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Minerals Local Plan for Gloucestershire (2018-2032): Publication Plan

Sustainability Appraisal including Strategic Environmental Assessment: Non-Technical Summary

Non-Technical Summary

Prepared by LUC

April 2018

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Introduction

1.1 This Non-Technical Summary of the Sustainability Appraisal/Strategic Environmental Assessment Report relates to the Minerals Local Plan for Gloucestershire (2018-2032): Publication Plan for Gloucestershire: Publication Plan (May 2018) (referred to for simplicity as the “MLP”), which is being produced by Gloucestershire County Council (GCC). The MLP sets out the long-term vision with associated objectives and strategy for the county as well as the policies that are required to deliver that vision over the period up to the end of 2032 to ensure that sufficient permitted reserves of crushed rock and sand and gravel are maintained.

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. GCC has commissioned independent consultants (LUC) to carry out the SA of the emerging Minerals Local Plan on its behalf. This Non-Technical Summary relates to the full SA Report for the MLP, and should be read alongside those two documents.

The Gloucestershire Minerals Local Plan

1.3 GCC as Minerals Planning Authority (MPA) and Waste Planning Authority (WPA) has been working on a Minerals & Waste Development Framework that will replace its currently adopted Minerals Local Plan and Waste Local Plan. GCC adopted its Waste Core Strategy in November 2012. The County Council prioritised the Waste Core Strategy over the Mineral Core Strategy (MCS) in light of advice from the Government Office for the South West (GOSW). The National Planning Policy Framework (NPPF)¹ now advises (paragraph 156) that planning authorities should produce Local Plans and that a series of separate Development Plan Documents should only be produced where justified. Therefore, GCC is now producing a single Minerals Local Plan (formerly the Minerals Core Strategy) which will be a plan for the future development of minerals in Gloucestershire. Below is a list of the minerals related documents that have been produced in earlier stages:

- MCS Issues and Options consultation September 2006 - designed to generate public debate on mineral issues facing the county and to seek out possible ways of resolving them.
- MCS Preferred Options consultation January 2008 - involved setting out the 'direction of travel' for the planning framework and core policies.
- Gloucestershire Minerals Local Plan Site Options and Draft Policy Framework Consultation Document June 2014 – drew together feedback from previous consultations on the Vision Strategic Objectives and some preferred policy options and additional evidence. The document also identified new potential sites allocations and mineral safeguarding options.
- Draft Minerals Local Plan for Gloucestershire, Pre-Publication Consultation Draft September 2016 – This document was a draft version of the MLP. This drew on previous stages of plan making, consultation responses to these, the SA and Habitats Regulations Assessment (HRA) and additional evidence documents to formulate proposed policies and site allocations for the MLP.

1.4 The Publication version of the MLP, which this SA assesses, is the version of the plan that the Council intends to submit for Examination. Examination is the process whereby an Inspector, acting on behalf of the Secretary of State, considers whether the plan is fit for adoption. The Publication MLP is an update of the Pre-Publication version of the Local Plan and has refined the contents of the plan based on feedback from previous consultations and the most up to date evidence.

1.5 The MLP includes:

¹ DCLG (March, 2012). National Planning Policy Framework.

- A Spatial Portrait – identifies the current social, economic and environmental characteristics of Gloucestershire County and also describes the local minerals economy and its geographic distribution.
- Drivers for change – discusses what needs to be improved in the county as well as identifying current and future challenges for the local minerals economy.
- Vision and Objectives – sets out the county's aspiration in relation to minerals for 2032 (when the plan period ends) and from the Vision seven Objectives have been identified.
- Strategy – uses the Vision and Objectives to steer the policy content.
- Policies – policies are proposed to replace those in the 2003 Gloucestershire Minerals Local Plan. Most of these policies are intended to continue the supply of minerals in the county (the future supply of minerals) and allocate areas for future aggregate working, whereas other policies ensure land that could be used for mineral workings is not threatened by other development occurring on or near to potential sites (mineral safeguarding). The remaining majority of the policies are intended to be used for development management purposes and cover all of the policy issues covered in the 2003 adopted Gloucestershire Minerals Local Plan.

Sustainability Appraisal and Strategic Environmental Assessment

1.6 GCC is required by law to carry out both Sustainability Appraisal and Strategic Environmental Assessment (SEA) of the Gloucestershire Minerals Local Plan, and has appointed LUC to do this on its behalf. The requirements for SEA are set out in the Environmental Assessment of Plans and Programmes Regulations 2004 (known as the SEA Regulations). The Government recommends that these two requirements are met through one integrated process, referred to as Sustainability Appraisal (or SA).

1.7 The purpose of SA is to promote sustainable development through the better integration of sustainability considerations into the preparation and adoption of plans. It should be viewed as an integral part of good plan making, involving ongoing iterations to identify and report on the potential social, economic and environmental effects of the plan and the extent to which sustainable development is expected to be achieved.

1.8 This Non-Technical Summary relates to the SA Report for the MLP Publication Plan (April 2018). The SA Report has been produced alongside the emerging MLP in order to provide sustainability guidance during its development.

1.9 SA should be conducted in accordance with Government guidance, and must meet the requirements of the European Strategic Environmental Assessment Directive². The approach taken to the SA of the Gloucestershire MLP is based on current best practice and the following guidance:

- Practical Guide to the SEA Directive, Office of the Deputy Prime Minister (September 2005).
- Sustainability Appraisal guidance included in DCLG's Plan Making Manual, Planning Advisory Service website (last updated September 2009). *Note this guidance was used for earlier stages of the SA, but has been superseded by the recent National Planning Practice Guidance published March 2014.*
- Sustainability Appraisal guidance included in the Government's National Planning Practice Guidance website (2014)³.
- RTPI Practice Advice: Strategic Environmental Assessment, Levett-Therivel on behalf of RTPI (2018).

1.10 A description of the method used in carrying out the SA of the Gloucestershire MLP is set out below.

² European Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'.

³ <http://planningguidance.planningportal.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/>

Stage A: Scoping

1.11 GCC undertook the Scoping stage of the SA for the MLP in-house. As the GCC Sustainability Appraisal Scoping Report was last updated in 2009, an update on the Sustainability Appraisal Scoping Report was required to address the work now being resumed on the MLP. GCC updated the Scoping Report early in 2013, with a final version published in July 2013⁴. This updated Scoping Report describes the baseline information and key sustainability issues for Gloucestershire in relation to minerals and waste and sets out the SA Framework (sustainability objectives) against which potential effects will be assessed. The development of the SA Framework which has been used for the appraisal of the MLP, including the minerals site options, is presented further ahead in this Non-Technical Summary.

1.12 The SA Scoping Report was published for a five week consultation period (March-May 2013) with the statutory consultees under the SEA Regulations (Natural England, the Environment Agency and English Heritage). GCC updated the Scoping Report after the consultation to address and take account of all responses received during the consultation (see Appendix 1 of the full SA Report for the summary of consultation responses received and how they have been addressed).

Stage B: Developing and Refining Options and Assessing Effects

1.13 Developing options for a plan is an iterative process undertaken by the local planning authority usually involving a number of consultations with 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 sites 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. However, the SEA and 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, deliverability, conformity with national policy will also be taken into account by plan-makers when selecting preferred options for their plan.

