b.

7.13.8 The data underpinning the priorities is necessarily broad-brush. Whilst the level of detail of each theme will vary, the GI evidence base is strategic in nature and is therefore not expected to provide site-specific detail. It is important that the MLP provides flexibility to account for site-specific characteristics that are not reflected in the overall GI assessment of the respective area of search. This should be facilitated though more localised assessments at site level through the planning application process.

- High-level restoration priorities: Landscape character

7.13.9 Step 3 establishes that among the various aspects of green infrastructure, *"landscape character is considered to be an overarching consideration"*. This seeks to set landscape character apart from the other issues, ostensibly because it is 'everywhere'. Unlike the other issues, there are no qualitative assessments of landscape character in Worcestershire; this means that it has not been possible to accord a priority level to landscape, as there is no evidence base guiding where landscape character is in good condition and where it requires improvement.

- High-level restoration priorities: Flooding

7.13.10 The MLP confirms that the areas identified by the Environment Agency as being a priority for flood alleviation relate primarily to solid sand, which does not lend itself to the sort of restoration which will generally reduce flood risk. Opportunities to enhance the flooding element of GI at an 'area of search' scale are therefore limited.

7.13.11 It should be noted that although the *River Basin Management Plan* covers the county's main rivers, other watercourses also need to be considered.

- High-level restoration priorities: Habitat fragmentation

7.13.12 The divisions for biodiversity quality (high/medium/low) may need refining. The 'medium' division should be reworded to say *"More than ¼ of the area of search classified as ~~high and/or~~ medium quality or a combination of high and medium quality ~~combined~~ EXCEPT where more than ¼ of the area of search is classified as high quality"*. Similarly, the 'medium' division for landscape fragmentation should be *"More than ¼ of the area of search classified as ~~low and/or~~ medium fragmentation or a combination of low and medium fragmentation ~~combined~~ EXCEPT where more than ¼ of the area of search is classified as low fragmentation"*.

7.13.13 The MLP does allow for a degree of flexibility within this overall approach, as demonstrated in the approach to habitat quality and fragmentation in the Stour corridor (although not technically a 'determining factor', the other

characteristics of the area have been taken into account in finding it to be an 'overarching priority').

- High-level restoration priorities: Water quality

7.13.14 The approach to water quality can be seen as the opposite to that of habitat quality & fragmentation and agricultural land quality; for habitat quality and agricultural land, the 'determining factors' are guided by the best existing areas, whereas these are guided by the worst-performing water bodies. There is no clear explanation of why this is so.

- High-level restoration priorities: Geodiversity

7.13.15 One of the proposed determining factors for the priority to be given to geodiversity is whether or not the area of search is within or partially within either the Cotswolds or the Malvern Hills AONB. The AONBs were designated to conserve and enhance their natural beauty and, although geology forms a key part of their special features, it is questionable whether this should have the same level of significance as a 'pure' geological asset such as a Geopark or a geological SSSI.

7.13.16 Section 12.80 of the MLP (p85) states that *"The way in which geodiversity considerations can be considered in a restoration approach will vary significantly depending on the nature and location of the features to be incorporated. It has therefore not been possible to give any high-level guidance in the areas of search restoration profiles at this stage"*. The MLP should explore whether there are any high-level principles (e.g. from the Earth Heritage Trust) which could be drawn upon in informing this approach.

7.13.17 In determining the level of priority to be given to geodiversity, one further approach could be to give a higher priority to those sites closer to centres of population, or which tie in to existing projects.

- High-level restoration priorities: Horticulture and food production

7.13.18 The MLP should explain the underlying factors which make agricultural land good (or bad) quality.

- High-level restoration priorities: Historic environment

7.13.19 This section is well-informed by a robust evidence base, and the SA makes no recommendations for improvement although, as with geodiversity, one further approach could be to give a higher priority to those sites closer to centres of population, or which tie in to existing projects.

- High-level restoration priorities: Access and recreation

7.13.20 The ANGSt measure is based on accessibility of residents to green space. As the areas of search are based on proximity to urban areas, there is good opportunity for public access here.

Minor issues

7.13.21 The 'spider' diagram in Figure 13 (and repeated at section 11.58) could be laid out more clearly. A 'family tree' type diagram would be more legible.

7.13.22 The spelling of infrastructure needs to be corrected in Figure 27 (page 72).

➤ **Potential alternatives**

7.13.23 The MLP could set out a restoration approach that is guided more by economic and social opportunities, either as an equal focus alongside the current environmental (GI) goals, or as the primary driver(s). This could include, for example, a requirement for restoration to make the maximum contribution to employment, or to make the greatest contribution to affordable housing or health needs. The MLP states, in section 12.14, that *"The Green Infrastructure approach integrates the consideration of economic, health and social benefits to ensure that delivery against both environmental and socio-economic objectives is central to the planning, management and delivery of these spaces"*. There is little evidence, however, that the approach chosen fully explores the economic and/or social elements arising from the GI opportunities, and there would undoubtedly be a conflict between a purely economic focus and the more balanced scenario of GI-led restoration. As the MLP's approach to key/significant resources takes into account *"proximity to anticipated market demand"*, this corresponds directly with centres of population where there is the greatest concentration of potential employees.

7.13.24 The MLP sets out three alternatives, A, B and C, for how the restoration approach could be achieved. Alternative A (Policies to ensure all proposals give proportionate weight to restoration priorities) is 'light touch', providing only high-level guidance and policies to be interpreted by each minerals developer as sites come forward. Alternative B (Policies for each area of search and opportunity area for clay) would provide a greater level of guidance by specifying the overall priorities for each area of search, as well as setting out broad principles of how linkages can be made. Alternative C (Policies and spatial master-plans for each area of search and opportunity area for clay) is the most prescriptive, providing master-plans, informed by the Green Infrastructure Partnership, for each area of search. Alongside these broad alternatives, the MLP also refers to the possibility of developing SPDs to accompany Alternative A as another way of providing the additional guidance proposed in Alternatives B or C. One issue that should be considered is how regularly the evidence base will need to be updated and how simple it will be to do this through either the MLP itself or through specific SPDs.

7.13.25 The MLP proposes, broadly speaking, that restoration efforts are concentrated on ensuring the best resources remain in good condition. While it could be

argued that the 'hierarchy' approach perpetuates the low quality status of some habitats (in the 'integrate' approach, for example, it is only high-value features that should be retained or restored), this is necessarily pragmatic and recognises that particular sites, even in combination, are unlikely to create new features such that fragmented habitat becomes high-quality. It would therefore be misguided to expend limited resources improving poor-quality habitat that does not link well into the wider network.

7.13.26 The MLP's alternative options for restoration policies include listing/mapping known assets within the policy and spatial plan. Whilst this would ensure those known assets are taken fully into account in development restoration proposals, it is unclear how the policy could be kept sufficiently up to date. Even the further option of using SPDs to expand on the main policy could be too restrictive, given the long timescales involved in SPD preparation and revision. If this approach is to be progressed, it is important that some form of dynamic database is used, or that applicants are referred to the source information. A failure to reflect up-to-date data could risk those assets identified after the MLP is published being overlooked in restoration proposals, and potentially compromised. Although Alternatives B and C potentially offer a finer degree of detail, the valuable flexibility of Alternative A is lost.

7.14 Alternative approaches to driving the delivery of the restoration priorities for each area of search and the opportunity area for clay

7.14.1 The MLP's identification of the predominant landscape types in each area of search will help to ensure applicants are aware (at a high level) of the characteristics that contribute to the landscape. More detailed information on the likely impact of mineral workings on landscape character in each area of search should be available in the next version of the MLP. There is not currently a proposed landscape policy response to minerals development in AONBs, and this should be considered. The 'habitat quality and fragmentation' issue is also informed by landscape fragmentation, under an approach that proposes the greatest efforts are made to maintain the least fragmented landscapes. This does risk allowing those landscapes with a high degree of fragmentation to remain fragmented, but is probably a practical solution given limited resources and the need to focus on achievable aims in the context of the GI network; the MLP recognises that a focus on improving the poorest sites may not ultimately be effective if these sites are relatively isolated and do not make a valuable contribution to a wider network. It remains unclear how potential conflicts between landscape and other issues would be resolved. Alternative A would ensure landscape character is taken into account, but would fail to promote the important linkages that would be gained under Alternatives B and, especially, C. However, if biodiversity assets are identified on a spatial master plan, it is unclear how this will be updated to ensure that revisions to the evidence base are accurately and promptly reflected.

7.14.2 The SA objective on *biodiversity, geodiversity, flora and fauna* is generally well covered through all of the options. The MLP identifies 'habitat quality and fragmentation' and 'geodiversity' as two of the Plan's eight high-level strategic restoration priorities. Where it is high quality, biodiversity will be a determining factor in restoration schemes. Where it is medium or low quality, however, it will be less of a priority. The Spatial Strategy sets out corridors where biodiversity is an overarching principle, having taken into account geology and landscape. Alternatives B and C will help to place the development's approach to biodiversity in the wider context of the site's surroundings.

Geodiversity will be a significant factor in restoration for the area of search if it is within an AONB or the Geopark, and is less of a priority if the area only contains, or is near, a specific geodiversity site (such as a geological SSSI). Geodiversity corridors will be an overarching principle in the Spatial Strategy within the AONBs and the Geopark, but the issue has not been identified as a priority in any specific area of search. Alternative A makes basic provision for protecting geodiversity, whilst Alternative B takes this further and seeks positive integration. Alternative C provides a spatial dimension by identifying specific sites. While Alternative C is the most comprehensive and would theoretically help applicants to better understand the geodiversity implications of restoration from the outset, there is a concern that the evidence base underpinning this element may become dated and fail to reflect the latest known sites.

7.14.3 In terms of the SA objective on *cultural heritage, architecture and archaeology*, 'Historic environment' is identified as a high-level strategic restoration priority in

the MLP, with the potential of historic environment resources determined through the Historic Environment Assessment (HEA) evidence base. The HEA does not cover Wyre Forest district. Historic environment will be a determining factor in restoration schemes where there is high potential. Where potential is only judged as medium or low/unknown, however, historic environment will be less of a priority. There is potentially a conflict in applying a precautionary approach to the Wyre Forest district – where the historic environment potential is unknown and the priority level is 1 – and applying a priority of 3 to areas that have been assessed as 'low' or 'unknown' potential. For that proportion of the county that has been assessed, the area classified as 'high potential' is relatively small, and this proportion is likely to be similar in Wyre Forest district.

Historic environment is not an over-arching priority in the Spatial Strategy as no 'meaningful and coherent corridors' have been identified. Unlike some of the other strategic restoration priorities, historic environment assets are a finite resource and cannot be recreated. As there may be limited opportunities to enhance the historic environment, the focus is likely to be on preserving assets. Alternative A would ensure the historic environment is considered in site restoration, whilst Alternative B would require specific assets to be identified in the policy. Alternative C would present these assets on a spatial master plan. A similar concern arises for Alternatives B and C as is noted in relation to some of the other strategic restoration priorities: the number and location of historic environment assets (both those designated nationally/internationally and those on the Historic Environment Record) is continually changing, and it is difficult to see how such a dynamic record could be reflected within the MLP policy or mapping. It may be better to cross-refer to the relevant data sources which can then be consulted for each application. Maintaining the proposed approach could risk assets identified after the MLP is published being overlooked in restoration proposals, and potentially compromised.

