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Sustainability Appraisal of the Worcestershire Minerals Local Plan

Non-Technical Summary

Prepared by LUC
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Introduction

- 1.1 This Non-Technical Summary of the Sustainability Appraisal Report relates to the Worcestershire Minerals Local Plan Fourth Stage Consultation document (referred to hereafter as “the MLP”). The MLP sets out the level of mineral resources required in the county, how and where minerals development will be delivered, and how it will be ensured that mineral resources are not sterilised by other development. The purpose of this summary is to provide an accessible account of the SA process and to set out how far the MLP will deliver environmental, economic and social benefits in Worcestershire.
- 1.2 Plans and strategies such as the MLP are subject to a process called Sustainability Appraisal (SA), which assesses the potential impacts of a plan on social, economic, and environmental issues. Worcestershire County Council carried out the first stages of the SA in-house and has commissioned independent consultants (LUC) to carry out the remaining stages of the SA of the emerging Minerals Local Plan on its behalf. This Non-Technical Summary relates to the full SA Report for the Fourth Stage Consultation MLP, and should be read alongside those two documents.

The Minerals Local Plan

- 1.3 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 for mineral provision and restoration in the county in the next 15 years, and proposes a series of objectives and policies for making the vision a reality. The MLP includes a spatial strategy to guide where minerals development should take place. This is based on working viable mineral resources in areas where there is the greatest ability to achieve green infrastructure priorities through restoration. The Fourth Stage Consultation MLP includes:
 - A vision and six objectives for the MLP.
 - A key diagram, directing development to strategic corridors.
 - Areas of Search for minerals development, showing where extraction is considered appropriate, subject to other policies being met.
 - Criteria-based policies to assess the suitability of proposals (both strategic and non-strategic).
 - Minerals safeguarding policies to ensure mineral resources and infrastructure are not sterilised by other development.
 - Encouragement of the use of substitute, secondary and recycled materials and mineral waste.
- 1.4 The MLP seeks to protect Worcestershire's environment (including habitats, species, landscape, archaeology, historic environment, surface and ground water) and to minimise adverse effects from minerals operations on those nearby (including impacts from noise and dust, vibrations, and visual impacts).
- 1.5 A suite of background documents sets out the evidence upon which the MLP is based and identifies key matters which the plan must take into account. These are technical documents (resource assessments, methodologies, legislative information, maps, etc.) to help inform the policy direction of the MLP. Their preparation and review is on-going as the plan develops. The suite of documents is available at www.worcestershire.gov.uk/mineralsbackground.
- 1.6 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 were developed into broad policy directions in the 'Second Consultation Draft' of November 2013, which were further refined into the set of policies presented in the 'Third Stage Consultation Draft' of December 2016. The current 'Fourth Stage Consultation Draft' builds on the previous stages and has made

changes to policies to reflect updated national policy and in response to comments received during the consultation process.

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

1.8 The MLP vision is summarised below:

- Minerals development is to take a holistic approach to delivering sustainable economic growth, supporting health and quality of life, and enhancing the built, historic, natural and water environment.
- The MLP will enable a steady, adequate and sustainable supply of minerals and will contribute to the vitality of the local economy whilst making prudent use of resources.
- Mineral supply will be delivered from multiple sites, focused in five strategic corridors. The design, working and restoration of mineral sites will strengthen the distinctive character of each strategic corridor.
- Minerals sites will deliver and enhance green infrastructure and restoration will deliver multifunctional benefits.

1.9 The MLP's objectives are set out below:

- MO 1: Enable the supply of minerals
- MO 2: Protect and enhance the environmental and socio-economic function of Worcestershire's network of green spaces and natural elements (green infrastructure)
- MO 3: Protect and enhance the quality, character and distinctiveness of the built, historic, natural and water environment
- MO 4: Protect and enhance the health, well-being, safety and amenity of people and communities
- MO 5: Protect and enhance the vitality of the local economy
- MO 6: Ensure the prudent use of natural resources

1.10 The MLP contains the following policies:

Policy MLP 1: Strategic Location of Development	Policy MLP 17: Prudent Use of Resources
Policy MLP 2: Borrow pits	Policy MLP 18: Green Belt
Policy MLP 3: Green Infrastructure	Policy MLP 19: Amenity
Policy MLP 4: Avon and Carrant Brook Strategic Corridor	Policy MLP 20: Access and Recreation
Policy MLP 5: Lower Severn Strategic Corridor	Policy MLP 21: Biodiversity
Policy MLP 6: North East Worcestershire Strategic Corridor	Policy MLP 22: Historic Environment
Policy MLP 7: North West Worcestershire Strategic Corridor	Policy MLP 23: Landscape
Policy MLP 8: Salwarpe Tributaries Strategic Corridor	Policy MLP 24: Soils
Policy MLP 9: Contribution of Substitute, Secondary and Recycled Materials and Mineral Waste to Overall Minerals Supply	Policy MLP 25: Best and Most Versatile Agricultural Land
Policy MLP 10: Steady and Adequate Supply of Sand and Gravel	Policy MLP 26: Geodiversity
Policy MLP 11: Steady and Adequate Supply of Crushed Rock	Policy MLP 27: Water Quality and Quantity
Policy MLP 12: Steady and Adequate Supply of Brick Clay and Clay Products	Policy MLP 28: Flooding
Policy MLP 13: Steady and Adequate Supply of Silica Sand	Policy MLP 29: Transport
Policy MLP 14: Adequate and Diverse Supply of Building Stone	Policy MLP 30: Planning Obligations
Policy MLP 15: Supply of Other Locally and Nationally Important Industrial Minerals	Policy MLP 31: Safeguarding Locally and Nationally Important Mineral Resources
Policy MLP 16: Supply of Energy Minerals	Policy MLP 32: Safeguarding Mineral Sites and Supporting Infrastructure

1.11 The MLP should be read alongside relevant European, national, regional and local policies, and is guided by international, national and local policy. It will sit alongside the Worcestershire Waste Core Strategy Local Plan and the city, borough and district Core Strategies/Local Plans.

Sustainability Appraisal: Background and Process

- 1.12 The purpose of Sustainability Appraisal is to promote sustainable development by integrating sustainability considerations into the preparation and adoption of plans.
- 1.13 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the Development Plan Document (DPD) preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process appraises the likely social, environmental and economic effects of the strategies and policies within a DPD (in this case the MLP) from the outset of its development.
- 1.14 Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive, transposed in the UK by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment, and set the framework for future consent of projects. The purpose of SEA, as defined in Article 1 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'.
- 1.15 SEA and SA have similar aims and objectives, although SEA focuses only on the likely significant environmental effects of a plan whilst SA includes a wider range of considerations, extending to social and economic effects. The Government's Sustainability Appraisal guidance^{1,2} outlines how it is possible to satisfy both requirements by undertaking a joint SA/SEA process, and to present an SA report that incorporates the requirements of the SEA Regulations.
- 1.16 This non-technical summary accompanies the SA Report, which represents Stage D in the SA process (see below). It is a strategic appraisal of the policies and spatial options proposed in the Fourth Stage Consultation Draft MLP. This SA builds upon the earlier 'SA Environmental Report' for the Third Stage Consultation, the 'Initial SA Report' and the 'SA Scoping Report' before that.
- 1.17 A brief overview of the key stages of SA and how these relate to the MLP is set out below.

Stage A: The SA Scoping Report

- 1.18 The SA process began with a Scoping Report, produced at the earliest evidence-gathering stage of MLP plan-making. The key tasks undertaken for the Scoping Report were:
- Review of the issues of relevance to Worcestershire as described within plans, policies and programmes.
 - Review of sustainability characteristics and issues.
 - Analysis of baseline data, including the likely evolution of the baseline in the absence of the plan.
- 1.19 The outcomes of the review of plans, policies and programmes, identification of issues and baseline analysis are described later in this NTS.
- 1.20 The Scoping Report also established the 'SA framework': a series of sustainability objectives against which the proposals for the MLP are assessed. These objectives were informed by the review of plans, policies and programmes, the baseline review and identification of sustainability issues in Worcestershire. Several changes were made to the SA framework between the 'Initial SA Report' accompanying the MLP Second Stage Consultation and the SA Report accompanying the Third Stage Consultation. These changes were intended to simplify the process and avoid repetition and irrelevant content. The sustainability objectives which form the current SA framework are presented overleaf.

¹ ODPM (2005) A Practical Guide to the Strategic Environmental Assessment Directive

² MHCLG (2015) Planning Practice Guidance (Strategic Environmental Assessment and Sustainability Appraisal). Available at: <http://planningguidance.planningportal.gov.uk/>

SA Objectives for the Worcestershire MLP

1: Landscape

Safeguard and strengthen landscape character and quality and minimise negative visual impact.

2: Biodiversity and geodiversity

Conserve and enhance Worcestershire's biodiversity and geodiversity.

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.

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.

5: Natural resources

Protect and enhance water and air quality.

6: Climate change and energy

Reduce causes of and adapt to the impacts of climate change. Promote energy efficiency and energy generated from renewable energy and low-carbon sources.

7: 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.

8: 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.

9: Health and amenity

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

10: Waste

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

11: Traffic and transport

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

12: Growth with prosperity for all

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

13: 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.

14: 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.

15: 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.