Alternatives considered in the preparation of the MLP to date

1.14 The options or reasonable alternatives being considered during development of the MLP include the alternative policy approaches for the strategic policies and development management policies, and minerals site options. While GCC has made a decision to prepare a new style MLP, there were two stages of developing and refining minerals planning options as part of the earlier work on the Minerals & Waste Development Framework as outlined below. Appendix 2 of the full SA Report sets out in more detail the audit trail of the reasonable alternatives considered and discounted by GCC for each policy area in the MLP at each stage in its development.

Minerals Core Strategy Issues & Options (2005-2007)

1.15 The initial Issues and Option stage began in 2005 with the publication of a minerals newsletter, evidence gathering, and two local stakeholder forums in July 2006. The key topics debated at the forums included: the spatial vision and strategic objectives for the Core Strategy; the future of aggregate working across the County; and important local issues affecting communities in and around the mineral resource areas of the Cotswolds, Forest of Dean, and Upper Thames Valley.

1.16 The outcomes of forums were collated and views and ideas expressed were incorporated into two Issues and Options consultation papers which were published in September 2006. Both documents covered the same issues (one in more technical detail), and comprised the following sections:

- Section 1: A general introduction.
- Section 2: A spatial portrait of Gloucestershire.
- Section 3: Minerals planning policy background.

⁴ Gloucestershire County Council (July 2013). Gloucestershire Minerals Local Plan, Sustainability Appraisal, Scoping Report Update 4.

- Section 4: Minerals in Gloucestershire, including information on geology, resources, sales, sites and reserves.
- Section 5: A presentation of the issues and options.

1.17 Twelve key issues were identified for the Minerals Core Strategy in Section 5 of the Issues and Options consultation paper, and each had a number of options set out for dealing with the issue. The options considered for each of the key issues are listed in Appendix 2 of the full SA Report, along with a summary of the SA findings from the Issues and Options SA Report (2006), and the reasons for selecting or discounting each option to take forward to the next stage (Preferred Options).

Minerals Core Strategy Preferred Options (2008)

1.18 The Minerals Core Strategy Preferred Options consultation document was published in January 2008, based on the outcomes of the Issues and Options consultation and evidence gathered. The document set out a spatial vision, strategic objectives, as well 14 Preferred Options for the Minerals Core Strategy policies under the following headings:

- Provision & Supply
- Reuse & Recycling
- The Environment
- People
- Reclamation
- Resource Management
- Transport

1.19 A public consultation on the Preferred Options version of the Minerals Core Strategy and the accompanying SA Report took place between 31st January 2008 and 13th March 2008. A number of technical evidence papers were also prepared to support the consultation⁵.

1.20 The Preferred Options set out in the 2008 Preferred Options Consultation document are listed in Appendix 2 of the full SA Report, showing how they relate to the options considered in the 2006 Issues and Options consultation document. A summary of the SA findings from the Preferred Options SA Report (2008) is also included in Appendix 2 of the full SA Report.

Minerals Local Plan Site Options and Draft Policy Framework Consultation Document (June 2014)

1.21 This stage of the MLP drew together the outcomes of the earlier two MCS consultation stages outlined above, along with additional evidence in a format that enabled further input from stakeholders prior to a draft of the plan being produced.

1.22 Where certain aspects of the plan had already been consulted upon in 2006 and 2008 (such as the Vision, Strategic Objectives and preferred policy options) some preferred policy approaches were suggested in the 2014 MLP Consultation Draft. However, some aspects of the plan were totally new (such as the inclusion of potential site allocations and minerals safeguarding) and these areas were presented to stakeholders as individual options in the 2014 MLP Consultation Document.

1.23 The appraisal of Minerals Local Plan Site Options and Draft Policy Framework Consultation Document (June 2014) found that a range of significant effects, both positive and negative, were expected as a result of the Plan. Potentially significant positive effects were identified for all of the SA objectives from at least one of either of the proposed vision, strategic priorities or policies. Potentially significant negative effects were only identified in relation to some of the crushed rock and sand and gravel site options, but none of the proposed policies. A consultation on this document occurred in June to August 2014 and the Additional Site consultation during February – March 2015). Comments from these consultations were taken forward to the next stage of the Minerals Local Plan (September 2016).

⁵ Available at: <http://www.goucestershire.gov.uk/extra/article/107668/Evidence-Base-for-the-MCS>

Draft Minerals Local Plan for Gloucestershire 2018 – 2032 (June 2016)

1.24 This stage of the MLP included draft policies and site allocations, drawing on the Site Options and Draft Policy Framework Consultation Document, consultation comments on this, SA work and evidence base documents. The document set out the draft Vision, objectives, strategy, policies and site allocations.

1.25 Each of the proposed vision, objectives and policies and site allocations were subjected to appraisal against the SA objectives. The SA found that, in general, the Draft MLP has a wide range of positive and significant positive effects on the SA objectives. Some potential significant negative and minor negative effects were identified, mainly in relation to the allocation of particular sites for crushed rock or sand and gravel extraction. The potential severity of such impacts was uncertain as they would be dependent on the exact location of the proposed development, its proximity to sensitive receptors, and its nature and scale, which may not be known until the planning application stage. The Draft MLP and the accompanying SA were subject to consultation from September 2016. Comments from these consultations were taken forward to the current stage of the Minerals Local Plan.

Minerals Local Plan for Gloucestershire 2013-2032: Publication Plan (May 2018)

1.26 This is the current stage of the MLP, and the version that is intended to be submitted to the Secretary of State for Examination. This stage of the MLP draws together the outcomes of earlier consultation stages along with new and up-to-date evidence. The MLP Publication Plan includes:

- Section 1 – an introduction to minerals planning within Gloucestershire and discussion concerning the preparation of a new minerals local plan for the county.
- Section 2 – a spatial portrait that describes present day Gloucestershire and introduces the minerals likely to be of economic importance over the plan period.
- Section 3 – the drivers for change that the minerals plan will seek to reflect and act upon where necessary and appropriate, principally to the advantage of Gloucestershire.
- Section 4 – the plan's vision of the future that highlights what success may look like, and the objectives that will explain how, through targeted actions, the vision will be achieved.
- Section 5 – the overall strategy for the plan, which details the policy framework and strategic approach being taken to deliver the plan's objectives.
- Sections 6, 7, 8 and 9 – these sections make up a substantial part of the plan's core policy content. They include the delivery policies for the plan's themes: – reducing the demand for primary minerals (section 6); safeguarding mineral resources (section 7), making provision for the supply of minerals (section 8); and allocating areas for future aggregate working (section 9).
- Sections 10 and 11 – complete the plan's core policy and include the full suite of development management policies (section 10). The plan's final theme – restoration, aftercare and facilitating beneficial after-uses (section 11) is also included.
- Section 12 – explains how the plan will be monitored to ensure it is working effectively and contributing the delivery of the strategy, objectives and spatial vision.