- 7.14.4 The MLP makes provision for the *material assets* SA objective, as green infrastructure should be safeguarded through the restoration approach proposed for each of GI's constituent parts. The restoration priorities for the MLP do not include green belt, which is covered elsewhere (policy criteria p). Agricultural land is considered in the MLP's approach to the 'horticulture and food production' strategic restoration priority. Linkages are made to water quality, landscape, flooding and biodiversity, but in determining the level of priority the MLP equates 'horticulture and food production' to soil quality. This fails to recognise the wider elements which determine the capacity (and appropriateness) of horticulture and food production, including water quantity, access to infrastructure, market demand, etc. The MLP identifies areas of search where agriculture should be an over-arching priority in the spatial strategy, and this corridor has been informed by the complementary benefits that would arise when overlapped with opportunity areas for water quality enhancement. Alternative A seeks to safeguard agricultural land in the long term. Alternative B would see the particular agricultural land quality identified in the policy. Alternative C provides a spatial dimension by mapping agricultural land quality for each area of search. Alternative C is the most comprehensive and would theoretically help applicants to better understand the restoration implications for agricultural land from the outset. Unlike some of the other evidence

underpinning the strategic restoration priorities, agricultural land quality (if based on the best and latest agricultural land classification) is unlikely to change significantly following publication of the MLP.

- 7.14.5 Each part of the SA objective on *natural resources* is considered through the MLP. Soil quality will be protected and enhanced through the MLP's restoration approach for horticulture and food production, which focusses on agricultural land quality (as above).
- 7.14.6 Air quality is not one of the MLP's eight strategic restoration priorities, but will benefit from the protection and enhancement of trees and hedgerows facilitated through the 'habitat quality and fragmentation' and 'landscape character' priorities.
- 7.14.7 Water quality is a strategic restoration priority. The proposal to develop guidance on water quality, to be informed by as-yet unpublished Environment Agency *Water Improvement Plans* and *Water Action Plans*, is supported. The current MLP sets an approach to restoration which prioritises water quality according to a combination of WFD measures. It is not immediately clear if the WFD assessment provides comprehensive coverage of Worcestershire's water courses; if this is not the case, the MLP should be explicit about those areas not assessed, and should make clear the approach to be taken where this is the case. Water quality has been identified as an overarching priority only in the Avon Corridor, judged to be the only place where the resource areas are in close proximity to water courses. Alternative A would provide a basic level of protection to water quality. Alternative B would make provision for specific watercourses to be considered, but the MLP should be clear that this would be as part of a catchment-based approach, as the linkages between watercourses and main rivers, etc. mean that a good quality watercourse could flow into a failing watercourse. The MLP should stress that it is not only the immediate surroundings of a site that should be considered, but also the impacts on the area of search and beyond. Alternative C would provide the greatest guidance to applicants, through defining the specific watercourses and their objectives for each area of search on a spatial master-plan. As with some of the other strategic restoration priorities, there is a risk that any data included in the MLP could be superseded following MLP publication (WFD monitoring is carried out in accordance with the provisions of *River Basin Management Plans*).
- 7.14.8 Although there is not a single priority which equates to the SA objective on *climate change*, each of the strategic restoration priorities can contribute to meeting the objective, in particular 'Flood alleviation', 'Habitat quality and fragmentation' and 'Horticulture and food production'.
- 7.14.9 No direct impacts on the SA objective on *energy* have been identified as arising from the strategic restoration priorities. Encouraging food production and horticulture on restored land could potentially discourage the growing of energy crops, but energy crops are not specifically excluded from consideration.

7.14.10 The SA objective on *flooding* raises issues which are considered through the MLP. One of the MLP's strategic restoration priorities is 'Flood alleviation'. This sets out that the local flooding priorities for Worcestershire are found in the *River Severn Catchment Flood Management Plan (CFMP)*. The MLP proposes that the level of priority to be given to flood protection within each area of search is determined by the respective CFMP policy area(s) in which it falls. The higher the degree of flood risk, the higher the level of priority. It is open to debate whether the CFMP's 'Policy 3' areas (Areas of low to moderate flood risk where the Environment Agency is generally managing existing flood risk effectively) should mean flooding is a 'significant component' in restoration; the implications of moving Policy 3 and 4 areas down to priority levels 3 and 2, respectively, should be considered.

The limitations in identifying a corridor where flood alleviation could be an over-arching principle in the Spatial Strategy are the location and nature of the areas of search; the MLP proposes further discussion with the Environment Agency to identify whether this approach is appropriate, and it is beyond the scope of this SA to make a judgement on this in advance of such advice.

Alternative A provides for an effective consideration of the impact of proposals on flooding (particularly welcome is the need to consider impacts on the wider catchment, and the need to consider multifunctional benefits). Alternative B would require the identification of the specific EA Policy Area from the CFMP, and Alternative C would take this further by identifying the Policy Area and showing where there is potential to implement actions.

7.14.11 No direct impacts upon the SA objective on *access to services* have been identified as likely to arise from the strategic restoration priorities.

7.14.12 No significant impacts on the *health* SA objective have been identified as arising from the strategic restoration objectives, although several of the objectives (including flood alleviation and access and recreation) will help to ensure that health is improved (or at least safeguarded).

7.14.13 Considering the SA objective on *growth with prosperity for all*, successful delivery of the strategic restoration priorities will provide for appropriate economic development (including horticulture and food production, which is a key economic sector in Worcestershire). The MLP has made a deliberate policy choice to place the environmental side of restoration ahead of economic and social aspects. This does not mean there will not be complimentary and joined-up benefits, especially as a green infrastructure approach will provide the right environment in which businesses can grow.

7.14.14 No direct or indirect impacts have been identified as arising from the strategic restoration priorities in relation to the SA objectives on *waste, traffic and transport, provision of housing, participation by all, technology, innovation and inward investment, population (skills and education), or population (crime & fear of crime)*.

7.15 Cross-cutting site-specific restoration policies to be applied to all mineral developments

- 7.15.1 At the current stage, the MLP sets out a series of issues which will supplement the strategic restoration priorities through further policies, covering those factors which are not otherwise considered. The MLP has not yet suggested any policy options, but the list of issues provides a clear policy direction. There are 26 issues in total, grouped into six broad categories (Impacts on health, amenity and Worcestershire's key economic sectors; Climate change; Sustainable transport; Natural and historic environment; Open and effective engagement; and Other issues). It should be noted that 'Natural and historic environment' category is probably not the most appropriate location for issue (p) on Green Belt. It would also be useful if the MLP clarified how the strategic restoration priorities relate to the cross-cutting policies, especially for those issues which will span both sets of policies.
- 7.15.2 The emphasis is currently on protecting and maintaining quality/resources, and there is scope to include a greater focus on the potential for enhancements, either on or off-site. There is little consideration of biodiversity offsetting (or other forms of offsetting). Issue (i) on soil resources in the list of considerations for cross-cutting restoration policies does recognise the opportunity to upgrade land elsewhere if soil quality cannot be restored on-site. Given the government's stated commitment to offsetting, this could be given greater consideration through the MLP. Worcestershire County Council will be producing a position paper in Winter 2013/14 on the potential for biodiversity offsetting in the county, and the MLP should be informed by its findings.
- 7.15.3 The list of issues includes guidance for how the restoration process itself should be managed, as well as guidance on what the future use of the site needs to take into account.
- 7.15.4 The *landscape* SA objective will be supported through issue (t) on landscape, and issue (c) on visual intrusion. Any landscape considerations should take into account Worcestershire's Landscape Character Assessment (LCA), and should take advantage of the *LCA Supplementary Guidance*. Restoration should seek to go beyond minimising negative impacts, to enhancement of character and quality wherever possible.
- 7.15.5 The range of issues suggested in the MLP should ensure that the *biodiversity, geodiversity, flora and fauna* SA objective is covered comprehensively. The most direct benefits will be provided through issue (n) on protection and enhancement of internationally, nationally and locally designated sites, habitats and species, and issue (q) on geodiversity. The enhancement called for under this SA objective will be delivered through, inter-alia, the call in issue (n) for measures to "*expand existing habitats and enhance linkages to wider habitat networks*". While issues (n) and (q) provide the most direct means of delivering this SA objective, there are other issues that will also make an indirect contribution, including issues (b) on air quality and dust; (i) on soil resources; (o) on ground and surface water resources; and (x) on aviation safety. For issue (x),

much will depend on the specific nature of the proposals, and conflict between this issue and issue (n) must be avoided wherever possible; the need to minimise the risk of bird strikes should not be at the expense of protecting and enhancing sites, habitats and species.

7.15.6 Under the *cultural heritage, architecture and archaeology* SA objective, the historic environment will be preserved and enhanced primarily through the considerations set out in issue (r) on heritage assets and their settings, and in issue (s) on archaeology. Many of the other issues will have a role to play in maintaining local character and distinctiveness, but the most relevant are issues (c) on visual intrusion; (d) on light pollution; (p) on Green belt (one of the five purposes of which is "to preserve the setting and special character of historic towns"); (t) on landscape; and (w) on built development. Resource efficiency will be promoted through issue (k) on maximising use of recycled materials and minimising waste.

7.15.7 The MLP should help to deliver the *material assets* SA objective through requiring agricultural land quality to be preserved through issue (i) on soil resources. Whilst there may be no possibility of using the minerals site for agricultural purposes during its operational lifetime, the issue identifies the need to reinstate soils, and to make provision for upgrading land elsewhere if the original site cannot be restored. Issue (i) could also clarify that staged restoration of agricultural land should be undertaken as soon as possible if this is the best outcome. Efficient use of land and safeguarding of mineral reserves will be furthered by issue (k), which seeks to maximise use of recycled materials, thereby helping to safeguard reserves from unnecessary extraction. The importance of safeguarding land of green belt value is recognised through issue (p). The safeguarding of green infrastructure will be achieved through the consideration of the various elements which collectively make up GI (covered here primarily through issues (c), (n), (o), (q), (r), (s) and (n), but also contributed to through issues (b), (i) and (x)).

7.15.8 The MLP's list of issues recognises each of the considerations within the *natural resources* SA objective, although the focus as currently drafted is on protecting and maintaining quality, and there is less attention on the potential for enhancement.

Water quality will be met in part through the consideration in issue (o) of ground and surface water resources. Issue (i) on soil resources should ensure that the quality of soil at the site is maintained. This issue also recognises the potential of 'offsetting' as a means of ensuring no net loss (and possibly some degree of net gain) where the site's soil cannot be restored to its original quality. The issue could also recognise the degradation that occurs in stored soils over time; simply removing the soil and then replacing once mineral operations are completed is likely to lead to a net loss in soil quality that should be mitigated by positive measures. The value of soil as a carbon sink could also be mentioned here.

Issue (b) on air quality and dust should ensure that air quality is protected, but this should cover not only the immediate impacts in and around

the restored site, but the potential for air quality issues to arise from transport to and from the site, depending on final use.