16: Population (skills and education)

Raise the skills levels and qualifications of the workforce.

17: Population (crime & fear of crime)

Reduce crime, fear of crime and antisocial behaviour.

Stage B: Developing and Refining Options and Assessing Effects

- 1.21 Developing options for a plan is an iterative process undertaken by the local planning authority, usually involving a number of consultations with the public and stakeholders. Consultation responses and the SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan (e.g. additional locations that may be suitable for development). The SA can also help decision makers by identifying the potential positive and negative sustainability effects of each option.
- 1.22 The MLP considered options for where new minerals development should be located and for the policies to guide this development, the assessment results for which are presented in Chapters 6 and 7 of the main SA report and Appendices 4, 5 and 7-11. At each stage of the SA, the options being considered were subject to appraisal and the SA findings helped to inform which options were taken forward in the development of the MLP. Chapter 8 of the main SA Report outlines the decision-making process at different stages of development of the MLP and gives an overview of how options were identified and why they were or were not selected. Chapter 9 of the main SA Report presents a cumulative assessment of the MLP as a whole, taking into account the likely evolution of the baseline without the plan and other (non-minerals) development expected to come forward in the area.
- 1.23 The SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. There will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on sustainability performance in order to select a preferred option. Factors such as public opinion, other Council targets and conformity with other plans, programmes and strategies will also be taken into account by plan-makers when selecting preferred options for their plan.
- 1.24 Each area of search and policy in the MLP was assessed against each SA objective, and a judgement was made with regards to the likely effect that the spatial and policy options may have on those objectives. These judgements were recorded as a colour coded symbol, as shown below in **Figure 1**. Attempts have been made to differentiate between the most significant potential effects and other more minor effects through the use of the symbols shown below. The dividing line in making a decision about the significance of an effect is often quite small. Where either ++ or -- has been used to distinguish significant effects from more minor effects (+ or -), this is because the effect of the policy or spatial option in question on an SA objective is considered to be of a magnitude that it could have the potential to generate an effect that would make a substantial change to the environment or social or economic characteristics of an area, taking into account other factors that may influence the achievement of that SA objective. It is a requirement to consider whether the potential effects predicted are likely to be secondary, cumulative, synergistic, short, medium or long-term, permanent or temporary. Chapter 9 of the main SA Report discusses synergistic and cumulative effects, and summarises the likely short, medium and long-term effects of the MLP.
- 1.25 The sustainability effects of the MLP and reasonable alternatives are presented in the SA Report Chapters 5, 6, 7 and 9 and Appendices 5 and 7 to 12, along with a brief justification of the judgement made.

Figure 1: Key to symbols and colour coding used in the SA of the MLP

++	The policy is likely to have a significant positive impact on the SA objective(s).
+	The policy is likely to have a minor positive impact on the SA objective(s).
0	The policy is likely to have a negligible or no impact on the SA objective(s).
+/-	The policy is likely to have a mixture of positive and negative impacts on the SA objective(s).
-	The policy is likely to have a minor negative impact on the SA objective(s).
--	The policy is likely to have a significant negative impact on the SA objective(s).
?	It is uncertain what effect the policy will have on the SA objective(s).

Stage C: Preparing the Sustainability Appraisal report

- 1.26 The SA Report and accompanying appendices describe the process undertaken to date in carrying out the SA of the MLP. It sets out the findings of the appraisal, highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the plan, and outlining proposed monitoring measures.

Stage D: Consultation on the MLP and this SA Report

- 1.27 The SA Report and this NTS is being published alongside the Fourth Stage Consultation MLP from 17th December 2018 to 8th February 2019.

Stage E: Monitoring Implementation of the Plan

- 1.28 Stage E will follow adoption of the MLP. The SEA Regulations and the Government's SA Guidance require that the Sustainability Report includes a description of measures envisaged concerning monitoring. This is discussed in Chapter 9 of the full SA report.

Sustainability Profile of Worcestershire

Policy Context

- 1.29 A review was undertaken of the other plans, policies and programmes that are relevant to the MLP. This was originally undertaken at the Scoping stage but has been updated to ensure the review is up to date. The updated review is included in Appendix 2 of the full SA report which, in line with the SEA Regulations requirements, identifies the relationship that the plans and policies have with the development of the MLP, and also shows how the environmental, social and economic objectives contained within those plans and policies have been taken into account during preparation of the MLP and also the SA.
- 1.30 A significant development in terms of the policy context for the MLP was the publication of the National Planning Policy Framework (NPPF), which replaced the suite of Planning Policy Statements (PPSs) and Planning Policy Guidance, including Minerals Policy Statements and Minerals Policy Guidance documents. This has also resulted in the publication of national Planning Practice Guidance (PPG) as a web-based resource that accompanies the NPPF. A large majority of past guidance has been included in the PPG; however, many guidance documents were also cancelled. A revised version of the NPPF was published in July 2018. Other key relevant plans, policies and programmes include relevant European directives and the legislation by which these are translated into UK law, particularly those relating to environmental protection and land use. There is a suite of other relevant national and regional policy and guidance relating to environmental, social and economic issues. For example, Worcestershire has strategies and

guidance for sustainable development, Green Infrastructure, climate change, landscape and the historic environment, all of which help to promote sustainable development.

- 1.31 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: 20% of the UK electricity should come from renewable energy sources 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, to support a strong 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.

Baseline information

- 1.32 It is a further requirement of the SA process that consideration should be given to the current state of the environment, as well as social and economic factors, in Worcestershire, and their likely evolution in the absence of the MLP. Without the MLP, baseline trends are generally expected to continue. National policy is likely to play a part in protecting the most sensitive environmental assets, but the MLP presents opportunities to guide the location of new minerals development, plan for and mitigate any negative effects and maximise any positive effects of minerals development.

- 1.33 Baseline information provides the context for assessing the sustainability of proposals in the MLP and it provides the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. The baseline data was originally collated and analysed in the SA Scoping Report, but has been reviewed to ensure it contains the most up to date and relevant data. Appendix 3 of the SA Report presents the updated baseline information.

Key sustainability issues

- 1.34 The SA has been informed by the identification of a series of significant environmental, social and economic issues for Worcestershire (including environmental 'problems' requiring identification under the SEA Directive). These issues were initially identified through the review of existing baseline data and relevant plans and policies at the Scoping Stage and have now been updated where appropriate. They key issues can be summarised as:
- From 2013 to 2015 there had been a slight decrease in overall proportion of **SSSIs** meeting either 'favourable' or 'unfavourable recovering' standard, however, the latest data from 2018 shows that 95.49% of selected sites now meet these standards. There has been a steady increase in the proportion of SSSIs within Worcestershire in 'favourable' or 'unfavourable recovering' condition.
 - 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 (although it should be noted that the latest update is from 2010).

- 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 (although it should be noted that the latest update is from 2010).
- Worcestershire **water courses** do not compare favourably with those in the wider area. Only 10.26% watercourses within Worcestershire are classified as 'good' status.
- There has been an overall fall in **CO₂ emissions per capita** since 2009. These emissions are now slightly above both the national figure and the West Midlands average. In relation to the 2016 population estimates for each district, Bromsgrove, Malvern Hills and Wychavon had the highest CO₂ emissions per capita.
- Since 2014, Worcestershire and each district within it, has had increased **CO₂ emissions for road transport**.
- 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 has been constant since 2012.
- The **employment** rate in Worcestershire is better than both the national and regional averages, and has increased significantly since 2016.
- Worcestershire's **GVA** per hour worked is below that of England, but above the West Midlands, and it is expected to continue to increase faster than regional or national GVA per hour worked.
- During 2016/17 some 728 **affordable homes** were built in Worcestershire, which was a decrease from previous years, 2014/15 and 2015/16.

Summary of SA findings for the Fourth Stage Consultation Draft MLP

- 1.35 The tables below summarise how the various policies and areas of search in the Fourth Stage MLP perform in relation to each of the SA objectives. We have then considered how the MLP performs as a whole, and in combination with other planned development in the county, against each SA objective.