Stage C: Preparing the sustainability appraisal report

1.27 The full SA Report and this Non-Technical Summary describe the process undertaken to date in carrying out the SA of the Gloucestershire MLP. They set out the findings of the appraisal, highlighting any likely significant effects (both positive and negative), and outlining proposed monitoring measures.

Stage D: Consultation on the Minerals Local Plan for Gloucestershire (2018-2032): Publication Plan and this SA Report

1.28 GCC is inviting comments on the MLP Publication Plan and the SA Report. Those two documents and this SA Non-Technical Summary are being published on GCC's website.

Stage E: Monitoring Implementation of the DPD

1.29 Proposals for monitoring the sustainability effects of the MLP are set out in Chapter 6 of the full SA Report and are summarised further ahead in this Non-Technical Summary.

Policy Context

1.30 The Gloucestershire MLP should reflect the contents of other plans and programmes where relevant, to assist in their implementation. It must also conform to environmental protection legislation and the sustainability objectives established at the international, national and regional levels. It is a requirement of the SEA process that relevant international, national, regional, sub-regional and local plans are reviewed in relation to their objectives, targets and indicators and their implications for the MLP and the Sustainability Appraisal.

1.31 There are a large number of plans and programmes that are potentially relevant to the preparation of the Gloucestershire MLP. The full review of plans, policies and programmes can be seen in Appendix 3 of the full SA Report.

1.32 The most significant development in terms of the policy context for the MLP was the 2012 publication of the NPPF which replaced the suite of Planning Policy Statements (PPSs) and Planning Policy Guidance (PPGs), including Minerals Policy Statements and Minerals Policy Guidance documents. A number of the replaced documents were reviewed as part of the Lord Taylor review of planning guidance. The aim of the review was 'to support effective planning; what new or updated practice guidance should be published, with clear priorities; and what guidance should be cancelled.' This resulted in the publication of national Planning Practice Guidance⁶ (PPG) as a streamlined web-based resource that accompanies the NPPF. This ensures that planning practice guidance supports national planning policy. A large majority of past guidance has been included in the recently published guidance, however, many guidance documents have also been cancelled.

1.33 The Gloucestershire MLP must be consistent with the requirements of the NPPF, which sets out information about the purposes of local plan-making. It states that:

"Local Plans must be prepared with the objective of contributing to the achievement of sustainable development. To this end, they should be consistent with the principles and policies set out in this Framework, including the presumption in favour of sustainable development."

1.34 While the NPPF replaces the suite of Minerals Policy Statements, the principles for minerals planning are still retained in the NPPF including: the maintenance of landbanks for crushed rock and sand and gravel; designation of Mineral Safeguarding Areas; providing for restoration and aftercare at the earliest opportunity and to high environmental standards; and setting out environmental criteria against which planning applications will be assessed.

Baseline Information

1.35 It is a further requirement of the SEA process that consideration should be given to the current state of the environment in Gloucestershire, and for the SA process, social and economic information should also be taken into account. 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.

1.36 The baseline data focuses on key indicators which are readily available and can be updated to demonstrate the issues. The choice of baseline data has been informed by the previous stages in the SA process. Appendix 4 of the full SA Report provides an extensive discussion on the relevant baseline information for the County and in particular the role of minerals development.

⁶ DCLG (2014). Planning Practice Guidance. Available at: <http://planningguidance.planningportal.gov.uk/>

1.37 Annex 1(f) of the SEA Directive requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors (these are often referred to as 'SEA Topics'). As an integrated SA and SEA is being carried out, baseline information relating to other 'sustainability' topics has also been included; for example information about housing, social inclusiveness, transport, energy, minerals and economic growth.

1.38 It is a requirement of the SEA process that consideration is given to the likely evolution of the environment in the Plan area if the MLP were not to be implemented. **Table 1** describes the potential effects of minerals development on the SEA Topics and also the likely future environmental status if the Gloucestershire MLP were not prepared.

Table 1: Potential environmental effects of minerals development and likely future evolution of the environment in the absence of the Gloucestershire MLP

SEA Topic (SEA Directive 2001/42/EC Annex 1 (f))	Potential effects of minerals and waste development & likely future environmental (or other) status in the absence of the Gloucestershire MLP
Biodiversity, Flora, Fauna and Soil	<p>Gloucestershire is a highly diverse County with a great variety of wildlife reflected in the large number of sites that have international, national or local designations. Biodiversity outside these areas should also not be neglected as habitats that have a linking function are very important.</p> <p>Potential negative effects are:</p> <ul style="list-style-type: none"> • Impacts on ecosystem services such as flood defences, water purification, soil formation and pollination. • Potential loss of protected species and loss/deterioration of priority habitats. • Habitat deterioration loss and/or fragmentation due to land take. • Changes in soil conditions and or quality or loss of best and most versatile soils. • Changes in the quality of air and water. Pollution potential in terms of noise, vibration, light, dust, air and water pollutants. • Creation of barriers or obstacles affecting wildlife. • Changes in methods of habitat management. • Introduction of new species / habitats. • Changes in ecological balances of prey and predators. • Changes in patterns of human activity. <p><u>Comment on the likely future environmental status in the absence of the MLP:</u></p> <p>Minerals plans aim to provide for the needs of society (i.e. minerals which we all use). But in the process there may be damage to the natural environment. However plans contain policies which aim to protect and enhance the environment. Without these plans it is more likely that environmental designations would be damaged by un-planned development which is not likely to be the most sustainable option, and the opportunity to enhance the environment, and protect and improve environmental networks would be severely limited.</p>
Water	Quarrying may have significant negative impacts on the water

SEA Topic (SEA Directive 2001/42/EC Annex 1 (f))	Potential effects of minerals and waste development & likely future environmental (or other) status in the absence of the Gloucestershire MLP
	<p>table and on surface water regimes. This is a particularly pertinent issue in Gloucestershire in relation to sand and gravel extraction in the Upper Thames Valley.</p> <p><u>Comment on the likely future environmental status in the absence of the MLP:</u></p> <p>In the absence of the MLP and policies aimed at the protection of the water environment, rivers, streams, lakes as well as subterranean hydrological regimes are more likely to be damaged as a result of un-regulated and environmentally insensitive development.</p>
Air	<p>Traffic associated with mineral sites can increase dust and odour.</p> <p><u>Comment on the likely future environmental status in the absence of the MLP:</u></p> <p>Air quality may deteriorate in the County in the absence of policies which aim at the control and mitigation of the problem.</p>
Climatic factors	<p>The extraction methods, mineral processing (including burning of fossil fuels) and the movement of mineral products may contribute to the production of greenhouse gases which have a negative impact on actions to tackle climate change.<u>Comment on the likely future environmental status in the absence of the MLP:</u></p> <p>In the absence of the MLP and specific policies aimed at combating climate change and reducing the impacts, it is likely that contributions to climate change from minerals development will not be appropriately controlled and mitigated.</p>
Material assets	<p>Minerals development may affect the value of nearby land, property or other material assets. This may also apply to land and property that lies on a lorry route. In terms of aerodromes (as material assets) there are potential safety issues related to the likelihood of birdstrike from e.g. open water created as part of mineral restoration.</p> <p>Conflicts with existing or planned infrastructure such as green infrastructure assets.</p> <p><u>Comment on the likely future status in the absence of the MLP:</u></p> <p>In the absence of the MLP there may be negative impacts, on material assets (and also safety concerns) as a result of un-regulated, un-mitigated or poorly planned development.</p>
Population	<p>Populations may potentially be affected by mineral workings and associated transportation. Communities can be very sensitive to increases in noise, traffic levels, odour, visual impacts and other negative impacts on amenity.</p> <p><u>Comment on the likely future status in the absence of the MLP:</u></p>