7.15.9 Whilst there is no single issue here which equates to the SA objective on *climate change*, the wide-ranging nature of the subject means that minerals operations and restoration can impact, and be impacted by, climate change. Many of the issues set out in the MLP will relate to climate change to a greater or lesser extent, but the most direct relationships are with flooding, land stability and transport. Issue (h) on flood risk should ensure that the risk of flooding to the restored site and its occupiers is minimised. There is currently little mention of the potential for the site itself to impact on flooding, but this is covered elsewhere in the restoration chapter, through the strategic restoration priority on flooding. Issue (j) on land stability and subsidence fails to recognise the impact of climate change on land stability. Research undertaken for Worcestershire County Council by Gina Cavan (reproduced in the *Worcestershire Partnership Climate Change Strategy*) has mapped subsidence risk for gleyed and clay soils, and this could be overlain with other data to inform the MLP. Issue (l) on sustainable transportation covers relevant issues, but the assertion that transport issues will be very site specific may underplay the potential impacts on the wider transport network, depending on the end-use of the site. Whilst Worcestershire's sites may not be of a scale or location to become nationally-known tourist attractions, there nevertheless remains the potential for significant visitor numbers to sites that may have traditionally been isolated and seen little traffic apart from that associated with minerals transport.

7.15.10 There are no specific issues relating to the SA objective on *energy*, and it is unlikely that one would be necessary. There are issues, however, which could help determine how any future energy provision on restored sites could be delivered. Issue (c) on visual intrusion will be important in this regard. *Worcestershire Viewpoint* surveys have revealed that the visual impact of renewable energy technologies is a contentious issue with Worcestershire residents. There are numerous examples of successful energy-generating projects in former mineral workings around the country, and such sites often perform well against visual impact criteria because they are well-screened. The issue could also recognise the importance of key viewpoints to and from restored sites. The Malvern Hills AONB Partnership has published guidance on key views in and around the Malvern Hills AONB. Issue (w) on built development will also help shape any energy-related uses on the restored sites; the issue's identification of renewable energy schemes and environmental technologies is welcomed, as this recognises the potential for such development to come forward on restored sites.

7.15.11 Issue (h) on flood risk should ensure that the risk of flooding to the restored site and its occupiers is minimised, and should therefore help to satisfy the SA objective on *flooding*. There is currently little mention of the potential for the site itself to impact on flooding, but this is covered elsewhere in the restoration chapter, through the strategic restoration priority on flooding. Other relevant considerations are set out in issues o (on ground and surface water resources) and w (on built development).

- 7.15.12 None of the issues listed will have a significant direct impact on the SA objective on *access to services*, but issues (f) on public rights of way and (m) on safety of or congestion on transport routes will help to ensure access to services is maintained. Issue (f) in particular makes provision for adding to or enhancing the public rights of way network, which is welcomed.
- 7.15.13 There is no specific issue equating to the SA objective on *health*, but many of the issues will directly or indirectly help to ensure that health is safeguarded. Actively improving the health and wellbeing of the population may be beyond the scope of the restoration policies, but this is a possibility in the longer term if a net improvement in access and recreation opportunities is made. Issue (f) on public rights of way should foster such an approach. Issue (a) on noise and vibration should prevent those living and working in the vicinity of restored sites from suffering undue noise nuisance. It is important not to consider noise in the context of the former mineral working (which could involve intermittent noisy activities as part of a temporary planning permission), but in the context of the surrounding environment prior to development having occurred. Issue (b) on air quality and dust should minimise the potential for health hazards arising from excessive dust inhalation. Those living or working in the vicinity of restored sites should not suffer health disadvantages compared to the wider population. Issues (d) on light pollution and (e) on odour will have less direct impacts on health, but should nevertheless help to maintain quality of life.
- 7.15.14 The SA objective on *waste* will be contributed to through issue (k) on maximising use of recycled materials and minimising waste, which makes provision for the re-use of on-site waste materials.
- 7.15.15 Issues (l) on sustainable transportation and (m) on safety of or congestion on transport routes will help to deliver the SA objective on *traffic and transport*. The current focus is on managing, rather than reducing, the need to travel, although the location of minerals sites, means they are often not well-connected to population centres other than by private vehicles.
- 7.15.16 No specific issues in the overarching restoration section will directly contribute to meeting the SA objective on *growth with prosperity for all*. There may be scope to include economic development in the issues to be considered in restoration.
- 7.15.17 No specific issues have been identified as contributing directly to meeting the SA objective on *provision of housing*. Issue (w) on built development does not expressly mention housing as a potential use for restored sites, but this is an option which cannot be discounted. Much will depend on the location, and the nature of the restoration, including the type of any fill material and ground conditions.
- 7.15.18 Issues (u) on pre-application discussion and (v) on community liaison groups provide positive means of delivering against the *participation by all* SA objective, although the current wording is of encouragement, rather than requiring

opportunities for participation by all. The MLP could consider a stronger stance through the restoration policies.

7.15.19 No specific issues have been identified that will directly contribute to meeting the *technology, innovation and inward investment* SA objective, although issue (w) on built development does recognise that proposals for renewable energy schemes and environmental technologies may come forward on former minerals sites. No active encouragement for any particular type of development is proposed, and the MLP recognises that it will be the respective district, city or borough council which would approve most developments in accordance with their Local Plan and LDF policies.

7.15.20 No specific issues that will contribute to either the *population (skills and education)* or the *population (crime & fear of crime)* SA objectives have been identified.

7.15.21 Finally, the appropriateness of issues (y) and (z) (phasing and aftercare, respectively) appearing alongside the other issues must be considered. While the other issues are all topic-specific, (y) and (z) are more concerned with process and their inclusion here seems incongruous.

7.16 MLP Second Consultation Document, Section 13: How will we safeguard minerals for future use?

7.16.1 The aim of safeguarding is to ensure that resources are protected for the longer term. Safeguarded areas should therefore be sufficiently robust to last beyond the plan period, through being 'carried forward' through subsequent Minerals Local Plans. Resource areas currently considered unviable and therefore discounted from inclusion in this MLP may not necessarily be unviable in future; factors shaping the areas of search - such as the scale and location of future development set out in district-level Local Plans and LDFs - will change over time.

7.16.2 The MLP must strike the right balance between protecting resources and unnecessarily preventing/disrupting development. The sustainability impacts of the different approaches are difficult to predict, as the exact impacts will vary depending on the location of the resource and the type of development proposed. The MLP should provide further information on what the safeguarding policies will mean for prospective developers, and whether any or all of the Minerals Consultation Areas deriving from the safeguarded areas will include buffer zones. The mechanism for including minerals consultation areas in Local Plans is unclear, and there is a risk that, if inclusion cannot be made until the time of each Local Plan review, there will be a period in which the areas are not recognised.

Environmental impacts

7.16.3 Preventing development in some areas may help to safeguard the environment, but as the location of mineral deposits is not necessarily indicative of high environmental quality, such safeguarding could direct development to non-safeguarded land of a higher environmental quality.

Economic impacts

7.16.4 In the short term, the economic impacts of safeguarding will generally be negative, as the policies will prevent or inconvenience development that could bring jobs and growth, or support such jobs and growth elsewhere in the county. In the longer term, however, the value of having protected resources would be felt, as future mineral supplies will continue to be available locally; if resources are sterilised by development then economic growth could be hampered.

Social impacts

7.16.5 The social impacts of the policies could vary. Much-needed social development such as housing or health facilities could be compromised by safeguarding, but conversely valuable social resources such as public rights of way or green open spaces could be safeguarded alongside the mineral deposits beneath.

➤ Building Stone

7.16.6 The proposed approach of the MLP is to safeguard those quarries identified in English Heritage's *Strategic Stone Study*. This study appears to provide comprehensive coverage of Worcestershire, but it is important to ensure local expertise (such as the Herefordshire and Worcestershire Earth Heritage Trust and local civic/amenity groups) is sought to confirm that all relevant assets which contribute to Worcestershire's distinctiveness are identified.

7.16.7 The MLP states that some building stone in Worcestershire has been identified as being of local importance, but does not explain why, or why none of the stone is of national importance.

➤ Industrial minerals: clay

7.16.8 The MLP presents two options for safeguarding mercia mudstone for brick clay. Option A is to safeguard all the known resource (covering a very extensive area of the county). Option B is to not safeguard any of the resource (as there is insufficient detail to identify which parts of the resource are important). The MLP supports Option A in what amounts to a precautionary approach. It would not be appropriate to consider these options through the SA matrix, as they are not relevant to most of the SA objectives. However, the SA can make broad comments on their respective sustainability impacts. The proposed policy approach would potentially hinder economic and social development in urban and rural areas, including areas which need to accommodate significant housing and employment growth such as Worcester, Redditch and Malvern. Whilst identification as a safeguarded area does not preclude development, it could have financial and time implications for developers, and the process requirements would rely upon sufficient capacity being available within the minerals LPA to ensure that any proposal could be assessed. The MLP states that Option A "*would enable the council to require further information*", but further explanation is needed on what this would mean. Given the stated landbank of clay already available, safeguarding the entire resource – including that beneath the urban areas and known areas for development – may be excessive. A more refined, proportionate approach could remove from safeguarding those areas which can reasonably be judged to be technically and/or commercially unviable, or which fall within existing or proposed development land.

➤ Industrial minerals: silica sand

7.16.9 The MLP includes conflicting proposals on the approach to silica sand. Whilst stating that it will be safeguarded through being part of wider safeguarded solid sand deposits, it also states that it will not be safeguarded for a specific purpose. It may not be appropriate for the MLP to seek to limit safeguarding of a mineral resource based on speculation on the end-use of that resource. The NPPF identifies silica sand as a mineral of local and national importance and without clear evidence to the contrary, the arguments for not safeguarding it are unclear. It seems that the logic applied later in the MLP in relation to aggregates (that identifying large areas would "*remove the risk of assumptions about the viability*

of resources, which may change in the future") would apply equally to silica sand. The MLP should clarify whether the silica sand within solid sand deposits can be identified as a separate resource.

- Energy minerals: coal

7.16.10 The MLP proposes safeguarding all known coal resources, which are found only in the north-west of the county. Given the historic pattern of coal mining in this area, and the relative lack of significant urban areas and future development areas in the vicinity, such an approach is unlikely to interfere with economic and/or social development to a significant degree.

- Energy minerals: oil and shale gas

7.16.11 Due to insufficient evidence of their existence, the MLP does not propose that these resources are safeguarded. Unless further research or new sources of evidence emerge, it is unlikely that any other approach could be justified.

- Aggregates

7.16.12 The MLP sets out three options for the safeguarding of aggregates. Option A is to identify all aggregate resources shown on BGS digital maps as safeguarding areas; Option B is to identify all aggregate resources above 10ha in size and 200m in width as safeguarding areas; and Option C is to identify those aggregate resource areas assessed as 'key' or 'significant' in the "Analysis of Mineral Resources in Worcestershire" as safeguarding areas.