Table 1: Summary of SA scores for the Proposed Vision and Strategic Objectives

Vision and Objectives							
SA Objectives	Vision	1. Enable the supply of minerals	2. Protect and enhance the function of green space networks and natural elements (GI)	3. Protect and enhance the quality, character and distinctiveness of the built, historic, natural and water environment	4. Protect and enhance the health, well-being, safety and amenity of people and communities	5. Protect and enhance the vitality of the local economy	6. Ensure the prudent use of natural resources
1: Landscape	++	0	++	++	0	0	+
2: Biodiversity and geodiversity	+	0	++	++	0	0	+
3: Cultural heritage, architecture and archaeology	++	0	+	++	0	0	0
4: Material assets	++	0	0	++	0	0	++
5: Natural resources	+	0	+	++	0	0	+
6: Climate change and energy	++	0	+	+	0	0	0
7: Flooding	+	0	+	+	0	0	0
8: Access to services	+	0	0	0	+	0	0
9: Health and amenity	++	0	+	+	++	0	0
10: Waste	+	0	0	0	0	0	+
11: Traffic and transport	+	?	0	0	0	0	0
12: Growth with prosperity for all	++	0	0	0	0	++	0

Vision and Objectives							
SA Objectives	Vision	1. Enable the supply of minerals	2. Protect and enhance the function of green space networks and natural elements (GI)	3. Protect and enhance the quality, character and distinctiveness of the built, historic, natural and water environment	4. Protect and enhance the health, well-being, safety and amenity of people and communities	5. Protect and enhance the vitality of the local economy	6. Ensure the prudent use of natural resources
13: Provision of housing	++	++	0	0	++	0	0
14: Participation by all	++	0	0	0	0	0	0
15: Technology, innovation and inward investment	0?	+	0	0	0	+	0
16: Population (skills and education)	0	0	0	0	0	0	0
17: Population (crime & fear of crime)	0	0	0	0	0	0	0

Table 2: SA findings for the strategic policies in Chapter 4 of the MLP (Spatial Strategy)

SA Objectives	Spatial Strategy (strategic policies)							
	MLP 1	MLP 2	MLP 3	MLP 4	MLP 5	MLP 6	MLP 7	MLP 8
1 Landscape	+/--	+/-?	++	++/-?	++/-?	++/-?	++/-?	++/-?
2 Biodiversity and geodiversity	+/--	+/-?	++	+/--?	+/--?	+/--?	+/--?	+/--?
3 Cultural heritage, architecture and archaeology	+/--	+/-?	++	+/--?	+/--?	+/--?	+/--?	+/--?
4 Material assets	++/--	++?/--?	+	+/--?	+?/--?	--?	--?	--?
5 Natural resources	--?	+/--	++	+/--?	+/--?	--	+/--	--?
6 Climate change and energy	+?/-?	+	++	+?/?	+?/?	+?/?	+?/?	+?/?
7 Flooding	-?	-?	++	+/?	+/?	+/?	+/?	+/?
8 Access to services	+/--?	+/-?	+	+	+/--?	+/--?	+/--?	+/--?
9 Health and amenity	+/--?	+/--?	+	+?/--?	++/--?	++/--?	++/--?	++/--?
10 Waste	-	-	0	-	-	-	-	-
11 Traffic and transport	+/--?	++	0	+	+	+	+	+
12 Growth with prosperity for all	+/--?	0	0	++/--?	++/--?	++	++/--?	++/-?
13 Provision of housing	+/--?	+	+	+/--?	+/--?	+/--?	+/--?	+/--?
14 Participation by all	0	0	0	0	0	0	0	0
15 Technology, innovation and inward investment	0	0	0	0	0	0	0	0
16 Population (skills and education)	0	0	0	+	+	+	+	+
17 Population (crime & fear of crime)	0	0	0	0	0	0	0	0

Table 3: Summary of SA scores for the policies in Chapter 5 - Supply of mineral resources (strategic policies)

SA Objective	Supply of mineral resources (strategic policies)							
	MLP 9	MLP 10	MLP 11	MLP 12	MLP 13	MLP 14	MLP 15	MLP 16
1 Landscape	+/-?	-?	--?	-?	-?	-?	-?	-?
2 Biodiversity and geodiversity	+/-?	-?	-?	-?	-?	-?	-?	-?
3 Cultural heritage, architecture and archaeology	+/-?	-?	+/-?	+/-?	-?	+/-?	-?	-?
4 Material assets	+	+/-?	+/-?	+/-?	+/-?	+/-?	+/-?	+/-?
5 Natural resources	+/-?	-?	-?	-?	-?	-?	-?	-?
6 Climate change and energy	+	+	+/-?	+	+	+	?	--?
7 Flooding	-?	+?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?
8 Access to services	0	0	0	0	0	0	0	0
9 Health and amenity	+/-?	-?	-?	-?	-?	-?	-?	-?
10 Waste	++	+/-?	+/-?	+/-?	+/-?	+/-?	-	-?
11 Traffic and transport	+/-?	+/-?	+/-?	+/-?	+/-?	+/-?	+/-?	+/-?
12 Growth with prosperity for all	+/-?	+	+/-?	+	+	0	+	+/-?
13 Provision of housing	+	+?	+?	+	?	+	?	-?
14 Participation by all	0	0	0	0	0	0	0	0
15 Technology, innovation and inward investment	0	?	?	?	?	?	0	-?
16 Population (skills and education)	0	0	0	0	0	0	0	0
17 Population (crime & fear of crime)	0	0	0	0	0	0	0	0

Table 4: SA scores for Development management (non-strategic policies)

SA objective	Development Management Policy													
	MLP 17	MLP 18	MLP 19	MLP 20	MLP 21	MLP 22	MLP 23	MLP 24	MLP 25	MLP 26	MLP 27	MLP 28	MLP 29	MLP 30
SA 1: Landscape	++	+	+	+	+	+	++	+/-	+	+	+	+	+	+
SA 2: Biodiversity and geodiversity	+	+/?	+	+	++	+	+	+/-	+	++	+	+	+	+
SA 3: Cultural heritage, architecture and archaeology	+	+/?	+	+	+	++	++	?	+	+	+	+	+	+
SA 4: Material Assets	+	+	0	+	+	+	+	+	+	+	+	+	+	0
SA 5: Natural Resources	+	+/?	+	0	+	0	0	+	0	0	++	+	+	+
SA 6: Climate Change and energy	++	+	0	0	+	+/-?	+/-?	+	+	0	0	+	+	0
SA 7: Flooding	+	+	0	0	+	0	0	+	+	0	+	++	+	0
SA 8: Access to Services	0	0	0	++	+	0	0	0	0	0	+	+	+	0
SA 9: Health and Amenity	+	+	+	++	+	0	0	+/-?	0	0	+	+	+	+
SA 10: Waste	+	0	+	0	0	0	0	+	0	0	0	0	0	0
SA 11: Traffic and Transport	+	-?	+	++	+	0	0	+	0	0	0	0	+	0
SA 12: Growth with prosperity for all	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SA 13: Provision of housing	0	+	+	+	+	+	+	+/-?	?	+	+	+	+	+

SA 14: Participation by all	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SA 15: Technology, innovation and inward investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SA 16: Population (skills and education)	0	0	0	0	0	0	0	0	0	+	0	0	0	0
SA 17: Population (crime and fear of crime)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5: Summary of SA scores for the policies in Chapter 7 (Safeguarding mineral resources and supporting infrastructure)

SA Objective	Safeguarding mineral resources and supporting infrastructure (strategic policies)	
	MLP 31	MLP 32
1 Landscape	+?/-?	+?/-?
2 Biodiversity and geodiversity	+?/-?	+?/-?
3 Cultural heritage, architecture and archaeology	+?/-?	+?/-?
4 Material assets	+++?/-?	+++?/-?
5 Natural resources	+?/-?	+?/-?
6 Climate change and energy	+?/-?	+?/-?
7 Flooding	+/?	+/-/?
8 Access to services	+?/-?	+?/-?
9 Health and amenity	+?/-?	+?/-?
10 Waste	-?	-?
11 Traffic and transport	+?/-?	+?/-?
12 Growth with prosperity for all	+/-	+/-
13 Provision of housing	+?/-?	+?/-?
14 Participation by all	0	0
15 Technology, innovation and inward investment	+/-	+/-
16 Population (skills and education)	0	0
17 Population (crime & fear of crime)	0	0

Table 6: SA scores for building stone areas of search

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
HSBQ1	-?	--?	-?	-	--?	--	0	-?	--	0	-	+	0	0	0	0	0
HSBQ2	-?	--?	-?	-	--?	--	0	-?	--	0	-	+	0	0	0	0	0
HSBQ3	-?	--?	--?	-	-?	-	0	0	--?	0	-	+	0	0	0	0	0
HSBQ4	-?	--?	--?	-	--?	--	0	0	--	0	-	+	0	0	0	0	0
HSBQ5	-?	--?	--?	-	-	--	0	-?	-	0	-	+	0	0	0	0	0
HSBQ6	-?	-?	--?	-	-	-	0	-?	0	0	-	+	0	0	0	0	0
HSBQ7	-?	--?	--?	-?	--?	-	0	-?	-?	0	-	+	0	0	0	0	0
HSBQ8	-?	--?	--?	-?	-	-	0	-?	0	0	-	+	0	0	0	0	0
HSBQ9	-?	--?	--?	-	-	--	0	0	0	0	-	+	0	0	0	0	0
HSBQ10	-?	--?	--?	-	-	-	0	0	0	0	-	+	0	0	0	0	0
HSBQ11	-?	--?	--?	-	-	-	0	0	0	0	-	+	0	0	0	0	0
HSBQ12	-?	--?	--?	-	-	-	0	0	0	0	-	+	0	0	0	0	0
HSBQ13	--?	--?	0?	-	--?	-	0	-?	--	0	-	+	0	0	0	0	0