SEA Topic (SEA Directive 2001/42/EC Annex 1 (f))	Potential effects of minerals and waste development & likely future environmental (or other) status in the absence of the Gloucestershire MLP
	<p>In the absence of the MLP and appropriate policies there may be negative impacts on populations and communities as a result of un-regulated, un-mitigated or poorly planned development.</p>
Human Health	<p>Minerals development can have various negative impacts. Noise from quarry working or associated traffic may disturb individuals sleep patterns – causing stress.</p> <p>There is a danger that existing inequalities in health between groups in a community may be exacerbated. It may be that those with resources and influence in a community can successfully object to what they regard as undesirable development. Poorer communities may not have the means or mobilisation.</p> <p>Those at particular risk of discrimination / disadvantage or are particularly vulnerable include, poorer communities (measured through a variety of indicators), black and minority ethnic people, people with disabilities, Gypsies and Travellers, single parent families; lesbian, gay, bisexual and transgender people; religious groups and carers.</p> <p><u>Comment on the likely future status in the absence of the MLP:</u></p> <p>In the absence of the MLP there may be negative impacts on human health as a result of un-regulated, un-mitigated or poorly planned development.</p>
Cultural heritage including architectural & archaeological heritage	<p>Minerals sites along with ancillary development such as road construction, soil bunds and screening, processing and storage areas can potentially damage or destroy artefacts / sites of cultural and archaeological heritage. Indirect effects may include:</p> <ul style="list-style-type: none"> • A reduction in the legibility of archaeological landscapes as a result of the interruption of features extending beyond the extraction area. • Dewatering and potential disruption to drainage regimes may damage waterlogged archaeological deposits and destroy a site's palaeo-environmental potential. • Subsidence or ground settlement on upstanding monuments and historic buildings. • Dust from workings can have a detrimental impact on historic buildings and monuments – especially if the dust particles are chemically active. • In the long term the setting and character of a historic monument / archaeological landscape / Listed Building might be affected by extraction. Apart from visual aspects, there may be a detraction of amenity resulting from the disruption of rights of way and access and increased noise and heavy traffic. <p><u>Comment on the likely future status in the absence of the MLP:</u></p> <p>In the absence of the MLP and appropriate policies there may be damage to Gloucestershire's cultural heritage (including</p>

SEA Topic (SEA Directive 2001/42/EC Annex 1 (f))	Potential effects of minerals and waste development & likely future environmental (or other) status in the absence of the Gloucestershire MLP
	architecture and archaeology) as a result of un-regulated, un-mitigated or poorly planned development.
Landscape	<p>Landscapes may be damaged where a development changes the physical character of a particular area. Changes to, or the physical removal of landscape elements e.g. trees, slopes, hedges, field boundaries may change the character of the landscape and how it is experienced. Views may be damaged, both in terms of composition and extent. Potential landscape / visual effects as a result of quarrying / landraise / landfill development may include:</p> <ul style="list-style-type: none"> • Natural topography being permanently damaged. • Geological exposures in old disused quarries may be lost if they are backfilled. • Loss of hedgerows and hedgerow trees. • Rural character eroded as a result of operational areas, litter trapping fences, stockpiles and mounds, plant and buildings. • Insensitive restoration may weaken the local distinctiveness of a landscape. • On the positive side, mineral operations can create new landscape features such as lakes, ponds and wetlands. A good example being the Cotswold Water Park. <p><u>Comment on the likely future status in the absence of the MLP:</u></p> <p>In the absence of the MLP and appropriate policies there may be damage to valued landscapes within Gloucestershire as a result of un-regulated, un-mitigated or poorly planned development.</p>
The inter-relationship between the issues referred to above	<p>There are numerous, complex inter-relationships between all the aspects of the natural and built environment and all the other social and economic factors that have been considered.</p> <p><u>Comment on the likely future status in the absence of the MLP:</u></p> <p>In the absence of the MLP and appropriate policies, development may cause unforeseen damage or produce knock-on negative impacts as a result of un-regulated, un-mitigated or poorly planned development.</p>

Key Sustainability Issues

1.39 The following key sustainability issues for Gloucestershire were originally identified by GCC in the Scoping Report update (July 2013), and have been updated to reflect more recent baseline information. In order to address the SA requirements as well as SEA, social and economic issues are identified as well as environmental issues. It is a general list and certain issues are likely to have greater significance to the development of minerals policy in Gloucestershire, such as: protecting Gloucestershire's environment whilst providing minerals; the high levels of traffic congestion and associated impacts which minerals development could potentially contribute to; minerals can only be worked where they are found and this is often in what is considered to be

sensitive environments; the quality of mineral site restoration; and changes in landscape character.

Table 2: Key sustainability issues in Gloucestershire

No.	Sustainability Issues
1	Relatively high house prices in the County
2	Relatively low average income
3	High crime levels in some areas
4	Poor health in some areas / amongst certain groups
5	High levels of traffic congestion and associated impacts
6	The performance of the rural economy
7	Areas of deprivation and social exclusion
8	Potential for flooding
9	Specific issues relating to mineral site restoration
10	Difficulties in terms of protecting Gloucestershire's environment whilst providing minerals needed by society
11	Relatively low levels of renewable energy generation
12	The general state of Gloucestershire's biodiversity, the condition of SSSIs / sites protected under the Habitat's Directive / locally designated sites
13	Decline in species biodiversity - in particular of certain bird species in Gloucestershire
14	Increases in serious pollution incidents
15	Water quality and quantity
16	Potential for damage to the historic environment
17	Detrimental changes in landscape character

Sustainability Appraisal Framework

1.40 GCC Minerals and Waste Planning officers have developed a number of SA objectives that help form the SA Framework. This has been developed via the review of other policies, plans and programmes and baseline data, the identification of key sustainability issues, and input from stakeholders. The original SA Framework Objectives have changed and evolved with the Minerals & Waste Development Framework. There are several reasons for this:

- SA is an iterative and evolving process. The Framework can be regularly updated, particularly in terms of presenting up-to-date baseline data.
- The SA process is a consultative one, both in terms of the Minerals & Waste Development Framework documents and the SA Reports. The GCC Minerals and Waste Planning Policy

team have made every effort to take on board the comments of stakeholders and to make appropriate changes.

c. Government guidance and planning legislation is constantly changing and being updated and the SA process has to reflect this.

1.41 The policies and sites included in the MLP have been appraised against the SA Objectives, which are included in **Table 3** below. Each objective has a number of subsidiary questions, which provide criteria when conducting assessment.