7.16.13 Option C would link the safeguarding areas with the 'key' resources (estimated resource of over 2,000,000 tonnes) and 'significant' resources (estimated at 600,000-2,000,000 tonnes, and/or 51ha and above) identified through the MLP's resource assessment. For aggregate minerals, only sites falling within an area of search will be considered to be within an appropriate location, and so an argument could be made that these areas should form the starting point when considering safeguarding. The current Options fall short of this, but do not state the reasons why.

7.17 Ensuring resources are not needlessly sterilised through the use of Mineral Consultation Areas and the prior extraction of minerals

7.17.1 Whilst it is stated that "*we propose to use Mineral Safeguarding Areas to form Minerals Consultation Areas*", it is not completely clear whether these areas are the same, or whether some other factors are to be applied in informing Minerals Consultation Areas. If the terms are interchangeable, this should be made clear.

7.17.2 Caution may be needed if "*temporary development*" is to be included in the circumstances where consultation would not be expected; some temporary development can have lengthy permissions and cover large areas of ground. Wind farms, for example, may be granted 25 year permissions, and although the turbine structures and associated infrastructure occupy a relatively small footprint within what can be a huge overall area, minerals development could well be restricted over and beyond the entire site.

➤ Potential alternatives

7.17.3 A more onerous approach could require the extraction of resources before development (of any scale) takes places. This would be unreasonably onerous on developers and could potentially hinder the realisation of economic, social and environmental benefits. It would also create administrative burdens on both the county and district councils through unnecessary consultation and analysis.

7.17.4 Deriving the threshold for 'major development' from the definition in the Town and Country Planning (Development Management Procedure) (England) Order 2010 could be a reasonable approach.

7.17.5 The proposed approach to safeguarding 'appropriate infrastructure' in Table 27 (p120) states that wharfages at "*satellite sites*" which have been fully worked will not be safeguarded. This approach should be carefully considered to ensure that the wharfage could not provide a more sustainable transport solution for other current or potential future minerals sites.

Appendix 1:

SEA Directive requirements and where they have been met

SEA Directive Requirements	Location in this SA Report (or Scoping Report, where relevant)
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes.	Sections 2.1, 3.1, and 3.2
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Sections 1.4 and 4.1 SA Scoping Report
c) The environmental characteristics of areas likely to be significantly affected.	Sections 1.4 and 4.1 SA Scoping Report
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Sections 1.4 and 4.1 SA Scoping Report
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation.	SA Scoping Report
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Section 7 Appendix Two
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Section 7 Appendix Two
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Sections 1.7, 6.3, 7.5, 7.8, 7.11, 7.13, and 7.17
i) a description of measures envisaged concerning monitoring in accordance with Art. 10.	Section 1.8
j) a non-technical summary of the information provided under the above headings.	Sections 1.1 - 1.9

Appendix 2:

Sustainability Appraisal Matrices

Appendix 1a: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft VISION

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	Whilst there is no explicit mention of landscape – just “local features and characteristics”, landscape is an integral component of the GI approach which the Vision advocates.
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	++	The green infrastructure-led Vision for restoration should secure positive impacts for biodiversity, flora and fauna. However, this is referred to only in terms of restoration, rather than site identification/operation, The Vision should also specifically mention geodiversity, given the crucial role of the MLP in protecting existing (and guiding provision of new) geodiversity features of cultural and scientific value.
<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	++	The Vision’s commitment to ensuring local building stone is available will help to ensure Worcestershire’s historic built environment can be conserved and enhanced. Furthermore, it recognises the "value of local features and characteristics". A slight strengthening could be achieved through amending “the integrity of the environment” to “the integrity of the built and natural environment”.
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	++	Provision is made for the safeguarding of minerals for future use. Use of secondary and recycled materials should be “ <i>maximised</i> ” rather than just “ <i>encouraged</i> ”, as the MLP itself proposes in Section 10 ‘How will minerals be worked?’

5: Natural Resources Protect and enhance water, soil and air quality.	+/?	The issues covered by SA Objective 5 are covered in a generic sense by the wider concepts of “environment”, but are not explicitly recognised.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	?	The Vision refers to general sustainable development aims, but does not explicitly recognise the need to mitigate and adapt to climate change and to reduce energy and water consumption through lower-impact practices. The Spatial Portrait refers to climate change being “of particular concern in the county”, and this failure to refer to it in the Vision would be an omission.
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	0	The Vision does not explicitly recognise the need to reduce energy consumption in what is a very energy-intensive industry. The Vision should include energy reduction.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0	Flooding is not specifically included in the Vision. Whilst the Spatial Portrait confirms flooding is an issue of particular concern, the special nature of minerals workings in relation to flood risk (being classed as either ‘water-compatible’ or ‘less vulnerable’) means that it does not need to be specifically referenced here.
9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	This is not reflected in the Vision. Whilst minerals are essential for the building of all the essential and non-essential services people need, there is at best only a limited direct role in meeting this SA objective. It is, on balance, not considered necessary for an additional reference in the Vision.
10: Health Improve the health and well-being of the population and reduce inequalities in health.	+	The Vision envisages mineral workings/locations which take account of “the health and amenity of local people”. Health and recreation are also key components of Green Infrastructure, and as such will be considered in future restoration under the Vision’s GI-led approach.
11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	++	In seeking to identify the required tonnages of minerals required over the lifetime of the Plan, the Vision accords with the waste hierarchy, as this will reduce the need for minerals through over-provision. Furthermore, the hierarchy is reinforced through encouraging the use of secondary and recycled materials (although there is the potential to strengthen

		performance against this objective by maximising- rather than just encouraging - such use).
12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.	?	There is no mention of transport in the Vision. The impact of HGV movements associated with minerals operations can be considerable, and the Vision could include reference to the need to reduce the need for transport and to maximise the use of sustainable transport.
13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	The Vision places prominent emphasis on the need to provide minerals “to support a sustainable economy”.
14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	+	The Vision does not directly refer to housing. It should be recognised that the purpose of providing minerals is not simply (as currently set out in the Vision) to support the economy and to maintain distinctiveness; there is a valuable social role to play in ensuring that fundamental needs are met. Indeed, the NPPF (paragraph 142) states that “Minerals are essential to support sustainable economic growth <u>and our quality of life</u> ” (emphasis added). It is therefore suggested that the current wording of the Vision is amended, to add “and to provide for development necessary to support quality of life” after “In order to support a sustainable economy...”
15: Participation by all 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.	+	The Vision calls for minerals to be worked and located “in a socially ... sustainable way that takes account of the ... amenity of local people”. It is not considered necessary to specifically refer to local involvement in the process.
16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	+	The vision could strengthen the need for minerals operations, including transport, to be as sustainable and low-impact as possible through exploiting the best technologies.
17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	The Vision will not significantly help to deliver this SA objective, but this is not considered a weakness of the draft MLP, as the relationship here is too incidental.

18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	The Vision will not significantly help to deliver this SA objective, but this is not considered a weakness of the draft MLP, as the relationship here is too incidental.
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Appendix 1b: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft OBJECTIVES

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
1: Landscape Safeguard and strengthen landscape character and quality.	+	The issues covered by SA Objective 1 are covered in a generic sense by the wider concepts of "the natural and historic environment" in draft MLP Objective 6, but are not explicitly recognised. The inclusion of enhancement as well as protection is welcomed, as this stresses the need to seek net benefit rather than just mitigating harm.
2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.	+	The issues covered by SA Objective 2 are covered in a generic sense by the wider concepts of "the natural and historic environment" in draft MLP Objective 6, but are not explicitly recognised. The inclusion of enhancement as well as protection is welcomed, as this stresses the need to seek net benefit rather than just mitigating harm.
3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.	+	The issues covered by SA Objective 3 are covered in a generic sense by the wider concepts of "the natural and historic environment" in draft MLP Objective 6, but are not explicitly recognised. The inclusion of enhancement as well as protection is welcomed, as this stresses the need to seek net benefit rather than just mitigating harm.
4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.	-	This SA Objective is unlikely to be fully accounted for through draft MLP Objective 6, as although the "natural and historic environment" includes green infrastructure, the other issues are not necessarily covered. There is the potential for some degree of conflict between this SA Objective and draft MLP Objectives 1 and 2, as ensuring adequate supply could require development on agricultural or green belt land or open space. The draft MLP Objectives should seek efficiency of land and to minimise use of

		such land for development.
5: Natural Resources Protect and enhance water, soil and air quality.	+	The issues covered by SA Objective 5 are covered in a generic sense by the wider concepts of "the natural and historic environment" in draft MLP Objective 6, but are not explicitly recognised. The inclusion of enhancement as well as protection is welcomed, as this stresses the need to seek net benefit rather than just mitigating harm.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	++	Strong support is provided for this SA Objective through the inclusion of two draft MLP Objectives (4 and 5) which cover both mitigation and adaptation at both the operational and restoration stages of minerals development.
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	+	There are no draft MLP Objectives which explicitly mention energy, but draft Objective 4 should help to ensure that mineral operations maximise renewable/low-carbon energy. There is no MLP Objective which expressly covers resource efficiency.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	0/+	There are no draft MLP Objectives which explicitly mention flooding, but draft MLP Objectives 4 and 5 on climate change should help to ensure that the flood risk to minerals operations (and arising from them) is minimised. However, none of the draft MLP Objectives refers to the appropriate location of mineral operations.
9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	Whilst the draft MLP Objectives will not significantly help to deliver this SA objective, this is not considered a weakness of the draft MLP, as the relationship here is too incidental.
10: Health Improve the health and well-being of the population and reduce inequalities in health.	0	Whilst the draft MLP Objectives will not significantly help to deliver this SA objective, this is not considered a weakness of the draft MLP, as the relationship here is too incidental.
11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	There is no draft MLP Objective which expressly covers efficiency (of resources/land), and none of the draft Objectives will encourage the waste hierarchy, but there is nothing to expressly conflict with it.