Table 7: SA scores for terrace and glacial sand and gravel areas of search

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
TGSG1	--?	--	--?	-?	-	-	0	--?	-?	0	-	+	+	0	0	0	0
TGSG2	--?	--	0?	-?	-	-	0	--?	-?	0	-	+	+	0	0	0	0
TGSG3	--?	--	--?	-?	--	+	0	--?	--	0	+	+	+	0	0	0	0
TGSG4	--?	--	--?	-	--?	-	0	--?	--?	-	-	+	+	0	0	0	0
TGSG5	-?	--	-?	-	--?	-	0	--?	-?	-	-	+	+	0	0	0	0
TGSG6	--?	--	--?	-	--?	-	0	--?	--?	-	-	+	--?/+	0	0	0	0
TGSG7	--?	--	--?	-	--?	-	0	--?	--?	-	-	+	+	0	0	0	0
TGSG8	--?	--	--?	-	--	-	0	--?	-?	0	-	+	+	0	0	0	0
TGSG9	--?	--	--?	-	--?	+	0	--?	--?	-	+	+	+	0	0	0	0
TGSG10	-?	--	0?	-	-?	-	0	0	-?	0	-	+	+	0	0	0	0
TGSG11	--?	--	0	-	-?	-	0	--?	-?	0	-	+	+	0	0	0	0
TGSG12	-?	--	--?	-	-	-	0	-?	-?	0	-	+	+	0	0	0	0
TGSG13	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG14	--?	--	--?	-	--	-	0	-?	--?	-	-	+	+	0	0	0	0
TGSG15	--?	--	0?	-	--?	+	0	-?	--?	0	+	+	--?/+	0	0	0	0
TGSG16	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
TGSG17	--?	--	0?	-	--	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG18	--?	--	0?	-	--?	-	0	-?	--	0	-	+	+	0	0	0	0
TGSG19	-?	--	-?	-	-	-	0	0	0	0	-	+	+	0	0	0	0

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
TGSG20	--?	--	-?	-	--?	-	0	0	0	0	-	+	+	0	0	0	0
TGSG21	--?	--	--?	-	--	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG22	--?	--	--?	-	--	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG23	--?	--	--?	-	-	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG24	--?	--	--?	-	-	-	0	--?	-?	0	-	+	+	0	0	0	0
TGSG25	--?	--	--?	-	-	-	0	0	0	0	-	+	+	0	0	0	0
TGSG26	--?	--	--?	-	--?	+	0	-?	--?	0	+	+	+	0	0	0	0
TGSG27	-?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG28	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG29	--?	--	--?	-	0	-	0	--?	--	0	-	+	--?/+	0	0	0	0
TGSG30	--?	--	--?	-	--?	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG31	--?	--	--?	--	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG32	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	--?/+	0	0	0	0
TGSG33	--?	--	--?	-?	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
TGSG34	--?	--	--?	-	--?	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG35	--?	--	--?	-	0	-	0	--?	-	0	-	+	+	0	0	0	0
TGSG36	--?	--	--?	--?	--	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG37	--?	--	--?	-	--?	-	0	--?	--	0	-	+	--?/+	0	0	0	0
TGSG38	--?	--	--?	-?	0	-	0	--?	--	0	-	+	--?/+	0	0	0	0
TGSG39	--?	--	--?	--?	--	+	0	--?	--	-	+	+	--?/+	0	0	0	0

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
TGSG40	--?	--	--?	-?	--?	-	0	--?	--?	-	-	+	-?/+	0	0	0	0
TGSG41	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	--?/+	0	0	0	0
TGSG42	--?	--	--?	-	--?	-	0	--?	--?	0	-	-?/+	+	0	0	0	0
TGSG43	--?	--	--?	--?	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG44	--?	--	--?	--?	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG45	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
TGSG46	--?	--	--?	--?	--	+	0	--?	--	0	+	+	+	0	0	0	0
TGSG47	--?	--	--?	-	0	-	0	--?	--	0	-	+	--?/+	0	0	0	0
TGSG48	--?	--	--?	-	0	-	0	0	--	0	-	+	--?/+	0	0	0	0
TGSG49	--?	--	--?	--?	0	-	0	-?	--	0	-	+	+	0	0	0	0
TGSG50	--?	--	0?	-	-	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG51	--?	--	-?	-	--?	-	0	-?	--	0	-	+	+	0	0	0	0
TGSG52	--?	--	-?	-	--?	-	0	-?	--	0	-	+	--?/+	0	0	0	0
TGSG53	--?	--	--?	-	--?	+	0	--?	--	0	+	+	+	0	0	0	0
TGSG54	--?	--	--?	--?	--	-	0	--?	-	0	-	+	--?/+	0	0	0	0
TGSG55	--?	--	--?	-	0	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG56	--?	--	--?	-	0	-	0	--?	--	0	-	+	+	0	0	0	0
TGSG57	-?	--	--?	-	--?	+	0	0	0	0	+	+	+	0	0	0	0
TGSG58	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG59	--?	--	--?	-	-	-	0	0	0	0	-	+	+	0	0	0	0

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
TGSG60	--?	--	--?	--?	0	-	0	--?	--?	-	-	+	+	0	0	0	0
TGSG61	--?	--	--?	-?	0	+	0	--?	--	0	+	+	+	0	0	0	0
TGSG62	--?	--	--?	-?	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
TGSG63	--?	--	--?	-?	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
TGSG64	--?	--	--?	--?	--?	-	0	-?	--?	0	-	+	+	0	0	0	0
TGSG65	-?	--	-?	-	--?	-	0	-?	--?	0	-	+	+	0	0	0	0
TGSG66	--?	--	--?	--?	--?	+	0	--?	--?	0	+	+	--?/+	0	0	0	0
TGSG67	-?	--	--?	-?	-?	-	0	--?	--?	0	-	+	+	0	0	0	0
TGSG68	-?	--	--?	-?	--?	+	0	0	0	0	+	+		0	0	0	0
TGSG69	--?	--	--?	-?	--	+	0	--?	--?	0	+	+	-?/+	0	0	0	0
TGSG70	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	--?/+	0	0	0	0

Table 8: SA scores for silica sand areas of search3

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material Assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
WFSS1	-?	--	--?	-	--	-	0	--?	-	0	-	+	0	0	0	0	0
WFSS2	-?	--	--?	-	-	-	0	--?	--	0	-	+	0	0	0	0	0
WFSS3	--?	--	--?	-	--	+	0	--?	--?	-	+	+	--?	0	0	0	0
WFSS4	--?	--	--?	-	--?	+	0	--?	--	-	+	+	--?	0	0	0	0
WFSS5	-?	--	0?	-	--	-	0	-?	--?	0	-	+	0	0	0	0	0
WFSS6	--?	--	-?	-	--	+	0	-?	--?	-	+	+	0	0	0	0	0
WFSS7	--?	--	--?	-	--?	+	0	--?	--?	-	+	--?/+	--?	0	0	0	0
WFSS8	--?	--	--?	0	--?	-	0	-?	--	0	-	+	-?	0	0	0	0
WFSS9	--	--	-?	0	--	+	0	0	--	0	+	+	--?	0	0	0	0
WFSS10	--	--	-?	-?	--	+	0	0	--	0	+	+	0	0	0	0	0
WFSS11	--?	--	-?	-?	--	+	0	--?	--	0	+	+	0	0	0	0	0
WFSS12	--	--	-?	0	--?	-	0	0	--	0	-	+	0	0	0	0	0
WFSS13	--	--	-?	-?	--?	--	0	0	--	0	-	+	0	0	0	0	0

³ Note that areas of search WFSS5, WFSS6, WFSS8, WFSS9 and WFSS10 have the same boundaries as areas of search SSSG4, SSSG5, SSSG13, SSSG14 and SSSG15 respectively, therefore the assessments for both are identical, except with regards to SA13 (as sand and gravel is used in housing construction, whereas silica sand is not).

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material Assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
WFSS14	--?	--	--?	-	--?	+	0	--?	--?	0	+	--?/+	--?	0	0	0	0
WFSS15	--	--	-?	-	--?	-	0	0	--	0	-	+	0	0	0	0	0
WFSS16	-?	--	0?	-	--?	--	0	0	0	0	-	+	0	0	0	0	0
WFSS17	-?	--	--?	-	--?	--	0	0	0	0	-	+	0	0	0	0	0
WFSS18	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	--?	0	0	0	0
WFSS19	--?	-	--?	-	-?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS20	-?	--	--?	-	-	-	0	-?	-?	0	-	+	0	0	0	0	0
WFSS21	-?	--	--?	-	-	-	0	--?	-?	0	-	+	0	0	0	0	0
WFSS22	--?	--	--?	-	--?	-	0	--?	--?	-	-	+	-?	0	0	0	0
WFSS23	--?	--	0?	-	--?	-	0	--?	--?	-	-	+	-?	0	0	0	0
WFSS24	-?	-	0?	-	-	-	0	0	0	-	-	+	0	0	0	0	0
WFSS25	--	-	0?	-	--?	-	0	0	--	0	-	+	--?	0	0	0	0
WFSS26	--?	-	--?	-	--?	-	0	--?	--?	-	-	+	0	0	0	0	0
WFSS27	--?	-	0	-	--?	-	0	--?	--	0	-	+	0	0	0	0	0
WFSS28	--?	--	0?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS29	--?	--	0?	-	--?	-	0	-?	--?	0	-	+	0	0	0	0	0
WFSS30	-?	-	0?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material Assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
WFSS31	--?	--	0?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS32	--?	--	0?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS33	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS34	0?	--	0?	-	-	-	0	0	0	0	-	+	0	0	0	0	0
WFSS35	--?	--	--?	-	--	-	0	-?	--	0	-	+	0	0	0	0	0
WFSS36	--?	--	--?	-	--?	-	0	0	--	0	-	+	0	0	0	0	0
WFSS37	-?	--	--?	-	-?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS38	-?	--	--?	-	-?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS39	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0
WFSS40	--?	--	--?	-	-?	-	0	0	-?	0	-	+	0	0	0	0	0
WFSS41	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	0	0	0	0	0