Table 3: Sustainability Appraisal Objectives

Sustainability Appraisal Objectives and Subsidiary Questions	
Social	
1.	To promote sustainable development and sustainable communities and improve the health and wellbeing of people living and working in Gloucestershire as well as visitors to the County. - What are the potential health impacts on communities? - What are the potential health impacts on the employees at the site or facility?
2.	To safeguard the amenity of local communities from the adverse impacts of mineral development. - What are the impacts in terms of noise and vibration? - To what extent are there potential land use conflict issues? - Are there any cumulative effects in terms of adverse impacts on environmental quality, social cohesion and inclusion or economic potential?
Economic	
3.	To promote sustainable economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds. - Does the site present opportunities for spin off employment or other opportunities?
4.	To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy. - How many new jobs are likely to be created? - How far will employees have to travel to work? - Are there opportunities for employees to use sustainable transport?
5.	To ensure that mineral sites do not compromise the safety of commercial or military aerodromes. - Is the site close to an aerodrome or low flying area? - Will the site's potential restoration attract large numbers of birds?
6.	To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.
Environmental	
7.	To protect, conserve and enhance biodiversity in Gloucestershire. - What are the potential impacts on sites which are Internationally and Nationally designated?

Sustainability Appraisal Objectives and Subsidiary Questions

- Are there any other potential significant impacts over and above the effects on designated sites - including on irreplaceable habitats (e.g. Ancient Woodlands), local sites, protected species and habitats and species of principle importance for biodiversity?
- What potential is there for achieving biodiversity targets and net gains in habitats/biodiversity?

8. To protect, conserve and enhance the landscape in Gloucestershire.

- What are the impacts on AONB?
- What is the likely impact on specific landscape character as detailed in Gloucestershire's Landscape Character Assessment?
- What is the scope for landscape improvement?

9. To restore mineral sites to a high standard in order to achieve the maximum after use benefits including the conservation and enhancement of biodiversity, and delivery of green infrastructure where possible.

- Can the existing landscape be enhanced?
- What restoration issues are there?
- What potential is there to establish coherent, resilient ecological networks?
- Would the restored sites contribute to the Biodiversity 2020 targets?

10. To protect conserve and enhance Gloucestershire's material, cultural and recreational assets.

- What are the likely impacts on material, cultural and recreational assets?
- Have any material assets been overlooked?
- Will the development contribute to providing traditional building materials?

11. To protect conserve and enhance geodiversity in Gloucestershire.

- What if any are the likely impacts on geodiversity?
- Will it enhance geodiversity?

12. To protect conserve and enhance townscapes and Gloucestershire's architectural and archaeological heritage.

- What are the potential adverse effects on heritage sites of International importance and / or sites or buildings with a nationally recognised designation?
- What are the impacts upon the wider historic landscape?

13. To prevent flooding, in particular preventing inappropriate development in the floodplain.

- *Can the risk of flooding be managed and reduced through site design?*
- *Will surface water runoff be sustainably managed?*
- *Is there the potential to protect and promote areas for future flood alleviation schemes?*

14. To protect and enhance soil / land quality in Gloucestershire.

- What is the landtake?
- Would it improve the soil quality?

15. To protect and enhance air quality in Gloucestershire, helping to meet local, national and international objectives for air quality.

Sustainability Appraisal Objectives and Subsidiary Questions	
	<ul style="list-style-type: none"> - <i>What is the proximity of sensitive receptors and to what extent can air emissions, including dust be controlled?</i>
16.	<p>To protect and enhance water quality and quantity in Gloucestershire, and to ensure that minerals development does not compromise sustainable sources of water supply.</p> <ul style="list-style-type: none"> - What is the proximity of vulnerable surface or groundwater and what are the likely impacts on these features? - What are the impacts on water consumption?
17.	<p>To reduce the adverse impacts of lorry traffic on the environment and communities through means such as:</p> <ol style="list-style-type: none"> reducing the need to travel promoting more sustainable means of transport e.g. by rail or water sensitive lorry routing the use of sustainable alternative fuels <ul style="list-style-type: none"> - What is the capacity of the site and transport infrastructure to support the sustainable movement of minerals and products arising from resource recovery?
18.	<p>To reduce contributions to and to adapt to Climate Change.</p> <ul style="list-style-type: none"> - How flexible or adaptable is the site or facility in terms of a) adapting to Climate Change and b) using new technology to reduce greenhouse gas emissions as it develops.

Assumptions taken into account during the SA

1.42 SA relies on an element of subjective judgement. In predicting and assessing sustainability effects of the MLP, GCC's analysis of the characteristics of Gloucestershire and the sustainability issues it faces has been drawn on plus the professional experience of the commissioned LUC SA team.

1.43 In making SA judgements for the appraisal of mineral sites and policies included in the MLP the SA team has also used the extensive data collated and the assessments produced by GCC for each site.

1.44 To support the appraisal of mineral site options a series of decision-making criteria for each SA headline objective was developed (this can be seen in Table 4.1 of the full SA Report) with the purpose of providing a consistent approach to the prediction and assessment of effects. The decision-making criteria relate specifically to the assessment of the potential sites being considered at this stage for allocation in the MLP, and set out assumptions and justifications for the level of significance of the potential effects that mineral sites developed at those sites may have. These assumptions were developed so that, where possible, a quantitative analysis and data could be applied to the appraisal of the sites.

1.45 For example, for SA objective 1 (improve the health and wellbeing) the assumptions state that potential minerals sites, which are over 100m from sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) are expected to have no or negligible effects on health, whereas potential minerals sites within 100m of sensitive receptors are assumed to have possible minor negative effects on health due to the potential for dust to have an effect on the health of local residents, communities and visitors to the County. However, the scale and significance of the impact would depend on a number of local circumstances (e.g. the topography, the nature of the landscape, the respective location of the site and the nearest residential property or other sensitive use in relation to the prevailing wind direction and visibility).

1.46 It should also be noted that distances from specific assets (e.g. biodiversity, heritage, recreational) used within relevant SA Objectives to predict the magnitude of potential effects of allocating the sites are for a **guide only** and do not mean that mineral sites within a certain distance would definitely have an effect in every instance. The potential effect will be dependent upon the type and design of mineral sites eventually developed on a site including any mitigation measures proposed, which will need to be assessed if prescribed within policies of the Minerals Local Plan or at the planning application stage.

1.47 Note that the assumptions and justifications used in the SA were developed prior to the publication of the National Planning Policy Guidance (March 2014) and have therefore been informed by some planning policy statements, and planning practice guidance that has been superseded by the National Planning Practice Guidance. Where referenced, former minerals planning policy statements and planning practice guidance are still judged to be relevant and useful.

Use of the SA Framework

1.48 Each mineral site and policy in the MLP was assessed against each SA objective, and a judgement was made with regards to the likely effect that the site/option may have on that objective. 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 site in question on an SA objective is considered to be of a magnitude that it could have the potential to generate a noticeable and measurable effect taking into account other factors that may influence the achievement of that SA objective.

1.49 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. Where relevant, reference has been made to effects being either direct or indirect, the latter is taken to cover 'secondary' effects. Cumulative effects refer to the potential to increase overall effects due to adding one effect onto another. The cumulative effects of the MLP policies and allocated sites have been considered in Chapter 5 of the full SA Report and are described further ahead in this Non-Technical Summary. Consideration is also given to the timescales over which effects are likely to occur.