<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	?	<p>There is no mention of transport in the draft MLP Objectives, although it could be considered a component of the climate change and environmental protection objectives. The impact of HGV movements associated with minerals operations can be considerable, and the MLP Objectives could include reference to the need to maximise the use of sustainable transport.</p>
<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	+	<p>Draft MLP Objective 3 – ‘Protect and enhance Worcestershire’s key economic sectors’ – may be overly-focussed on those sectors identified by the LEP. The value of employment opportunities afforded by minerals growth that do not fall within these categories should not be overlooked.</p>
<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	+	<p>Ensuring an adequate and long-term supply of minerals (Draft MLP Objectives 1 and 2) will help to ensure the county’s housing growth can be delivered where and when required.</p>
<p>15: Participation by all 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.</p>	++	<p>Draft MLP Objective 8 – ‘Involve all those affected as openly and effectively as possible’ - specifically supports this SA objective.</p>
<p>16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.</p>	+	<p>Notwithstanding the commentary for SA Objective 13 above, Draft MLP Objective 3 – ‘Protect and enhance Worcestershire’s key economic sectors’ – directly supports this SA Objective; the sectors include cyber security and defence, and environmental technology.</p>
<p>17: Population (skills and education) Raise the skills levels and qualifications of the workforce.</p>	0	<p>The draft MLP Objectives will not significantly help to deliver this SA objective, but this is not considered a weakness of the draft MLP, as the relationship here is too incidental.</p>
<p>18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.</p>	0	<p>The draft MLP Objectives will not significantly help to deliver this SA objective, but this is not considered a weakness of the draft MLP, as the relationship here is too incidental.</p>

Appendix 1c: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft PROVISION OF AGGREGATES (OPTION A)

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	-/?	Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, which could compromise landscape character and quality. It is recognised that Option A could actually over-provide slightly for sand & gravel, and may therefore lead to slightly greater impacts than are necessary.
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	-/?	Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, which could compromise biodiversity, geodiversity, flora and fauna. It is recognised that Option A could actually over-provide slightly for sand & gravel, and may therefore lead to slightly greater impacts than are necessary. Geodiversity could potentially see benefits from increased levels of mineral working where other receptors would see negative impacts, as there could be additional exposures. Conversely, however, the greater level of minerals development could mean greater destruction of valuable geodiversity assets if not approached with due consideration.
<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	-/?	Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, which could compromise cultural heritage, architecture and archaeology. It is recognised that Option A could actually over-

		provide slightly for sand & gravel, and may therefore lead to slightly greater impacts than are necessary. Whilst the provision of sufficient minerals will help ensure that high-quality development can be delivered in the county, the maintenance of local character and distinctiveness is likely to rely more upon building stone, which is not provided for in this proposed aggregates policy.
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	-/?	Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, which could lead to greater loss of agricultural land and development in the green belt. Option A could actually over-provide slightly for sand & gravel, and may therefore lead to slightly greater impacts than are necessary.
<p>5: Natural Resources Protect and enhance water, soil and air quality.</p>	-/?	Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, which could lead to greater negative impacts on water, soil and air quality. Option A could actually over-provide slightly for sand & gravel, and may therefore lead to slightly greater impacts than are necessary.
<p>6: Climate Change Reduce causes of and adapt to the impacts of climate change.</p>	-/?	Minerals development is carbon-intensive, and the extraction, processing and transport of minerals should ideally be kept to the minimum necessary to avoid excess emissions. Option A could actually over-provide slightly for sand & gravel, and may therefore lead to slightly greater climate change impacts than are necessary.
<p>7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.</p>	?	The highest provision of minerals could offer the greatest potential to embrace renewable energy, including through the restored sites, purely from an increased likelihood of large areas of land being available. During operational phases, there are no identified sustainability implications arising for this objective.

<p>8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.</p>	-/?	<p>There may be some flooding benefits arising from restored sites, as they can provide water storage and aid flows. But a greater level of minerals provision could potentially increase the likelihood of minerals development being located in flood-risk areas. The NPPF confirms that minerals development can be "water compatible" (sand and gravel) or "less vulnerable" (other minerals), but this does not mean that flood risk is not a major consideration. Option A could actually over-provide slightly for sand & gravel, which is generally found along flood-prone river corridors, and may therefore lead to slightly greater risk of fluvial flooding than is necessary.</p>
<p>9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.</p>	0	<p>No significant sustainability implications arising from Option A have been identified.</p>
<p>10: Health Improve the health and well-being of the population and reduce inequalities in health.</p>	0	<p>No significant sustainability implications arising from Option A have been identified, although there could be more instances of localised dust and noise emissions from minerals operations and transport. Such impacts should be minimised by other MLP policies.</p>
<p>11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.</p>	-/0	<p>No significant sustainability implications arising from Option A have been identified, but there could be some minor negative impacts by the minor over-provision of sand and gravel, as this could compromise the waste hierarchy through discouraging more efficient use of existing materials.</p>
<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	-/?	<p>Option A requires the greatest provision of minerals. This would almost certainly lead to more (and possibly bigger) developments and associated infrastructure, and would generate an increased number of HGV movements. Whilst sustainable transport would be promoted, the opportunities (given Worcestershire's distribution of minerals in relation to railheads and water accesses) are unlikely to prevent additional traffic. It is recognised that Option A could actually over-provide slightly for sand</p>

		& gravel, and may therefore lead to slightly greater traffic impacts than are necessary.
13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	Option A will ensure that there are sufficient minerals available to allow for the development needed for economic growth. A failure to provide sufficient resources could compromise delivery of economic development and push investment out of the county.
14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	+	Option A will ensure that there are sufficient minerals available to allow for house-building in the county. A failure to provide sufficient resources could compromise delivery of housing and lead to worsening affordability.
15: Participation by all 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.	0	No significant sustainability implications arising from Option A have been identified.
16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	No significant sustainability implications arising from Option A have been identified.
17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	No significant sustainability implications arising from Option A have been identified.
18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	No significant sustainability implications arising from Option A have been identified.

Appendix 1d: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft PROVISION OF AGGREGATES (OPTION B)

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
1: Landscape Safeguard and strengthen landscape character and quality.	+/?	Option B is likely to be an under-provision that would lead to lower levels of minerals development and, by extension, a lower risk of negative impacts on landscape character and quality being realised.
2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.	+/?	Option B is likely to be an under-provision that would lead to lower levels of minerals development and, by extension, a lower risk of negative impacts on biodiversity, geodiversity, flora and fauna being realised.
3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.	+/?	Option B is likely to be an under-provision that would lead to lower levels of minerals development and, by extension, a lower risk of negative impacts on cultural heritage, architecture and archaeology being realised.
4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.	+/?	Option B is likely to be an under-provision that would lead to lower levels of minerals development and, by extension, a lower risk of negative impacts on agricultural land and green belt being realised.
5: Natural Resources Protect and enhance water, soil and air quality.	+/?	Option B is likely to be an under-provision that would lead to lower levels of minerals development and, by extension, a lower risk of negative impacts on water, soil and air quality being realised.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	+/?	A lower provision of minerals will necessitate a lower level of development, and a consequent reduction in carbon emissions from minerals operations, transport and associated processes.

<p>7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.</p>	?	No significant sustainability implications have been identified in relation to this objective. A lower provision of minerals is likely to lead to fewer opportunities to install renewable energy as part of site restoration. During operational phases, there are no identified sustainability implications arising for this objective.
<p>8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.</p>	+	A lower provision of minerals is likely to lessen the risk of development taking place in flood-prone areas (or worsening flood risk elsewhere).
<p>9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>10: Health Improve the health and well-being of the population and reduce inequalities in health.</p>	0	No significant sustainability implications have been identified, although there are likely to be lower levels of localised dust and noise emissions arising from a lower provision of minerals.
<p>11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.</p>	+/?	No significant sustainability implications arising from Option B have been identified, but there could be some minor positive impacts arising from a lower provision, as this may restrict supply and lead to a greater focus on recycling and re-use of minerals, thereby supporting the waste hierarchy.
<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	+/?	The reduced provision under Option B would potentially lead to a reduced need for transport movements (predominantly HGV movements).
<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	0	No significant sustainability implications arising from Option B have been identified.

<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	-	A failure to adequately provide for the required level of minerals could lead to shortages which prevent the construction of homes, including much-needed affordable housing. Increased construction costs, due to a lack of available materials, could also have consequences for housing delivery and ultimately affordability.
<p>15: Participation by all 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.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>17: Population (skills and education) Raise the skills levels and qualifications of the workforce.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.</p>	0	No significant sustainability implications arising from Option B have been identified.

Appendix 1e: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft PROVISION OF AGGREGATES (OPTION C)

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
1: Landscape Safeguard and strengthen landscape character and quality.	+/?	Although only a minimum, the levels set out in Option C would be a significant under-provision. If this level was followed, the consequent need for minerals extraction would be reduced, and the impact on landscape character and quality would similarly be minimised (fewer, smaller sites will – in very general terms – equate to less environmental risk).
2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.	+/?	Option C is almost certainly a significant under-provision that would lead to less minerals development and, by extension, a lower risk of negative impacts on biodiversity, geodiversity, flora and fauna.
3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.	+/?	Option C is almost certainly a significant under-provision that would lead to less minerals development and, by extension, a lower risk of negative impacts on cultural heritage, architecture and archaeology.
4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.	+/?	Option C is almost certainly a significant under-provision that would lead to less minerals development and, by extension, a lower risk of negative impacts on agricultural land and green belt. Pressure on the green belt will be greatest where a lack of alternative land is available to meet identified need, meaning that a lower identified need should reduce pressure to identify green belt land.
5: Natural Resources Protect and enhance water, soil and air quality.	+/?	Option C is almost certainly a significant under-provision that would lead to less minerals development and, by extension, a lower risk of negative impacts on water, soil and air quality.

6: Climate Change Reduce causes of and adapt to the impacts of climate change.	+/?	A lower provision of minerals will necessitate a lower level of development, and a consequent reduction in carbon emissions from minerals operations, transport and associated processes.
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	?	No significant sustainability implications have been identified in relation to this objective. A lower provision of minerals is likely to lead to fewer opportunities to install renewable energy as part of site restoration. During operational phases, there are no identified sustainability implications arising for this objective.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	+	A lower provision of minerals is likely to lessen the risk of development taking place in flood-prone areas (or worsening flood risk elsewhere).
9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	No significant sustainability implications arising from Option B have been identified.
10: Health Improve the health and well-being of the population and reduce inequalities in health.	+	No significant sustainability implications have been identified, although there are likely to be lower levels of localised dust and noise emissions arising from a lower provision of minerals.
11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+/?	No significant sustainability implications arising from Option C have been identified, but there could be some positive impacts arising from a lower provision, as this may restrict supply and lead to a greater focus on recycling and re-use of minerals, thereby supporting the waste hierarchy. As the levels are minima, however, any under-provision could potentially be met through increased development of new resources beyond this level.
12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.	+/?	The reduced provision under Option C would potentially lead to a reduced need for transport movements (predominantly HGV movements).

<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	-/?	No significant sustainability implications arising from Option B have been identified, although a failure to adequately provide for the required level of minerals could lead to shortages which prevent development needed to ensure economic development, such as business parks and factories. But as the level in Option C is only a minimum, further extraction could be provided for if necessary.
<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	-/?	A failure to adequately provide for the required level of minerals could lead to shortages which prevent the construction of homes, including much-needed affordable housing. But as the level in Option C is only a minimum, further extraction could be provided for if necessary.
<p>15: Participation by all 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.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>17: Population (skills and education) Raise the skills levels and qualifications of the workforce.</p>	0	No significant sustainability implications arising from Option B have been identified.
<p>18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.</p>	0	No significant sustainability implications arising from Option B have been identified.

Appendix 1f: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft HOW WILL MINERALS BE WORKED?