Table 9: SA scores for solid sand and gravel areas of search⁴

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
SSSG1	--?	--	--?	-	--	+	0	--?	--	-	+	+	--?/+	0	0	0	0
SSSG2	--?	--	--?	-	--?	+	0	--?	--?	-	+	+/--	--?/+	0	0	0	0
SSSG3	--?	--	--?	-	--	+	0	--?	--?	-	+	+	-?/+	0	0	0	0
SSSG4	-?	--	0?	-	--	-	0	-?	--?	0	-	+	+	0	0	0	0
SSSG5	--?	--	-?	-	--	+	0	-?	--?	-	+	+	+	0	0	0	0
SSSG6	--?	--	0?	-	--?	-	0	0	--	0	-	+	+	0	0	0	0
SSSG7	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
SSSG8	--?	--	0	0	--	-	0	0	--	0	-	+	+	0	0	0	0
SSSG9	-?	--	0?	-	--?	-	0	-?	-?	0	-	+	+	0	0	0	0
SSSG10	--?	--	--?	-	--	+	0	--?	--?	0	+	+	+	0	0	0	0
SSSG11	-?	--	--?	-	--?	+	0	--?	-?	0	+	+	+	0	0	0	0
SSSG12	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG13	--?	--	--?	0	--?	-	0	-?	--	0	-	+	-?/+	0	0	0	0
SSSG14	--	--	-?	0	--	+	0	0	--	0	+	+	--?/+	0	0	0	0

⁴ Note that areas of search SSSG4, SSSG5, SSSG13, SSSG14 and SSSG15 have the same boundaries as areas for search WFSS5, WFSS6, WFSS8, WFSS9 and WFSS10 respectively, therefore the assessments for both are identical, except with regards to SA13 (as sand and gravel is used in housing construction, whereas silica sand is not).

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
SSSG15	--	--	-?	-?	--	+	0	0	--	0	+	+	+	0	0	0	0
SSSG16	--?	--	0?	-	--?	-	0	-?	--	0	-	+	+	0	0	0	0
SSSG17	--?	--	--?	-	--	+	0	--?	--?	0	+	+	--?/+	0	0	0	0
SSSG18	--?	--	--?	-	--	+	0	--?	--?	0	+	+	+	0	0	0	0
SSSG19	-?	--	--?	-	-	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG20	-?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG21	--?	--	--?	-	--	-	0	--?	--?	-	-	+	-?/+	0	0	0	0
SSSG22	--?	--	0?	-	--	+	0	-?	--	0	+	+	--?/+	0	0	0	0
SSSG23	--?	--	--?	-	--?	+	0	--?	--?	-	+	+	+	0	0	0	0
SSSG24	--?	--	0	-	--?	-	0	0	--	0	-	+	+	0	0	0	0
SSSG25	--?	--	-?	-	--?	-	0	-?	--?	0	-	+	+	0	0	0	0
SSSG26	--?	--	0?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG27	--?	--	--?	-	--	+	0	--?	--	0	+	+	+	0	0	0	0
SSSG28	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG29	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
SSSG30	--?	--	--?	-	-	-	0	--?	--?	0	-	+	+	0	0	0	0

Table 10: SA scores for brick clay areas of search

AoS Ref	SA1: Landscape	SA2: Biodiversity and geodiversity	SA3: Cultural heritage, architecture and archaeology	SA4: Material assets	SA5: Natural Resources	SA6: Climate change and energy	SA7: Flooding	SA8: Access to Services	SA9: Health and amenity	SA10: Waste	SA11: Traffic and transport	SA12: Growth with prosperity for all	SA13: Provision of housing	SA14: Participation by all	SA15: Technology, innovation and inward investment	SA16: Population (skills and education)	SA17: Population (crime & fear of crime)
CLAY1	--?	--	--?	-	--	+	-?	--?	0	0	+	+	+	0	0	0	0
CLAY2	--?	--	--?	-	--	+	-?	--?	--?	-	+	--?/+	--?/+	0	0	0	0
CLAY3	--?	--	--?	-	--?	-	0	--?	--?	0	-	+	+	0	0	0	0
CLAY4	-?	--	--?	-	0	-	0	--?	0	0	-	+	+	0	0	0	0
CLAY5	--?	-	--?	-	--	+	0	--?	--?	-	+	+	--?/+	0	0	0	0
CLAY6	--?	--	--?	-	--?	+	0	--?	--?	0	+	+	+	0	0	0	0
CLAY7	--?	--	--?	--?	--	+	-?	--?	--?	0	+	+	--?/+	0	0	0	0
CLAY8	--?	--	--?	--?	--?	+	-?	--?	--?	0	+	+	+	0	0	0	0
CLAY9	--?	--	--?	--?	--?	+	-?	--?	--?	0	+	+	-?/+	0	0	0	0
CLAY10	--?	--	--?	--?	--	+	-?	--?	--?	-	+	+	--?/+	0	0	0	0
CLAY11	--?	--	--?	--?	--	+	0	--?	--?	0	+	+	--?/+	0	0	0	0
CLAY12	--?	--	--?	--?	--?	-	0	--?	--	0	-	+	--?/+	0	0	0	0
CLAY13	--?	--	--?	-	--?	+	-?	--?	--?	0	+	+	--?/+	0	0	0	0

SA Objective 1: Landscape

- 1.36 The vast majority of the areas of search will likely lead to a significant negative effect as the areas of search allocations are adjacent to AONBs and/or a number of receptors likely to be sensitive to landscape modifications and any coinciding visual impacts. These effects are uncertain as it depends on the exact scale, location and design of mineral development sites that come forward in these areas. These effects are likely to be exacerbated if several mineral sites are developed within close proximity of each other, and may have in-combination effects if any other large-scale developments come forward in the area.
- 1.37 Spatial Strategy Policies MLP 1-8 record both minor negative and positive effects since they require development to contribute to the quality, character and distinctiveness of the area, but allow minerals working that has the potential to adversely affect the local landscape. Mineral Supply Policies MLP 9-16 are expected to have mainly negative effects, due to the operations they facilitate and promote having the potential to adversely affect the local landscape. However, Development Management Policies MLP 17 (Prudent Use of Resources) and 23 (Landscape) generate significant positive effects against this objective due to the requirements they put in place to safeguard and strengthen landscape character and visual amenity for mineral activities. In addition, the MLP emphasises through a number of policies the need to create and enhance green infrastructure, which can be a strong contributor to landscape character and can help to minimise visual impacts of minerals development.
- 1.38 As such, the MLP is likely to result in a **cumulative mixed minor positive and minor negative effect** against this objective.

SA Objective 2: Biodiversity and Geodiversity

- 1.39 Most areas of search are expected to have significant negative effects on this SA objective. If several minerals sites were to come forward in a particular area, or if minerals sites come forward in proximity to other large-scale development, this could have cumulative effects on the biodiversity sites in that area, resulting in greater likelihood and magnitude of effects on these sites. Development of a number of smaller sites can also adversely affect habitat integrity and wildlife corridors, depending on their nature and location.
- 1.40 Most policies are expected to have minor or significant positive effects with uncertainty in relation to this objective. Policy MLP 3 (Green Infrastructure) promotes the protection and enhancement of networks of green infrastructure throughout the life of the development. This policy could work in tandem with Policies MLP 21 (Biodiversity) and MLP 26 (Geodiversity) to have an overall positive effect, as they promote the protection, conservation and enhancement of geodiversity and biodiversity with the integration of other green infrastructure components where appropriate.
- 1.41 These three policies could also help to mitigate potential negative effects by ensuring that biodiversity and geodiversity are taken into account when making decisions on applications for minerals development. The Biodiversity section of the MLP highlights that mineral development can also provide an opportunity to create valuable habitats and enhance existing networks, primarily through site restoration, but also during site preparation and working. The MLP also puts a lot of emphasis on provision and enhancement of GI, which is expected to conserve, enhance and create habitats across the county.
- 1.42 It is considered unlikely that all impacts on biodiversity can be avoided and therefore there will be some degree of loss or degradation of biodiversity related to minerals development, at least in the short and medium terms. However, the Minerals Local Plan includes policies to provide mitigation for any loss and promote net gain, therefore positive effects are possible in the longer term, through restoration. As such, **cumulative mixed minor positive and minor negative effects** are expected with regards to SA objective 2.

SA Objective 3: Cultural heritage, architecture and archaeology

- 1.43 The majority of areas of search are expected to have significant negative effects with uncertainty for this SA objective. If several mineral sites came forward, or if minerals sites come forward in proximity to other large-scale development, next to an area with a relatively high concentration of historic assets (such as a Conservation Area containing multiple listed buildings) or a key historic

environment asset to which the surrounding area forms an important setting, cumulative effects as a result of minerals extraction could occur. This increases the likelihood and magnitude of effects likely to occur on heritage assets located in/around the areas of search.