1.50 The sustainability effects are presented in a matrix for each policy and site option, in Appendices 5 and 6 of the full SA Report, 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).

Potential Effects of the MLP

1.51 This section summarises the findings of the SA of the Minerals Local Plan for Gloucestershire 2018 – 2032. The potential effects on each of the SA objectives are summarised in **Tables 4-11** overleaf (using the symbols and colour coding referred to in **Figure 1** above). A summary of the SA findings for the MLP as a whole follows **Tables 4-11**.

Table 4: Summary of SA scores for the Vision and MLP Objectives

Vision/Objectives	Vision	1. Reuse & Recycling (SR)	2. Resource Management (RM)	3. Provision & Supply (PS)	4. The Environment (ENV)	5. Local Communities (LC)	6. Restoration (RA)	7. Transport (MM)
SA Objective								
Social								
1. Health and wellbeing	+	+	0	0	0	+	+	+
2. Amenity of local communities	+	+	0	0	0	+	+	+
Economic								
3. Sustainable economic development	++	0	0	++	0	0	+	0
4. Employment opportunities	++	0	0	++	0	+	+	+
5. Safety of commercial or military aerodromes	+	0	0	0	0	+	+	0
6. Conservation of minerals resources	+	++	++	+/-	0	0	0	0
Environmental								
7. Biodiversity	++	+/-	0	+/-	++	0	+	0
8. Landscape	++	+/-	0	+/-	++	0	+/-	0
9. Restoration of mineral sites	++	+	+	0	0	0	++	0
10. Material, cultural and recreational assets	++	0	0	+/-	+	+	+	+
11. Geodiversity	++	0	0	+/-	++	0	+	0
12. Historic environment, heritage assets and their setting	+	0	0	+/-	+	0	+	0
13. Flooding	++	0	0	+/-	+/-	0	+/-	0
14. Soil / land quality	+?	+	+	+/-	+	0	+	0
15. Air quality	+	+/-	0	+/-	+	0	+/-	+
16. Water quality and quantity	++	0	0	+/-	+	0	+/-	0
17. Impacts of lorry traffic on the environment and communities	+	+/-	0	+/-	+	0	+/-	+
18. Climate Change	++	+/-	0	+/-	+	0	+	+

Table 5: Summary of SA scores for Secondary and recycled aggregate supplies policy

Policy	SR01 Maximising the use of secondary and recycled aggregates
SA objective	
1. Health and wellbeing	-?
2. Amenity of local communities	-?
3. Sustainable economic development	+
4. Employment opportunities	+
5. Safety of commercial or military aerodromes	0
6. Conservation of minerals resources	++
7. Biodiversity	+/-?
8. Landscape	+/-?
9. Restoration of mineral sites	0
10. Material, cultural and recreational assets	+/-?
11. Geodiversity	0
12. Historic environment, heritage assets and their setting	+/-?
13. Flooding	+/-?
14. Soil / land quality	0
15. Air quality	+/-?
16. Water quality and quantity	+/-?
17. Impacts of lorry traffic on the environment and communities	+/-?
18. Climate Change	+

Table 6: Summary of SA scores for Mineral Safeguarding Policies

SA Objective	Policy	MS01 Non-mineral development within MSAs	MS02 Safeguarding mineral infrastructure
1. Health and wellbeing		+/-?	+/-?
2. Amenity of local communities		+/-?	+/-?
3. Sustainable economic development		+/-	+/-
4. Employment opportunities		+/-	+/-
5. Safety of commercial or military aerodromes		+/-?	0
6. Conservation of minerals resources		++	++
7. Biodiversity		+?	+/-?
8. Landscape		+/-?	+/-?
9. Restoration of mineral sites		+?	0
10. Material, cultural and recreational assets		+/-?	+/-?
11. Geodiversity		++?	0
12. Historic environment, heritage assets and their setting		+/-?	+/-?
13. Flooding		0	+/-?
14. Soil / land quality		?	0
15. Air quality		0	+/-?
16. Water quality and quantity		?	+/-?
17. Impacts of lorry traffic on the environment and communities		+/-?	+/-?
18. Climate Change		0	+/-?

Table 7: Summary of SA scores for the Future Supply of Minerals Policies

SA Objective	Policy	MW01 Aggregate Provision	MW02 Natural Building Stone	MW03 Clay for civil engineering purposes	MW04 Brick Clay	MW05 Coal	MW06 Ancillary minerals development
1. Health and wellbeing		+/-?	0/-?	0?	0/-?	+/-?	-?
2. Amenity of local communities		-?	0/-?	0?	0/-?	+/-?	-?
3. Sustainable economic development		+?	+?	+?	+?	+/-?	+
4. Employment opportunities		+?	+?	+?	+?	+/-?	+
5. Safety of commercial or military aerodromes		-?	0	?	0	0	0
6. Conservation of minerals resources		+	+	0	0	0	0
7. Biodiversity		+/-?	+/-?	+/-?	+/-?	+/-?	+/-?
8. Landscape		+/-?	+/-?	+/-?	+/-?	+/-?	+/-?
9. Restoration of mineral sites		+?	+?	0	0	0	+
10. Material, cultural and recreational assets		+/-?	+/-?	+/-?	+/-?	+/-?	0
11. Geodiversity		+/-?	+/-?	+/-?	+/-?	+/-?	0
12. Historic environment, heritage assets and their setting		+/-?	++/-?	+?	+/-?	+/-?	+
13. Flooding		-?	-?	+?	0?	+/-?	0
14. Soil / land quality		-?	-?	-?	-?	+/-?	0
15. Air quality		-?	-?	0?	-?	+/-?	0
16. Water quality and quantity		-?	?	?	?	?	0
17. Impacts of lorry traffic on the environment and communities		-?	-?	0?	-?	+/-?	+
18. Climate Change		+/-?	+/-?	+/-?	+/-	+/-?	+

Table 8: Summary of SA scores for the Area for Future Aggregate Working Policies

SA Objective	Policy	MA01 Aggregate working within allocations	MA02 Aggregate working outside of allocations
1. Health and wellbeing		-?	-?
2. Amenity of local communities		-?	-?
3. Sustainable economic development		+	+
4. Employment opportunities		+	+
5. Safety of commercial or military aerodromes		-?	-?
6. Conservation of minerals resources		0	0
7. Biodiversity		+/-?	+/-?
8. Landscape		+/-?	+/-?
9. Restoration of mineral sites		+?	+?
10. Material, cultural and recreational assets		+/-?	+/-?
11. Geodiversity		+/-?	+/-?
12. Historic environment, heritage assets and their setting		+/-?	+/-?
13. Flooding		-?	-?
14. Soil / land quality		-?	-?
15. Air quality		-?	-?
16. Water quality and quantity		-?	-?
17. Impacts of lorry traffic on the environment and communities		-?	-?
18. Climate Change		?	?