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	<p>Issues (e) and (bb) should help to ensure that landscape character and quality is safeguarded and strengthened, but there are further considerations which should be addressed to ensure that negative impacts are minimised.</p> <p>Issue (e) on visual intrusion needs to recognise not only those impacts arising from the site, but also impacts arising from transport (access roads, etc.) and associated infrastructure.</p> <p>Issue (bb) on landscape should recognise that AONBs will be a factor not only in working practices and site design, but more fundamentally in the consideration of whether development of the scale and nature proposed is appropriate in a location within or affecting an AONB. The issues here could also refer to the importance of key viewpoints. The Malvern Hills AONB Partnership, for example, has published guidance on key views to and from the Hills.</p>
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	+/?	<p>Issues (u), (v), (w), (x) and (y) provide a generally comprehensive range of issues which should ensure biodiversity, geodiversity, flora and fauna are taken into account. However, the overriding emphasis in the issues is on 'conserving' assets, rather than 'enhancing' them as part of a GI network. The commitment to "protect or record" geological features in issue (u) fails to convey the potential to create and maintain new features which could be revealed through minerals workings.</p> <p>Similarly, issues (v) and (w) on European sites and international sites,</p>

		<p>respectively, focus more on the obstacles of legal obligations, rather than taking a positive approach in line with the green infrastructure approach of the Vision.</p> <p>The issues could consider the potential of biodiversity offsetting. Although government proposals on this are still at an early stage, it could potentially have a role to play in minerals site development and should be included in the MLP.</p>
<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	<p>+</p>	<p>Issue (aa) on archaeology could usefully include the same focus on significance that is found in issue (z). It is noted that issue (z) makes provision for World Heritage Sites, of which there are none in Worcestershire, but it is accepted that future designation of suites within the county is a possibility.</p> <p>Resource efficiency is considered in issue (a) (which makes a necessary link to the Waste Core Strategy), and in issues (l) and (m).</p> <p>Distinctiveness is also promoted within AONBs, so issue (bb) also has a role to play in delivering this SA objective in those parts of the county within the Cotswolds and Malvern Hills AONBs.</p> <p>Issue (s) on Green belt can also play a role in maintaining Worcestershire's local character and distinctiveness, as one of the five purposes of the green belt is "to preserve the setting and special character of historic towns".</p> <p>The issues could also seek to highlight particular Worcestershire characteristics/features that give the county its distinctiveness, some of which are already discussed under the Spatial Portrait.</p>
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	<p>+</p>	<p>This objective will generally be delivered through issues (a), (b), (q) and (s). The cross-referencing to the Waste Core Strategy in issue (a) is welcomed.</p> <p>It is also worth noting (linking to issue (z) on heritage assets and their settings), that the provision of minerals - including building stone - for the repair of historic buildings can help bring under-utilised assets back into</p>

		use. It is notable from the issues that whilst the individual components of green infrastructure are covered, the holistic consideration of GI, including as a positive enabler, could be strengthened.
5: Natural Resources Protect and enhance water, soil and air quality.	+	Issues (d), (l), (q), and (t) cover the requirements of this SA objective. Transport will also be key factor in how far this objective is met (especially air quality) and so issue (j) is also relevant.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	+	The MLP does not propose a separate climate change issue in its own right. This decision seems appropriate, as the cross-cutting nature of climate change means that it will affect – and will be affected by – a wide range of issues. There is a risk of duplication if climate change is identified as a standalone issue, as it is through the other issues that mitigation and adaptation will be realised. The key issues which will help to deliver this objective are (j), (l), (m), (n), (o), (p) and (r).
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	+	Issues (m), (n), and (o) consider energy efficiency and the use of and generation of renewable energy. Issue (o) should provide greater ambition; there is more scope to deliver renewable energy than simply building-mounted solutions. Restoration of minerals sites can provide an ideal location for large-scale installations.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	+	Issue (p) identifies the relevant flood risk considerations that will need to be taken into account. It is not only the impact of flooding on minerals sites that needs to be properly scoped, but also the potential impact of minerals sites on flooding elsewhere. Issue (p) recognises this.
9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.	0	None of the issues identified in the MLP will directly contribute to meeting this objective.
10: Health Improve the health and well-being of the population and reduce inequalities	+/0	Site location and conditions imposed on minerals operations should prevent any negative health impacts arising. The risk of physical or

in health.		mental health being compromised through excessive noise, light pollution, odour, or reduced air quality should be minimised through the considerations in issues (c), (d), (f), and (g).
11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	+	Issue (a) states that future policies will seek to maximise recycled and secondary aggregates. It is unclear whether the MLP is the appropriate place to enable waste management facilities associated with operational mineral workings, as waste developments are covered by the Waste Core Strategy. The issues do not mention the potential of landfill to play a part in restoration proposals. Although a requirement for additional landfill capacity is not anticipated in the WCS, this could depend upon future waste management policy. Enabling added-value processing plants in issue (b) would be a valuable way of ensuring resource efficiency. Issue (p) also states that waste will need to be stored outside areas of flood risk.
12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.	+	The MLP will help ensure this objective is met through issues (i), (j), and (k). Issue (j) on Sustainable transportation states that "the issues will be very site specific", but this may not necessarily be the case; depending on the scale of operations, the potential transport issues could be significant.
13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	0	There are no issues which specifically relate to this objective, but collectively the issues will provide a framework for the winning of minerals which will contribute to local and national economic growth.
14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	There are no issues which specifically relate to this objective, but the provision of minerals will allow for necessary construction to foster economic and social development, including house-building.
15: Participation by all 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.	+/?	Issues (cc) and (dd) specifically recognise the role of communities in influencing proposals and helping to shape operation and restoration of minerals sites. However, the current issues only refer to such community engagement being "encouraged", which may not be strong enough to

		provide the levels of participation envisaged in the SA objective.
16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	+	The MLP issues, in particular (l), (m), (n) and (o), should help to ensure that high-value, low-impact technologies are promoted and supported. As detailed under objective 7 above, minerals sites offer scope for renewable energy generation as part of restoration, as well as during their operational phase.
17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	None of the issues identified in the MLP will directly contribute to meeting this objective.
18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	None of the issues identified in the MLP will directly contribute to meeting this objective.

Appendix 1g: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft ISSUES TO BE ADDRESSED BY THE SITE-SPECIFIC LOCATION POLICIES

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	<p>This objective will be met primarily through the considerations in issue (o) on Landscape character and quality and issue (p) on Areas of Outstanding Natural Beauty. However, while issue (o) seeks to safeguard landscape character and quality, no attention has been paid to the potential for enhancement. Consideration should be given to the long-term landscape impact, including improvement, arising from mineral development.</p> <p>Other issues will also help ensure the objective is met, including issues e (Amenity along transport routes), and t (Green belt).</p>
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	+	<p>The conservation part of this SA objective is well covered through the geological and nature conservation issues (namely issues j (Geological sites), k (European sites of nature conservation importance), l (Internationally identified habitats and species), m (Nationally identified habitats, species and nature conservation sites) and n (Locally identified habitats, species and nature conservation sites)). Issue (i) on water quality and quantity will also play a role in delivering this objective.</p> <p>With the exception of the geodiversity issue, there is less of a focus on enhancement, and there is scope to include more on the positive opportunities arising from minerals sites in both the short and long-term (post-restoration).</p>

<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	<p>+</p>	<p>The preservation aspect of this SA objective should be ensured through issues q (Heritage assets and their settings), r (Conservation Areas), s (Archaeology) and t (Green belt). With the exception of a small part of the archaeology issue, enhancement of cultural heritage, architecture and archaeology is absent.</p> <p>Local character and distinctiveness comes not only from the built environment, but is a product of the whole range of natural and social aspects. Many of the other issues therefore play a contributory role in maintaining Worcestershire's unique character, including those relating to biodiversity, geodiversity and landscape.</p>
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	<p>+</p>	<p>This objective will be met primarily through issues h (Soil resources) and t (Green belt). Green infrastructure will be safeguarded through the issues covering each of its component parts, namely issues j (Geological sites), k (European sites of nature conservation importance); l (Internationally identified habitats and species); m (Nationally identified habitats, species and nature conservation sites); n (Nationally identified habitats, species and nature conservation sites); o (Landscape character and quality); q (Heritage assets and their settings); r (Conservation Areas); and s (Archaeology).</p>
<p>5: Natural Resources Protect and enhance water, soil and air quality.</p>	<p>+</p>	<p>The water element of this objective will be satisfied in part through issue (i) on water quality and quantity, although enhancement is not considered here.</p> <p>The soil element will be satisfied in part through issue (h) on soil resources, although again there is no attention paid to enhancement opportunities here.</p> <p>None of the issues specifically consider air quality, but this will largely be governed by the operational policies, rather than those guiding site locations. There are linkages, however, through issue (a) on Connectivity to the strategic transport network, which should help to reduce emissions from road transport. Issue (k) on European sites of</p>

		<p>nature conservation importance will also be important in helping to meet this objective, as this will prevent site development "in locations that are likely to have a significant effect on European sites". The <i>Habitats Regulations Assessment Scoping Report</i> prepared to support the MLP identifies five European sites in and around Worcestershire for which a key site sensitivity is air quality. The report identifies a potential risk to these sites arising from a breach in "critical air pollution thresholds for vegetation, e.g. by increased oxides of sulphur, nitrogen compounds and/or ozone".</p>
<p>6: Climate Change Reduce causes of and adapt to the impacts of climate change.</p>	<p style="text-align: center;">+</p>	<p>There is no single issue in this section of the MLP which considers climate change, as climate change impacts upon and is impacted by so many issues. The main aspects of climate change are generally well-covered through issues; issue a's focus on alternatives to road transport should help to reduce vehicular emissions, although it is clear that this must take into account all relevant issues, as road transport could turn out to be the most environmentally-friendly option in some locations.</p> <p>Issues f (Subsidence and land stability) and g (Flood risk) will ensure that the effect of climate change on these aspects will be given due consideration.</p> <p>The MLP should be informed by the latest climate change projections available through UK Climate Projections 2009 (UKCP09).</p>
<p>7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.</p>	<p style="text-align: center;">0</p>	<p>There are no issues which directly relate to this SA objective, but issue (u) will ensure that "the location of the proposed development does not compromise the integrity of infrastructure, such as that relating to power..." The issues could direct development towards locations where the opportunities to be served by, or to generate, renewable energy are greatest, but this would not be a practical solution and it would be inappropriate to raise this consideration above other, more relevant locational criteria.</p>

<p>8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.</p>	+	Issue (g) on flood risk covers these issues fully (recognising the particular classification of mineral workings in national policy) and should ensure that this SA objective is met.
<p>9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.</p>	0/+	<p>The actual mineral workings themselves would not constitute "<i>local services or facilities</i>" in the context of this SA objective, so issue (b) on access to the site is not relevant.</p> <p>Issue (d) on congestion will help to ensure people's access to services and facilities is not compromised by minerals development.</p> <p>There is no consideration of the impact on Public Rights of Way, but this may be a localised issue which is best controlled through the site-specific criteria.</p>
<p>10: Health Improve the health and well-being of the population and reduce inequalities in health.</p>	0/+	There are no issues which directly fulfil this SA objective, but some indirect benefits will be provided through many of the issues, including issue c (Safety), e (Amenity along transport routes), and v (Aviation safety).
<p>11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.</p>	0	None of the issues in the table will directly fulfil this SA objective, and no indirect linkages have been identified.
<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	+	This SA objective should be delivered through issue (a) on connectivity to the strategic transport network.
<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	0/+	None of the issues in the table will directly fulfil this SA objective, but the collective issues will provide a framework for the economic growth of the minerals industry. This in turn supports wider economic growth throughout the urban and rural area, through economic multipliers and through the provision of minerals necessary to translate economic strategies into physical development.