- 1.44 Around half of the policies are likely to have minor positive or significant positive effects for this SA objective. Policy MLP 3 (Green Infrastructure) and Policy MLP 22 (Historic Environment) are likely to work in combination to avoid and mitigate effects on heritage assets and their settings, as far as possible.
- 1.45 Policy MLP 23 (Landscape) is likely to work with Policy MLP 3 (Green Infrastructure) and Policy MLP 22 (Historic Environment) to have positive effects, as it is expected to help conserve the historic landscape and the settings of historic assets and settlements. These policies, along with the priorities for strategic corridors set out in Policies MLP 4 to MLP 8, could also help to enhance access to and understanding and enjoyment of the historic environment. Effects will remain uncertain, as there is always a risk of damage to undiscovered archaeological remains.
- 1.46 Overall, **cumulative minor positive uncertain** effects are expected.

SA Objective 4: Material assets

- 1.47 The majority of the areas of search are expected to lead to a minor negative effect as they are within the Green Belt and/or include Grades 2 or 3 agricultural land. Some may lead to loss of Grade 1 agricultural land, resulting in significant negative effects. Adverse effects on the Green Belt could be exacerbated if several sites come forward in the same area or if minerals sites come forward in proximity to other Green Belt development. However, the impacts of loss of best and most versatile agricultural land are likely to be additive, rather than synergistic.
- 1.48 In relation to SA objective 4, the Development Management policies are expected to result in a minor positive effect, as they include measures to minimise the potential impacts from minerals development. For example, Policy MLP 17 (Prudent Use of Resources) requires the 'need to manage or mitigate the built, historic, natural and water environment and amenity'. In addition, Policies MLP 18, 24 and 25 seek to protect and enhance the best and most versatile agricultural land, soil resources and the Green Belt. On the contrary, all 'Supply of Mineral Resources' policies, except MLP 9 (Contribution of Substitute, Secondary and Recycled Materials and Mineral Waste to Overall Minerals Supply) will lead to potential minor negative effects, as these policies allow for a supply of different types of minerals to come forward, which encourages primary extraction that could lead to adverse effects on best and most versatile agricultural land and/or Green Belt.
- 1.49 Policies MLP 31 and MLP 32 specifically relate to safeguarding minerals reserves, which will have significant positive effects on this SA objective.
- 1.50 Many of the potential effects are uncertain as they depend on the scale and location of mineral extraction sites. Due to the nature of minerals extraction, it is not likely impacts on the Green Belt and the best and most versatile agricultural land can be avoided entirely. Overall, a **cumulative significant positive and minor negative effect** is recorded.

SA Objective 5: Natural resources

- 1.51 The majority of the areas of search will likely lead to an uncertain significant negative effect, as the areas are situated adjacent to a waterbody, sensitive receptor and/or AQMA or within a Source Protection Zone. These effects are also likely to be exacerbated if several minerals sites go ahead within the same area or around a particular settlement, or if minerals sites come forward in proximity to other large-scale development.
- 1.52 Spatial strategy policies are generally likely to have significant negative uncertain effects (some mixed with minor positive effects). Mineral Supply policies tend to have minor negative effects, whereas the DM policies tend to have minor positive effects and the safeguarding policies have a mix of the two. Negative effects generally relate to impacts on water quality, including where development may occur within a Source Protection Zone. However, depending on the site proposal and green infrastructure provision at the restoration phase, there may be opportunities to protect the quality of watercourses.

- 1.53 A number of policies are likely to lead to a positive effect, such as Policies MLP 17, 19, 27, 28, and 29 as they play a role in mitigating the negative impacts on water and air quality and could improve these in the long term.
- 1.54 Overall, the mitigation provided by policies in the MLP is expected to mitigate any potential adverse effects on air and water quality and may help to improve these in the long term. Therefore, a **cumulative minor positive effect** is recorded.

SA Objective 6: Climate change and energy

- 1.55 Most of the areas of search are expected to have a minor negative effect on this SA objective, as they are likely to require the use of fossil-fuelled heavy vehicle haulage. This could have cumulative effects on climate change and energy, such as by increasing CO₂ emissions due to traffic congestion, particularly if multiple sites come forward that use the same transport routes or other development comes forward in the area, particularly employment development that generates HGV movements. Most other areas of search are expected to result in minor positive uncertain effects, as these have a water link that runs through or adjacent to the area, which could provide a sustainable mode of transport, although this is uncertain, as it will depend on loading/unloading facilities and route availability between source and destination.
- 1.56 Most policies are expected to have a minor positive, mixed minor positive and negative effect with uncertainty or negligible/no effect on this SA objective. Policy MLP 17 (Prudent Use of Resources) promotes the sustainable use of water and energy and requires on-site energy generation from renewable and low-carbon sources to be optimised. This could work in tandem with Policy MLP 3 (Green Infrastructure), which promotes the protection and enhancement of networks of green infrastructure throughout the life of the development, and Policy MLP 28 (Flooding) which promotes the resilience of people and property on site or elsewhere to flood risk, with an additional consideration of climate change, to have an overall mixed positive and negative effect with uncertainty.
- 1.57 Provision and enhancement of GI is a strong theme in the MLP, which is expected to help mitigate potential negative effects by ensuring that adverse effects of climate change, such as increased flooding, are avoided or reduced.
- 1.58 It is considered unlikely that all impacts on climate change and energy can be avoided and therefore there will be some degree of increased CO₂ emissions related to minerals development. However, development management policies are expected to promote sustainable waste and energy use. As such, **cumulative mixed minor positive and minor negative effects** are expected with regards to SA objective 6.

SA Objective 7: Flooding

- 1.59 The majority of the areas of search are expected to have a negligible effect on this SA objective, as all sand and gravel based mineral extraction (and associated infrastructure) will have a negligible effect on flooding. All other areas of search (for non-sand and gravel based minerals) could result in development occurring in high-risk flood prone areas and contributing to fluvial and surface flooding, which could put properties at risk of flooding, particularly if several workings for non-sand and gravel based minerals came forward in one area or if minerals sites come forward in proximity to other development that could increase flood risk.
- 1.60 Most policies are expected to have a minor positive or minor negative effect with uncertainty or negligible/no effect on this SA objective. Policy MLP 28 (Flooding) promotes the resilience of people and property on site or elsewhere to flood risk, with an additional consideration of climate change and could work together with Policy MLP 27 (Water Quality and Quantity) which promotes the protection and enhancement of quality, quantity and flow of surface water and groundwater resources and the strong support for GI provision and enhancement throughout the plan (including Policy MLP 3).
- 1.61 Policy MLP 28 (Flooding), Policy MLP 27 (Water Quality and Quantity) and Policy MLP 3 (Green Infrastructure) could help to mitigate potential negative effects and improve flood risk management by building resilience to flood risk.

- 1.62 Overall, the mitigation provided through policies is expected to be sufficient to ensure flood risk is not exacerbated by the MLP and may contribute to improved flood management, therefore **cumulative minor positive effects** are expected with regards to SA objective 7.

SA Objective 8: Access to services

- 1.63 For this SA objective, the majority of areas of search are likely to have significant negative effects with uncertainty. If multiple mineral sites came forward within areas of search in close proximity to settlements, there could be an increased likelihood of minerals extraction creating a physical barrier and/or diverting or severing Public Rights of Way. This may significantly compromise the ability of people to access these services. This could be further exacerbated if minerals development comes forward in proximity to other development that could create a physical barrier or require re-routing of public rights of way.
- 1.64 The majority of policies are likely to have mixed, negligible or no impact for this SA objective. Policy MLP 20 (Access and Recreation) is expected to have significant positive effects by ensuring that rights of way and public access provision are protected and enhanced should minerals extraction sites come forward. The strong support for GI throughout the MLP is expected to work with Policy MLP 20 to conserve and enhance active travel links, although it is not considered likely that these will significantly enhance access to services.
- 1.65 In addition, Policy MLP 21 (Biodiversity), Policy MLP 28 (Flooding) and Policy MLP 29 (Transport), by ensuring that any mineral sites that come forward take full consideration of the environmental setting they are in and its transport links, reduce the potential for people's ability to access services to be compromised.
- 1.66 Overall, a **cumulative negligible effect** is expected in relation to SA objective 8.

SA Objective 9: Health and amenity

- 1.67 The majority of the areas of search will likely lead to a significant negative effect, as they are generally within close proximity of sensitive receptors that could be affected by air pollution, noise and other emissions, including existing residential areas and areas allocated for housing in district Local Plans. These effects are likely to be exacerbated if several minerals sites come forward around a particular settlement. Effects are uncertain as it will depend on the scale, location and design of the extraction sites.
- 1.68 Spatial strategy and safeguarding policies are generally likely to have mixed effects on this SA objective. This includes significant positive effects for most strategic corridors, as one of the green infrastructure priorities is to provide accessible semi-natural greenspace. Mineral supply policies are likely to have minor negative uncertain effects and DM policies are likely to have negligible/no effect or a minor positive effect. In the short term, impacts on health are likely to be negative as mineral extraction could lead to increased traffic, noise and emissions that could compromise health. However, the MLP will mitigate these to some extent through other policies such as Policy MLP 19 (Amenity). In addition, Policy MLP 20 (Access and Recreation) and the emphasis of the plan on provision and enhancement of GI, are likely to have a significant positive effect on health, as publicly accessible greenspace encourages a healthy lifestyle through outdoor exercise and recreation.
- 1.69 It is also possible that minerals developments may improve health and amenity in the long term through the delivery of green infrastructure, enhanced public rights of way, or improved access to recreation as part of the development or restoration of sites.
- 1.70 The MLP is expected to lead to mineral extraction that is well operated, and mitigation measures implemented should be sufficient to avoid any potential adverse, long-term effects on health and local amenity and may provide new areas for recreation in the long term. Overall, a **cumulative minor positive effect** is expected.