Table 9: Summary of SA scores for Development Management Policies in Section 10 of the MLP

MLP Proposed Development Management Policies	Amenity	Cumulative Impact	Transport	Flood Risk	Water resources	Biodiversity & geodiversity	Soil resources	Historic environment	Landscape	Gloucester-Cheltenham Green Belt	Aerodrome safeguarding & Aviation Safety
SA Objectives											
1. Health and wellbeing	+	+?	+?	+	+	0	0	0	0	+	0
2. Amenity of local communities	++	+?	+?	+	0	0	0	0	+	+	0
3. Sustainable economic development	0	+?	0	0	0	0	0	0	+?	0	0
4. Employment opportunities	0	+?	0	0	0	0	+?	0	0	0	0
5. Safety of commercial or military aerodromes	0	0	0	0	0	0	0	0	0	0	++
6. Conservation of minerals resources	0	0	0	0	0	0	0	0	0	0	0
7. Biodiversity	0	+?	+?	+	+	++	0	0	0	+	0
8. Landscape	0	+?	+?	+	0	+	0	+	++	+	0
9. Restoration of mineral sites	0	0	0	+?	0	0	0	0	+?	0	0
10. Material, cultural and recreational assets	0	+?	+	0	0	0	0	0	0	0	0
11. Geodiversity	0	+?	0	0	0	++	0	0	0	0	0
12. Historic environment, heritage assets and their setting	0	+?	+?	+	0	0	0	++	+?	0	0
13. Flooding	0	+?	0	++	0	0	0	0	0	0	0
14. Soil / land quality	0	+?	0	0	0	0	++	0	0	0	0
15. Air quality	0	+?	+?	0	0	0	0	0	0	0	0
16. Water quality and quantity.	0	+?	0	0	++	0	0	0	0	0	0
17. Impacts of lorry traffic on the environment and communities	0	+?	+?	0	0	0	0	0	0	0	0
18. Climate Change	0	+?	+?	+	0	0	0	0	0	0	0

Table 10: Summary of SA scores for the Minerals Restoration Policy

SA Objective	Policy	MR01 Restoration aftercare and facilitating beneficial after-uses
1. Health and wellbeing		+?
2. Amenity of local communities		+?
3. Sustainable economic development		0
4. Employment opportunities		0
5. Safety of commercial or military aerodromes		0
6. Conservation of minerals resources		0
7. Biodiversity		+?
8. Landscape		+?
9. Restoration of mineral sites		++
10. Material, cultural and recreational assets		+?
11. Geodiversity		+?
12. Historic environment, heritage assets and their setting		+?
13. Flooding		+?
14. Soil / land quality		+?
15. Air quality		+?
16. Water quality and quantity		+?
17. Impacts of lorry traffic on the environment and communities		0
18. Climate Change		+?

Table 11: Summary of SA scores for the Allocations

Allocation	01	02	03	04	05	06	07
Social objectives							
1. Health and wellbeing.	-/+?	-/+?	+?	+?	-/+?	-/+?	-/+?
2. Amenity of local communities.	-	-	-	-	-	-	-?
Economic objectives							
3. Sustainable economic development.	0	0	0	0	0	0	0
4. Employment opportunities.	+	+	+	+	+	+	+
5. Safety of commercial or military aerodromes.	0	0	0	0	0	-?	-?
6. Conservation of minerals resources.	0	0	0	0	0	0	0
Environmental objectives							
7. Biodiversity.	-/+?	+?	-/+?	-/+?	+?	-/+?	+?
8. Landscape.	-?	-?	0	0	0	-?	0
9. Restoration of mineral sites.	+?	+?	+?	+?	+?	+?	+?
10. Material, cultural and recreational assets.	-	-	0	-	-?	-	-
11. Geodiversity.	-?	0	--?	-?	-?	0	0
12. Historic environment.	--?	-?	-?	--?	-?	--?	-?

Allocation	01	02	03	04	05	06	07
13. Flooding.	-?	-?	-?	-?	-?	-?	-?
14. Soil / land quality.	-?	-?	0	-?	-?	--?	-?
15. Air quality.	-	-	0	0	-	-	0
16. Water quality and quantity.	-?	-?	-?	-?	-?	-?	-?
17. Impacts of lorry traffic.	-?	-?	+?	+?	-	-	+/-?
18. Climate Change.	?	?	?	?	?	?	?

1.52 Gloucestershire's MLP sets out proposals for how the future minerals development of the County should develop and operate and how the minerals needs of Gloucestershire and the markets it supplies will be met up to the end of 2032. Therefore, this means that the timescales for effects resulting from policies within the MLP could be up to at least 15 years. In reality, some of the policies may have short-term effects (defined for this SA as over the next 5 years), medium-term effects (defined as over the next 10 years), or long-term effects (defined as over the whole plan period, or even beyond). In many instances, given the generic nature of the policies in the MLP, it is difficult to be precise about when, where and in what form the effects will arise, and how one effect might relate to another.

1.53 However, it is possible to draw some broad conclusions about the nature and interrelationship of the effects that the SA has identified:

- Most of the effects will be long-term, in that the MLP aims to provide minerals that will last over time. There will inevitably be some temporary and short or medium term effects during the construction or operation of facilities (see below).
- The effects which have been identified in the appraisal of the MLP, both positive and negative, are likely to increase over time, as the policies in the MLP are implemented, and more minerals development is delivered in Gloucestershire, although some operations may be completed as new excavation sites are developed so some effects may balance out.

Short-term effects of the MLP

1.54 The impacts of the MLP in the short-term are mostly related to the initial impacts of commencing minerals extraction. This will include the removal of vegetation, top soil, sub soil, and provision of infrastructure required. Such works have the potential to negatively impact on biodiversity, health and wellbeing, amenity of local communities (possible disruption to rights of way, increase in traffic flows, noise generation, vibration, dust etc.), soil quality, and the landscape (including historic landscape). However, these impacts may be temporary in nature and could be minimised through good design, adherence to the policies in the MLP or reversed through restoration measures in the medium to long-term.

Medium-term effects of the MLP

1.55 Medium-term positive impacts relate to the employment and economic benefits of the minerals sites. Negative impacts in the medium-term include the implications of operational minerals extraction sites on health and wellbeing, and the amenity of local communities (e.g. noise, dust, increased traffic etc.). However, as discussed previously in this chapter, these impacts should be avoided or mitigated through good practices by the mineral operators, and adherence to all the policies in the MLP when planning proposals are assessed and determined by GCC.

Long-term effects of the MLP

1.56 Long-term, permanent benefits that would result from the MLP include the provision of sufficient minerals operations to meet Gloucestershire's needs, potential flood alleviation (e.g. sand and gravel sites in the Cotswolds Water Park resource area), habitat creation and biodiversity enhancement or recreation enhancement opportunities through the restoration of minerals working sites, or the incorporation and preservation of important geological features within sites. Long-term, permanent negative impacts of the MLP policies are potentially: loss of habitats, areas of best and most versatile agricultural land; climate change implications resulting from the energy used to operate facilities and vehicle movements to transport minerals; and the disturbance and/or removal of archaeological remains, some of which may be of national significance. However, there may also be some long-term, permanent positive impacts for biodiversity and landscape through the creation of new or expanded habitats, and enhancement of landscape types or features through well designed and implemented restoration of minerals sites; and long term, permanent positive impacts for the historic environment as sites may benefit our understanding of the local archaeology, which is found during minerals operations, and aggregates and building stone, for example, could also make a positive contribution towards enhancing the local vernacular.