<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	0/+	None of the issues in the table will directly fulfil this SA objective, but the collective issues will provide a framework for the provision of minerals essential for house-building.
<p>15: Participation by all 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.</p>	0	None of the issues in the table will directly fulfil this SA objective, which will be delivered through other parts of the MLP.
<p>16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.</p>	0/+	None of the issues in the table will directly fulfil this SA objective, but the collective issues will provide a framework for the provision of minerals essential for enabling high-value, low-impact growth.
<p>17: Population (skills and education) Raise the skills levels and qualifications of the workforce.</p>	0	None of the issues in the table will directly fulfil this SA objective, and no indirect linkages have been identified.
<p>18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.</p>	0	None of the issues in the table will directly fulfil this SA objective, and no indirect linkages have been identified.

Appendix 1h: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft ALTERNATIVE APPROACHES TO DRIVING THE DELIVERY OF THE RESTORATION PRIORITIES FOR EACH AREA OF SEARCH AND THE OPPORTUNITY AREA FOR CLAY

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating: Options			Comments
	A	B	C	
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	++	++ / ?	<p>The MLP identifies the predominant landscape types in each area of search so that applicants will be aware at a high level of the characteristics that contribute to the landscape. More detailed information on the likely impact of mineral workings on landscape character in each area of search should be available in the next version of the MLP. There is not currently a proposed landscape policy response to minerals development in AONBs.</p> <p>The 'habitat quality and fragmentation' issue is also informed by landscape fragmentation, under an approach that proposes the greatest efforts are made to maintain the least fragmented landscapes. This does risk allowing those landscapes with a high degree of fragmentation to remain in this condition, but is probably a practical solution given limited resources and the need to focus on achievable aims in the context of the GI network; the MLP recognises that a focus on improving the poorest sites may not ultimately be effective if these are relatively isolated and do not make a valuable contribution to a wider network. It remains unclear how potential conflicts between landscape and other issues would be resolved. Alternative A would ensure landscape character is taken into account, but would fail to promote the important linkages</p>

			<p>that would be gained under Alternatives B and, especially, C. However, if biodiversity assets are identified on a spatial master plan, it is unclear how this will be updated to ensure that revisions to the evidence base are accurately and promptly reflected.</p>
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	<p>+</p>	<p>+/ -</p>	<p>The MLP identifies 'habitat quality and fragmentation' and 'geodiversity' as two of the Plan's eight high-level strategic restoration priorities. Biodiversity will be a determining factor in restoration schemes where it is high quality. Where it is medium or low quality, however, it will be less of a priority. The Spatial Strategy sets out corridors where biodiversity is an overarching principle, having taken into account geology and landscape. Alternatives B and C will help to place the development's approach to biodiversity in the wider context of the site's surroundings.</p> <p>Geodiversity will be a significant factor in restoration for the area of search if it is within an AONB or the Geopark, and is less of a priority if the area only contains, or is near, a specific geodiversity site, such as a geological SSSI. Geodiversity corridors will be an overarching principle in the Spatial Strategy within the AONBs and the Geopark, but the issue has not been identified as a priority in any specific area of search. Alternative A makes basic provision for protecting geodiversity, whilst Alternative B takes this further and seeks positive integration. Alternative C provides a spatial dimension by identifying specific sites. Whilst Alternative C is the most comprehensive and would theoretically help applicants to better understand the restoration implications on geodiversity from the outset, there is a concern that the evidence base underpinning this element may become dated and fail to reflect the latest known sites.</p>

<p>3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.</p>	+			<p>'Historic environment' is identified as a high-level strategic restoration priority in the MLP, with the potential of historic environment resources determined through the Historic Environment Assessment (HEA) evidence base. The HEA does not cover Wyre Forest district.</p> <p>Historic environment will be a determining factor in restoration schemes where there is high potential. Where there is only judged to be medium or low/unknown potential, however, it will be less of a priority. There is potentially a conflict in applying a precautionary approach to the Wyre Forest district – where the historic environment potential is unknown and the priority level is 1 – and applying a 3 priority to areas that have been assessed as low <u>or unknown</u> potential. For that proportion of the county that has been assessed, the area classified as 'high potential' is relatively small, and this is likely to be the case in Wyre Forest district.</p> <p>Historic environment is not an over-arching priority in the spatial strategy as no 'meaningful and coherent corridors' have been identified.</p> <p>Unlike some of the other strategic restoration priorities, historic environment assets are a finite resource and cannot be 'recreated'. Though there may be limited opportunities to enhance the historic environment, the focus is more likely to be on preserving assets.</p> <p>Alternative A would ensure the historic environment is considered in site restoration, whilst Alternative B would require specific assets to be identified in the policy. Alternative C would present these assets on a spatial master plan. A similar concern arises for Alternatives B and C as is noted in relation to some of the other strategic restoration priorities; the number and location of historic environment assets (both those designated</p>
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				<p>nationally/internationally and those on the Historic Environment Record) is continually changing, and it is difficult to see how this dynamic record could be reflected within the MLP policy or mapping. It may be better to cross-refer to the relevant data sources which can then be consulted for each application. Maintaining the proposed approach could risk assets identified after the MLP is published being overlooked in restoration proposals, and potentially compromised.</p>
<p>4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.</p>	<p>+</p>	<p>++</p>	<p>++</p>	<p>Green infrastructure should be safeguarded through the restoration approach proposed for its constituent parts, each of which area discussed elsewhere in this matrix.</p> <p>The restoration priorities for the MLP do not include green belt, which is covered elsewhere (policy criteria p).</p> <p>Agricultural land is considered in the MLP's approach to the 'horticulture and food production' strategic restoration priority. Linkages are made to water quality, landscape, flooding and biodiversity, but in determining the level of priority the MLP equates 'horticulture and food production' with soil quality. This fails to give sufficient recognition to the wider elements which determine the capacity (and appropriateness) of horticulture and food production, including water quantity, access to infrastructure, market demand, etc. The MLP identifies areas of search where agriculture should be an over-arching priority in the spatial strategy, and this corridor has been informed by the complementary benefits that would arise when overlapped with opportunity areas for water quality enhancement. Alternative A seeks to safeguard agricultural land in the long term. Alternative B would see the particular agricultural</p>

				<p>land quality identified in the policy. Alternative C provides a spatial dimension by mapping agricultural land quality for each area of search. Alternative C is the most comprehensive and would theoretically help applicants to better understand the restoration implications for agricultural land from the outset. Unlike some of the other evidence underpinning the strategic restoration priorities, agricultural land quality (if based on the best and latest agricultural land classification) is unlikely to change significantly between revisions to the published MLP.</p>
<p>5: Natural Resources Protect and enhance water, soil and air quality.</p>	<p>+</p>		<p>+/ -</p>	<p>Soil quality will be protected and enhanced through the MLP's restoration approach for horticulture and food production, which focusses on agricultural land quality (as above). Air quality is not one of the MLP's eight strategic restoration priorities, but will benefit from the protection and enhancement of trees and hedgerows facilitated through the 'habitat quality and fragmentation' and 'landscape character' priorities. Water quality is a strategic restoration priority. The MLP proposes developing guidance on water quality, to be informed by as-yet unpublished Environment Agency Water Improvement Plans and Water Action Plans, and this is supported. The current MLP sets an approach to restoration which prioritises water quality according to a combination of WFD measures. It is not immediately clear if the WFD assessment comprehensively covers Worcestershire's water courses; if this is not the case, the MLP should be explicit about those areas not assessed, and should make clear the approach to be taken where this is the case. Water quality has been identified as an overarching priority only in the Avon Corridor, as this has been judged to be the only place where the resource areas are in close proximity to water courses. Alternative A would provide a basic level of protection to water</p>

				quality. Alternative B would make provision for specific watercourses to be considered, but the MLP should be clear that this would be as part of a catchment-based approach, as the linkages between watercourses and main rivers, etc. mean that a good quality watercourse could flow into a failing watercourse. The MLP should stress that it is not only the immediate surroundings of a site that should be considered, but also the impacts on the area of search and beyond. Alternative C would provide the greatest guidance to applicants, through defining on a spatial master-plan the specific watercourses and their objectives for each area of search. As with some of the other strategic restoration priorities, there is a risk that any data included in the MLP could be superseded before any revision to the MLP is published. WFD monitoring is carried out in accordance with the provisions of the river Basin Management Plans.
6: Climate Change Reduce causes of and adapt to the impacts of climate change.	+	+	+	Although there is not a single priority of climate change, each of the strategic restoration priorities can contribute to meeting this SA objective, in particular 'Flood alleviation', 'Habitat quality and fragmentation' and 'Horticulture and food production'.
7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.	0	0	0	No direct impacts on this SA objective have been identified as arising from the strategic restoration priorities. There may be a minor implication on energy crops as a result of encouraging food production and horticulture on restored land, but energy crops are not specifically excluded from consideration.
8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.	+	++	++	One of the MLP's strategic restoration priorities is 'Flood alleviation'. This sets out that the local flooding priorities for Worcestershire are found in the River Severn Catchment Flood Management Plan. The MLP proposes that the level of priority to be given to flood protection within each area of search is determined by the respective CFMP policy area(s) in which it falls. The higher the

				<p>degree of flood risk, the higher the level of priority. It is open to debate whether the CFMP's 'Policy 3' areas (Areas of low to moderate flood risk where the Environment Agency is generally managing existing flood risk effectively) necessitates allocation as a 'significant component' in restoration; consideration could be given to the implications of moving Policy 3 and 4 areas down to priority levels 3 and 2, respectively.</p> <p>The limitations in identifying a corridor where flood alleviation could be an over-arching principle in the Spatial Strategy are the location and nature of the areas of search; the MLP proposes further discussion with the Environment Agency to identify whether this approach is appropriate, and it is beyond the scope of this SA to make a judgement on this in advance of such advice. Alternative A provides for an effective consideration of the impact of proposals on flooding (particularly welcome are the need to consider impacts on the wider catchment, and to consider multifunctional benefits). Alternative B would require the identification of the specific EA Policy Area from the CFMP, and Alternative C would take this further by identifying the Policy Area and showing where there is potential to implement actions.</p>
<p>9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.</p>	<p>0/ +</p>	<p>0/ +</p>	<p>0/ +</p>	<p>No direct impacts upon this SA objective have been identified as likely to arise from the strategic restoration priorities, although to the extent that 'Access and recreation' can be deemed a 'service or facility', this would help to ensure the objective is met.</p>
<p>10: Health Improve the health and well-being of the population and reduce inequalities in health.</p>	<p>0</p>	<p>0</p>	<p>0</p>	<p>No significant impacts on this SA objective have been identified as arising from the strategic restoration objectives, although several of them (including flood alleviation and access and recreation) will help to ensure health of the population is improved (or at least safeguarded).</p>

11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.	+	+	+	Successful delivery of the strategic restoration priorities will provide for appropriate economic development (including the economic value of horticulture and food production, which is a key economic sector in Worcestershire). The MLP has made a deliberate policy choice to place the environmental side of restoration ahead of economic and social aspects. This does not mean there will not be complementary and joined-up benefits, especially as a green infrastructure approach will provide the right environment in which businesses can grow.
14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
15: Participation by all 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.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.