SA Objective 10: Waste

- 1.71 The majority of the areas of search are expected to have no effect with a few areas of search expected to have minor negative effects on this SA objective. If minerals development comes forward within close proximity to waste sites, this could restrict operations and expansion of the

waste site and have cumulative adverse effects on a range of sustainability factors, including increased traffic levels and associated emissions and health and amenity in that area.

- 1.72 Most policies are expected to have a negligible or a mixed minor positive and minor negative with uncertainty on this SA objective. Policy MLP 9 (Recycled & secondary materials) promotes development which would contribute to the overall sustainable supply of materials and thereby reduce the overall need for the extraction of primary minerals.
- 1.73 Overall, the Minerals Local Plan is expected to have **cumulative negligible effects** on SA objective 10.

SA Objective 11: Traffic and transport

- 1.74 Most areas of search are expected to have a minor negative effect on this SA objective, whilst some are expected to have minor positive uncertain effects. Positive effects are associated with areas of search that have a water link that runs through or adjacent to the area, which could provide an alternative sustainable mode of transport, although this is uncertain, as it will depend on loading/unloading facilities and route availability between source and destination. However, development in other areas of search will require road-based movement by HGVs. This could have cumulative effects on traffic and transport, such as increased CO₂ emissions as a result of increased traffic congestion, particularly if multiple sites come forward that use the same transport routes or other development comes forward in the area, particularly employment development that generates HGV movements.
- 1.75 Most policies are expected to have a minor positive or minor negative effect with uncertainty or no/negligible effect on this SA objective. Policy MLP 29 (Transport) promotes mineral development that uses the most sustainable transport options and which will not have an unacceptable adverse effect on transport safety or congestion. This policy could help to mitigate potential negative effects by ensuring that the need to travel is reduced. In addition, policies that seek to protect and enhance public rights of way, including Policies MLP 3, MLP 20 and the GI theme running through the plan, may help to encourage residents to travel by sustainable modes of transport. However, the effect of this on traffic is likely to be limited, as the MLP will not necessarily help to provide links that are well related to key destinations.
- 1.76 Overall, the Minerals Local Plan is expected to have **cumulative minor negative uncertain effects** on SA objective 11.

SA Objective 12: Growth with prosperity for all

- 1.77 The vast majority of areas of search are likely to have a minor positive effect on this objective as minerals development will provide employment opportunities. However, the presence of multiple minerals development sites in close proximity to areas allocated for employment development or existing employment sites could produce cumulative adverse effects on employment which may outweigh the potential benefits of any increased employment through mineral extraction.
- 1.78 Around half of the policies (mainly DM policies) are likely to have negligible or no impact on this objective. Spatial strategy and safeguarding policies are generally expected to have mixed positive and negative effects and Mineral Supply policies are likely to have minor positive effects. There is potential for Policy MLP 19 (Amenity) to work in combination with Policy MLP 3 (Green Infrastructure) and Policy MLP 29 (Transport) to ensure that employment areas and their connecting transport links are protected from potential adverse effects of minerals development.
- 1.79 Overall, the MLP is expected to provide new employment opportunities and raw materials for use in construction and industry, therefore a **cumulative minor positive effect** is expected.

SA Objective 13: Provision of housing

- 1.80 Almost half of the areas of search are likely to have a minor positive effect on the provision of housing, as they could provide minerals used in housing construction. The remaining areas of search are likely to have mixed minor positive and minor negative effects or no impacts on the SA objective. If multiple sites for minerals development came forward in close proximity to areas allocated for housing, this could increase the likelihood of the residential amenity of development (or existing housing) being adversely affected.

- 1.81 The majority of policies are likely to have a positive effect on this SA objective. It is likely that Policy MLP 23 (Landscape) and Policy MLP 19 (Amenity) will work in combination to ensure that residential amenity of developments and existing housing are maintained and enhanced, should mineral sites come forward.
- 1.82 There is also potential for Policy MLP 10 (Sand and Gravel), Policy MLP 11 (Crushed Rock) and Policy MLP 12 (Brick Clay) to work in combination to ensure minerals development is justified by providing and enhancing Worcestershire's productive capacity for minerals that would contribute to housing construction.
- 1.83 Overall, a **cumulative minor positive effect** is expected.

SA Objective 14: Participation by all

- 1.84 All of the areas of search and policies are likely to have no effect on the participation by all.
- 1.85 Overall, the Minerals Local Plan is expected to have **no effect** on this SA objective.

SA Objective 15: Technology, innovation and inward investment

- 1.86 All of the areas of search and most of the policies are likely to have no effect on technology, innovation and inward investment, although a small number of policies could have minor positive effects. These are mixed with minor negative effects for the safeguarding policies.
- 1.87 Overall, the Minerals Local Plan is expected to have a **cumulative negligible effect** on this SA objective.

SA Objective 16: Population (skills and education)

- 1.88 Most policies and areas of search are unlikely to have any direct effects on this SA objective. However, minerals working can reveal previously unknown archaeology or geodiversity features, which could provide opportunities for learning. In addition, the strategic corridor policies, Policies MLP 4 to MLP 8, all include a priority to incorporate information or routes that will increase the legibility and understanding of the geodiversity, heritage and character of the area, which is expected to promote access to and understanding of the historic environment and local geodiversity.
- 1.89 As such, overall cumulative minor positive effects are expected.

SA Objective 17: Population (crime & fear of crime)

- 1.90 All of the areas of search and policies are likely to have no effect on population (crime & fear of crime).
- 1.91 Overall, the Minerals Local Plan is expected to have **no effect** on this SA objective.

Short, medium and long term effects

- 1.92 Many of the effects of the MLP could differ over the short, medium and long term. Different sites will come forward at different times, and the duration of workings will vary according to a range of factors, including the prevailing economic conditions and the site operator's particular business plan. In general, minerals sites will be worked for long periods (a minimum of five years, and possibly longer than forty years). 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. On the other hand, such policies could have short term positive effects for environmental factors, by preventing development that could have negative environmental effects. Over the longer term, the protection of resources could eventually help to facilitate such development and so have a positive impact on economic and housing SA objectives. Some negative environmental effects, especially on the SA objectives for landscape, biodiversity and geodiversity, and cultural heritage, architecture and archaeology, are likely to arise in the short term from mineral workings. In the longer term, however, sensitive restoration can lead to positive effects, as sites are restored to their former condition (or restored to exceed their former environmental value through achieving net gain).

Difficulties encountered

- 1.93 The main difficulties encountered in carrying out the SA are detailed below. A more detailed account of these is detailed in Chapter 3 of the main report.
- 1.94 The MLP sets the overall approach to development, and is not intended to provide detailed information on exactly how each site will be operated. As such, the SA tends to draw 'broad-brush' conclusions, and many of the impacts of the MLP will not be known until more detail is available. The MLP is a strategic document, and the nature of SA is to identify significant effects. More detailed appraisal regimes, such as the standard planning application process, and Environmental Impact Assessment, also have a valuable role to play in ensuring that development is sustainable.
- 1.95 Limitations also arise as a result of the SA being a strategic, desk-based appraisal. Because spatial option appraisals have been carried out using GIS and other desktop resources, many of the distances given in the detailed matrices relate to 'point data', rather than shapes. This means, for example, that the distance given from a listed building is the distance from a single point within the curtilage of that listed building.
- 1.96 For some types of impacts, screening for likely significant effects has been determined on a proximity basis, using GIS data to determine the proximity of potential receptors to the spatial options that are the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts might be felt. As such, LUC and WCC have used professional judgement to estimate reasonable distance thresholds.

Mitigation and Monitoring

- 1.97 The sustainability impacts arising from implementation of the MLP will primarily be monitored through a series of existing monitoring regimes, including the Minerals and Waste Local Development Framework Authority Monitoring Report. Other agencies, including the Environment Agency, also have a role to play in monitoring various issues related to the plan, such as compliance of minerals sites with environmental permits and regulations. The SA process includes specific monitoring indicators, set out in the SA Scoping Report, that help to identify sustainability impacts. These are sometimes more general than the dedicated minerals indicators set out in the MLP, and help to build a fuller picture of sustainability in Worcestershire. **Table 11** summarises the negative effects that may arise as a result of the MLP, mitigation measures included within the MLP and proposed monitoring indicators for each SA objective.

Table 11: Potential negative effects of the MLP, potential mitigation measures and monitoring indicators

SA Objective	Potential negative effects	Mitigation	Potential monitoring indicators
SA Objective 1: Landscape	Adverse landscape and visual impacts could arise through creation of new workings, such as quarries, and associated infrastructure, and also through storing of arisings.	Policy MLP 3 (Green Infrastructure), Policy MLP 17 (Prudent Use of Resources), Policy MLP 18 (Green Belt), Policy MLP 19 (Amenity) and Policy MLP 23 (Landscape), should help to ensure that any landscape and visual impacts are taken into account.	<ul style="list-style-type: none"> Percentage of Total New Homes Built on Brownfield Land Condition of the Landscape Planted ancient woodland sites restored to native woodland
SA Objective 2: Biodiversity and Geodiversity	Minerals development could lead to direct loss of habitats as a result of minerals workings. Minerals workings could also adversely affect habitats and species through increased noise, light and visual disturbance, as well as increased levels of air pollution and particulates.	Policy MLP 3 (Green Infrastructure), Policy MLP 21 (Biodiversity) and Policy MLP 26 (Geodiversity), should help to ensure that biodiversity and geodiversity are taken into account.	<ul style="list-style-type: none"> Condition of European nature conservation sites Extent and condition of SSSIs Number of permitted developments coinciding with, or adjacent to, a designated site
SA Objective 3: Cultural heritage, architecture and archaeology	Minerals development could lead to direct loss of historic assets, including damage to archaeological remains. Development could also adversely affect the settings of heritage assets.	Policy MLP 3 (Green Infrastructure) and Policy MLP 22 (Historic Environment) and Policy MLP 23 (Landscape), should help to ensure that the historic environment is taken into account.	<ul style="list-style-type: none"> Number of grade I and II* listed buildings 'at risk' Proportion of undesignated heritage assets at risk Number of permitted developments coinciding with, or adjacent to, a designated site
SA Objective 4: Material assets	Minerals development could lead to the direct loss of the Green Belt and agricultural land.	Policy MLP 3 (Green Infrastructure), Policy MLP 17 (Prudent Use of Resources), Policy MLP 18 (Green Belt), Policy MLP 24 (Soils) and Policy	<ul style="list-style-type: none"> Amount of land falling within Agricultural Land Classifications (hectares) Hectares of Green Belt land Number of permitted developments that would compromise the purposes of the Green Belt

SA Objective	Potential negative effects	Mitigation	Potential monitoring indicators
		MLP 25 (Agricultural Land), should help to ensure that material assets are taken into account.	<ul style="list-style-type: none"> Number of non-mineral developments permitted which would sterilise locally or nationally important minerals resources, sites or supporting infrastructure
SA Objective 5: Natural resources	Minerals development could lead to the pollution of water sources as a result of mineral workings. The plan could also exacerbate air quality issues in AQMAs due to increased heavy vehicle traffic and associated air pollution.	Policy MLP 3 (Green Infrastructure), Policy MLP 17 (Prudent Use of Resources), Policy MLP 19 (Amenity), Policy MLP 27 (Water Quality and Quantity), Policy 28 (Flooding) and Policy 29 (Transport) are expected to mitigate potential negative effects arising in relation to natural resources.	<ul style="list-style-type: none"> Number of Air Quality Management Areas (AQMAs) in Worcestershire Proportion of watercourses meeting 'good' status. Water resource availability Hectares of potentially contaminated land in Worcestershire Annual production of land-won aggregates (sand and gravel) Annual production of land-won aggregates (crushed rock)
SA Objective 6: Climate change and energy	Opportunities to develop renewable and low-carbon energy on a minerals area of search could be limited by the need to protect and enhance environmental assets, such as landscape or the historic environment. In addition, minerals development could lead to increased CO ₂ emissions if there are no alternative sustainable means of transport within or adjacent to the area. The risk of flooding could also be increased as the effects of climate change intensify.	Policy MLP 17 (Prudent Use of Resources), Policy MLP 27 (Water Quality and Quantity), Policy MLP 3 (Green Infrastructure) and Policy MLP 28 (Flooding) are expected to ensure that climate change is mitigated and energy efficiency is promoted. Policy MLP 29 (Transport) could make reference to supporting new technologies, such as electric vehicles.	<ul style="list-style-type: none"> CO₂ emissions per capita Total CO₂ emissions by local authority Total final energy consumption by local authority (GWh)
SA Objective 7: Flooding	Depending on the type of mineral being extracted, the MLP will mostly likely have a negligible	Policy MLP 28 (Flooding), Policy MLP 27 (Water Quality and Quantity) and Policy MLP 3	<ul style="list-style-type: none"> Properties at risk of flooding

SA Objective	Potential negative effects	Mitigation	Potential monitoring indicators
	effect. However, for non sand and gravel based minerals, development could occur in high-risk flood prone areas and contribute to fluvial and surface flooding, which could put properties at risk of flooding.	(Green Infrastructure) are expected to ensure that development is resilient to flood risk, and does not increase flood risk for people and property.	
SA Objective 8: Access to services	Minerals development could restrict access to vital services by severing or reducing rights of way, or creating a physical barrier therefore compromising the ability of people to access health, educational or other key local services.	Policy MLP 3 (Green Infrastructure) and Policy MLP 20 (Access and Recreation) are expected to ensure that rights of way and public access provision are protected and enhanced.	<ul style="list-style-type: none"> Satisfaction rates with minerals and waste planning policy consultation
SA Objective 9: Health and amenity	Minerals development could adversely affect the health of persons that live or work in close proximity to an area of search through air pollution and particulates and noise, dust or other emissions. The plan could also lead to loss of or disturbance to recreational opportunities, PROWs and outdoor leisure and recreation facilities.	Policy MLP 3 (Green Infrastructure), Policy MLP 18 (Green Belt), Policy MLP 19 (Amenity) and Policy MLP 20 (Access and Recreation) are expected to ensure that health and amenity are protected and improved.	<ul style="list-style-type: none"> Proportion of population in each ONS general health category Number of formal complaints regarding loss of amenity due to minerals development.
SA Objective 10: Waste	Minerals development could adversely affect waste site operations, by limiting operation and expansion of the waste site. Minerals development and waste sites in close proximity could have cumulative negative effects	Policy MLP 9 (Recycled & secondary materials) and Policy MLP 24 (Soils) are expected to encourage use of recycled materials and soils. See also mitigation for other SA	<ul style="list-style-type: none"> Household waste produced per head of population Percentage/Amount of household waste recycled or composted

SA Objective	Potential negative effects	Mitigation	Potential monitoring indicators
	on a range of sustainability factors, including traffic levels and associated emissions and health and amenity.	objectives where minerals and waste sites could have in-combination effects on environment or amenity. The MLP could make reference to ensuring that minerals development does not limit the ability of waste sites to carry out their operations or restrict opportunities to expand sites for sustainable waste management (such as recycling plants).	
SA Objective 11: Traffic and transport	Minerals development could lead to increased traffic congestion and increased CO ₂ emissions if there are no opportunities for non-road based transport within or adjacent to the area of search.	Policy MLP 29 (Transport) is expected to promote transport of minerals by sustainable means, where possible.	<ul style="list-style-type: none"> • Method of travel to work. • CO₂ emissions in the county per capita arising from road transport
SA Objective 12: Growth with prosperity for all	Minerals development could lead to an adverse effect on areas allocated for employment development. In addition, minerals development could adversely affect existing employment sites in terms of the wellbeing and amenity of those visiting or working at nearby employment sites.	Policy MLP 3 (Green Infrastructure), Policy MLP 19 (Amenity) and Policy MLP 29 (Transport) are expected to help ensure amenity at employment sites is not compromised by minerals development. The safeguarding policies (MLP 31 and MLP 312) are expected to help ensure that minerals development does not prevent employment allocations coming forward and vice versa.	<ul style="list-style-type: none"> • Average Worcestershire household income • Percentage employment rate (working age) • GVA per hour worked in Worcestershire
SA Objective 13: Provision	Minerals development could lead	Policy MLP 23 (Landscape) and	<ul style="list-style-type: none"> • New affordable homes built per year

SA Objective	Potential negative effects	Mitigation	Potential monitoring indicators
of housing	to a negative effect on areas allocated for the provision of housing by compromising residential amenity.	Policy MLP 19 (Amenity) are expected to help ensure residential amenity is maintained. The safeguarding policies (MLP 31 and MLP 32) are expected to help ensure that minerals development does not prevent housing allocations coming forward and vice versa.	
SA Objective 14: Participation by all	No potential negative effects were identified.	No mitigation necessary.	<ul style="list-style-type: none"> • MLP consultation response rates
SA Objective 15: Technology, innovation and inward investment	No potential negative effects were identified.	No mitigation necessary.	<ul style="list-style-type: none"> • Number of new business enterprises
SA Objective 16: Population (skills and education)	No potential negative effects were identified.	No mitigation necessary.	<ul style="list-style-type: none"> • Population estimates • Demographic breakdown of population
SA Objective 17: Population (crime & fear of crime)	No potential negative effects were identified.	No mitigation necessary.	<ul style="list-style-type: none"> • Crimes per 1,000 people • Perceptions of anti-social behaviour

Next Steps

- 1.98 The SA Report and this accompanying NTS will be available for consultation alongside the Fourth Stage Consultation document, from 17th December 2018 to 8th February 2019.
- 1.99 Following the consultation on the Fourth Stage Consultation MLP, the responses received and the findings of the SA will be reviewed and will inform the Pre-Submission Worcestershire Minerals Local Plan. An updated SA Report will also be prepared to accompany that version of the MLP.
- 1.100 Once finalised, the MLP will be submitted for examination and, providing the plan is found sound, adopted by Worcestershire County Council. Upon adoption, an SA statement will be produced to explain how the SA has influenced the MLP and how sustainability effects will be monitored.

LUC

November 2018