18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	0	0	No direct or indirect impacts upon this SA objective have been identified as arising from the strategic restoration priorities.
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Appendix 1i: Initial Sustainability Appraisal Matrix: Assessment of MLP Second Consultation Draft **CROSS-CUTTING SITE-SPECIFIC RESTORATION POLICIES**

Minor positive impact	+	Neutral/no impact	0	Minor negative impact	-
Significant positive impact	++	Unknown impact	?	Significant negative impact	--

Sustainability Appraisal Objectives	SA rating	Comments
<p>1: Landscape Safeguard and strengthen landscape character and quality.</p>	+	<p>This SA objective will be supported through issue (t) on landscape, and issue (c) on visual intrusion. Any landscape considerations should take into account Worcestershire's Landscape Character Assessment (LCA), and should take advantage of the LCA supplementary guidance. Restoration should seek to go beyond merely minimising negative impacts, and should seek to enhance character and quality wherever possible.</p>
<p>2: Biodiversity, Geodiversity, Flora and Fauna Conserve and enhance Worcestershire's biodiversity and geodiversity.</p>	+	<p>The range of issues suggested in the MLP should ensure that this SA objective is covered comprehensively. The most direct benefits will be provided through issues (n) on protection and enhancement of internationally, nationally and locally designated sites, habitats and species, and (q) on geodiversity. The enhancement called for under this SA objective will be delivered through, inter-alia, the call in issue n for measures to "expand existing habitats and enhance linkages to wider habitat networks".</p> <p>Whilst issues (n) and (q) provide the most direct and overt means of delivering this SA objective, there are other issues that will also make an indirect contribution, including issues (b) on air quality and dust; (i) on soil resources; (o) on ground and surface water resources; and (x) on aviation safety. For issue (x), much will depend on the specific nature of</p>

		the proposals, and conflict between this issue and issue (n) must be avoided wherever possible; the need to minimise bird strike risk should not be at the expense of protecting and enhancing sites, habitats and species.
3: Cultural heritage, architecture and archaeology Preserve and enhance the historic environment and deliver well-designed and resource-efficient development which respects local character and distinctiveness.	+	The historic environment will be preserved and enhanced primarily through the considerations set out in issue (r) on heritage assets and their settings, and in issue (s) on archaeology. Many of the other issues will have a role to play in maintaining local character and distinctiveness, but the most relevant are issues (c) on visual intrusion; (d) on light pollution; (p) on Green belt (one of the five purposes of which is "to preserve the setting and special character of historic towns"); (t) on landscape; and (w) on built development. Resource efficiency will be promoted through issue (k) on maximising use of recycled materials and minimising waste.
4: Material assets Ensure efficient use of land through safeguarding of mineral reserves, the best and most versatile agricultural lands, land of green belt value, maximising use of previously-developed land and reuse of vacant buildings, whilst safeguarding open space/green infrastructure.	+	Agricultural land quality should be preserved through issue (i) on soil resources. Whilst availability of the minerals site for agricultural purposes during the operational lifetime may not be possible, the issue identifies the need to reinstate soils, and to make provision for upgrading land elsewhere if the original site cannot be restored. Efficient use of land and safeguarding of mineral reserves will be furthered by issue (k). This identifies maximised use of recycled materials, which will safeguard reserves from unnecessary extraction. The importance of safeguarding land of green belt value is recognised through issue (p). The safeguarding of green infrastructure will be achieved through the consideration of the various elements which collectively make up GI (covered here primarily through issues (c), (n), (o), (q), (r), (s) and (n), but also contributed to through issues (b), (i) and (x)).
5: Natural Resources Protect and enhance water, soil and air quality.	+	The MLP's list of issues recognises each of these considerations, although the focus as currently drafted is on protecting and maintaining quality,

		<p>and there is less attention on the potential for enhancement.</p> <p>Water quality will be protected through the consideration in issue (o) of ground and surface water resources.</p> <p>Issue (i) on soil resources should ensure that the quality of soil at the site is maintained. This issue also recognises the potential of ‘offsetting’ as a means of ensuring no net loss (and possibly a net gain) where the soil quality of the site cannot be restored to its original quality. The issue could also recognise the degradation that occurs in stored soils over time; simply removing the soil and then replacing once mineral operations are completed is likely to lead to a net loss in soil quality that should be mitigated by positive measures. The value of soil as a carbon sink could also be mentioned here.</p> <p>Issue (b) on air quality and dust should ensure that air quality is protected, but this should cover not only the immediate impacts in and around the restored site, but the potential for air quality issues to arise from transport to and from the site, depending on final use.</p>
<p>6: Climate Change Reduce causes of and adapt to the impacts of climate change.</p>	<p>+</p>	<p>Climate change is a wide-ranging issue which has many causes and effects. Minerals operations and restoration can impact, and be impacted by, climate change. Many of the issues set out in the MLP will relate to climate change to a greater or lesser extent, but the most direct relationships are with flooding, land stability and transport.</p> <p>Issue (h) on flood risk should ensure that the risk of flooding to the restored site and its occupiers is minimised. There is currently little mention of the potential for the site itself to impact on flooding, but this is covered elsewhere in the restoration chapter, through the strategic restoration priority on flooding.</p> <p>Issue (j) on land stability and subsidence fails to recognise the impact of climate change on land stability. Research undertaken for Worcestershire County Council by Gina Cavan (reproduced in the Worcestershire Partnership Climate Change Strategy) has mapped subsidence risk for</p>

		<p>gleyed and clay soils, and this could be overlain with other data to inform the MLP.</p> <p>Issue (l) on sustainable transportation covers relevant issues, but the assertion that transport issues will be very site specific may underplay the potential impacts on the wider transport network, depending on the end-use of the site. Whilst Worcestershire’s sites may not be of a scale or location to lead to national-scale tourist attractions, there nevertheless remains the potential for significant visitor numbers for sites that may have traditionally been isolated and seen little traffic apart from minerals transport.</p>
<p>7: Energy Promote energy efficiency and energy generated from renewable energy and low-carbon sources.</p>	<p>+</p>	<p>There is no specific issue on energy, and it is unlikely that one would be necessary. There are issues, however, which could help determine how any future energy-related use of restored sites could be delivered.</p> <p>Issue (c) on visual intrusion will be important in this regard. Worcestershire Viewpoint surveys have revealed that the visual impact of renewable energy technologies is a contentious issue with Worcestershire residents. There are numerous examples of successful energy-generating projects in former mineral workings around the country, and the sites often score highly on a visual impact basis because the minerals sites themselves are often well-screened. The issue could also recognise the importance of key viewpoints to and from the restored site. The Malvern Hills AONB Partnership has published guidance on such views in and around the Malvern Hills AONB.</p> <p>Issue (w) on built development will also help shape any energy-related uses on the restored sites. The issue’s identification of renewable energy schemes and environmental technologies is welcomed, as this recognises the potential for such development to come forward on restored sites.</p>

<p>8: Flooding Ensure inappropriate development does not occur in high-risk flood-prone areas and does not adversely contribute to fluvial flood risks or contribute to surface water flooding in all other areas.</p>	+	<p>Issue (h) on flood risk should ensure that the risk of flooding to the restored site and its occupiers is minimised. There is currently little mention of the potential for the site itself to impact on flooding, but this is covered elsewhere in the restoration chapter, through the strategic restoration priority on flooding.</p> <p>Other relevant considerations are set out in issues o (on ground and surface water resources) and w (on built development).</p>
<p>9: Access to Services Improve the quality of, and equitable access to, local services and facilities, regardless of age, gender, ethnicity, disability, socio-economic status or educational attainment.</p>	+	<p>None of the issues listed will have a significant direct impact on this SA objective but issues (f) on public rights of way and (m) on safety of or congestion on transport routes will help to ensure access to services is maintained. Issue (f) in particular makes provision for adding to or enhancing the public rights of way network, which is welcomed.</p>
<p>10: Health Improve the health and well-being of the population and reduce inequalities in health.</p>	+	<p>There is no specific issue on health, but many of the issues will directly or indirectly ensure that health is safeguarded. Actively <i>improving</i> the health and wellbeing of the population may be beyond the scope of the restoration policies, but this is a possibility in the longer term if a net improvement in access and recreation opportunities is made. Issue (f) on public rights of way should foster such an approach.</p> <p>Issue (a) on noise and vibration should prevent those living and working in the vicinity of restored sites from suffering undue noise nuisance. It is important to consider noise not in the context of the former mineral working (which could have required intermittent noisy activity as part of a temporary planning permission), but in the context of the surrounding environment prior to development having occurred.</p> <p>Issue (b) on air quality and dust should minimise the potential for health hazards arising from excessive dust inhalation. Those living or working in the vicinity of restored sites should not suffer health disadvantages compared to the wider population.</p> <p>Issues (d) on light pollution and (e) on odour will have less direct impacts on health, but should nevertheless help to maintain quality of life.</p>

<p>11: Waste Manage waste in accordance with the waste hierarchy: 1) reduce, 2) reuse, 3) recycling and composting, 4) recovery, 5) disposal.</p>	+	This SA objective will be contributed to through issue (k) on maximising use of recycled materials and minimising waste, which makes provision for the re-use of on-site waste materials.
<p>12: Traffic and transport Reduce the need to travel and move towards more sustainable travel patterns.</p>	+	Issues (l) on sustainable transportation and (m) on safety of or congestion on transport routes will help to deliver the SA objective. The current focus is on managing, rather than reducing, the need to travel, although the location of minerals sites, means they are often not well-connected to population centres other than by private vehicles.
<p>13: Growth with prosperity for all Develop a knowledge-driven economy, the infrastructure and skills base whilst ensuring all share the benefits, urban and rural.</p>	0	No specific issues in the overarching restoration section will directly contribute to meeting this SA objective. There may be scope to include economic development in the issues to be considered in restoration.
<p>14: Provision of housing Provide decent affordable housing for all, of the right quality and tenure and for local needs, in clean, safe and pleasant local environments.</p>	0	No specific issues have been identified as contributing directly to meeting this SA objective. Issue (w) on built development does not expressly mention housing as a potential use for restored sites, but this is an option which cannot be discounted. Much will depend on the nature of restoration, including the type of any fill material and ground conditions.
<p>15: Participation by all 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.</p>	+	Issues (u) on pre-application discussion and (v) on community liaison groups provide positive means of delivering against this SA objective, although the current wording is of encouragement, rather than requiring opportunities for participation by all. The MLP could consider a stronger stance through the restoration policies.
<p>16: Technology, innovation and inward investment Promote and support the development of new technologies, of high value and low impact, especially resource efficient technologies and environmental technology initiatives.</p>	0	No specific issues have been identified that will directly contribute to meeting this SA objective, although issue (w) on built development does recognise that proposals for renewable energy schemes and environmental technologies may come forward on former minerals sites. No active encouragement for any particular type of development is proposed, and the MLP recognises that it will be the respective district, city or borough council which would approve most such developments in accordance with their Local Plan and LDF policies.

17: Population (skills and education) Raise the skills levels and qualifications of the workforce.	0	No specific issues that will contribute to this SA objective have been identified.
18: Population (crime & fear of crime) Reduce crime, fear of crime and antisocial behaviour.	0	No specific issues that will contribute to this SA objective have been identified.