Significant effects of the MLP

1.57 A range of significant effects, both positive and negative, are expected as a result of the MLP. The relevant elements of the MLP that have the potential to have significant effects on the SA objectives are summarised in **Tables 12** and **13** below. Potentially significant positive effects (**Table 12**) have been identified for all of the SA objectives from at least one of either of the Vision, MLP Objectives or Policies. Potentially significant negative effects (**Table 13**) have only been identified in relation to some of the crushed rock and sand and gravel site options, but none of the policies.

Table 12: Potential for likely significant positive effects of the MLP

SA Objective	MLP - Vision, Objectives, Policies, Allocations
Social SA Objectives	
1. Health and wellbeing	<ul style="list-style-type: none"> • N/A
2. Amenity of local communities	<ul style="list-style-type: none"> • Policy DM01: Amenity
Economic SA Objectives	
3. Sustainable economic development	<ul style="list-style-type: none"> • Vision • Objective 3: Provision & Supply (PS)
4. Employment opportunities	<ul style="list-style-type: none"> • Vision • Objective 3: Provision & Supply (PS)
5. Safety of commercial or military aerodromes	<ul style="list-style-type: none"> • Policy DM11: Aerodrome safeguarding & Aviation Safety
6. Conservation of minerals resources	<ul style="list-style-type: none"> • Objective 1: Reuse & Recycling (SR) • Objective 2: Resource Management (RM) • Policy SR01: Maximising the use of secondary and recycled aggregates • Policy MS01: Non-minerals development within MSAs • Policy MS02: Safeguarding mineral infrastructure
Environmental SA Objectives	
7. Biodiversity	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy DM06: Biodiversity and Geodiversity
8. Landscape	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy DM09: Landscape
9. Restoration of mineral sites	<ul style="list-style-type: none"> • Vision • Objective 6: Restoration (RA) • Policy MR01: Restoration aftercare and facilitating beneficial after-uses
10. Material, cultural and recreational assets	<ul style="list-style-type: none"> • Vision
11. Geodiversity	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy MS01: Non-minerals development within MSAs • Policy DM06: Biodiversity and Geo-diversity
12. Historic environment, heritage assets and their setting	<ul style="list-style-type: none"> • Policy MW02: Natural Building Stone (as part of a mixed effect) • Policy DM08: Historic Environment
13. Flooding	<ul style="list-style-type: none"> • Vision • Policy DM04: Flood Risk
14. Soil / land quality	<ul style="list-style-type: none"> • Policy DM07: Soil resources
15. Air quality	<ul style="list-style-type: none"> • Policy DM03: Transport

SA Objective	MLP - Vision, Objectives, Policies, Allocations
16. Water quality and quantity	<ul style="list-style-type: none"> • Vision • Policy DM05: Water Environment
17. Impacts of lorry traffic on the environment and communities	<ul style="list-style-type: none"> • Policy DM03: Transport
18. Climate Change	<ul style="list-style-type: none"> • Vision

Table 13: Potential for likely significant negative effects of the MLP

SA Objective	MLP - Vision, Objectives, Policies, Allocations
Environmental SA Objectives	
8. Landscape	<ul style="list-style-type: none"> • Allocation 01 – Land east of Stowe Hill Quarry • Allocation 06 - Land south east of Down Ampney
11. Geodiversity	<ul style="list-style-type: none"> • Allocation 03 – Depth extension to Stowfield Quarry
12. Historic environment, heritage assets and their setting	<ul style="list-style-type: none"> • Allocation 01 – Land east of Stowe Hill Quarry • Allocation 04 – Land northwest of Daglingworth Quarry • Allocation 06 – Land south east of Down Ampney
14. Soil / land quality	<ul style="list-style-type: none"> • Allocation 06 - Land south east of Down Ampney

Cumulative effects of the MLP

1.58 Looking at the summary tables of SA scores (**Tables 4-11**) enables a judgement to be made regarding the overall potential cumulative effects of the MLP on each SA objective.

Social SA Objectives

1.59 A cumulative mixed, minor positive/minor negative effect on SA objectives 1 (Health and wellbeing) and 2 (Amenity of local communities) is likely to result from the MLP. While a number of the allocations are likely to have minor negative effects on the SA objectives many of them are uncertain, and many of the policies are likely to have mixed, minor positive effects, negligible effects or even no effects on these SA objectives.

Economic SA Objectives

1.60 The MLP mainly has either minor positive or no effects on SA Objective 3 (Economic Development), therefore cumulatively it is likely that minor positive effects will occur on this SA objective. Similarly, policies are likely to have either minor positive or no effects on SA Objective 4 (Employment), although all allocations are also expected to have minor positive effects on this SA objective. Therefore, cumulative effects on SA objective 4 are considered likely to be minor positive.

1.61 All allocations in the Sand and Gravel Cotswold Water Park resource area are likely to have minor negative effects on SA objective 5 (Aerodrome Safety), however, these are all uncertain as it is dependent on the type of restoration proposed and eventually implemented on a site. All other sites are expected to have no effect on SA objective 5. The few MLP policies that are likely to have effects on SA objective 5 are generally likely to be minor negative (apart from the Aerodrome Safeguarding and Aviation Safety policy which is likely to have a significant positive effect). Therefore, cumulative effects on SA objective 5 overall are considered to be minor negative.

1.62 A cumulative significant positive effect on SA objective 6 (Conservation of mineral resources) is likely to result from the MLP, as the policies that are likely to affect this SA objective are expected to either have significant positive or minor positive effects.

Environmental SA Objectives

1.63 The MLP mainly has either positive effects or mixed, minor positive/minor negative effects on SA objective 7 (Biodiversity), many of which are uncertain. Therefore, cumulative effects on SA objective 7 are considered to be mixed, minor positive/minor negative.

1.64 All allocations are expected to have minor positive effects on SA objective 9 (Mineral site restoration). Similarly, most policies in the MLP are also expected to have either positive or negligible effects on SA objective 9, in some cases significant positive effects. Therefore, overall minor positive effects are likely for SA objective 9.

1.65 Cumulative mixed, minor positive/minor negative effects are expected for many of the Environmental SA objectives (SA objectives 8, 10, 11, 14, 15 and 17). Whilst a number of allocations are expected to have minor negative effects, and even significant negative effects on these SA objectives, many of the MLP policies are expected to have positive effects, in some cases significant, on the SA objectives or mixed, minor positive/minor negative effects.

1.66 All of the allocations have the potential to have minor negative effects on SA objective 13 (Flooding) and SA objective 16 (Water quality and quantity) and minor or significant negative effects on SA objective 12 (Historic Environment). However, many of the MLP policies are likely to have either minor positive or mixed no effect/minor positive effects on these SA objectives, and should help to avoid the potential negative effects occurring if allocation sites are developed. Therefore, overall, cumulative mixed, no effect/minor negative effects on SA objectives 8 (Historic Environment), 13 (Flooding) and 16 (Water quality and quantity) are likely to result from the MLP.

1.67 Cumulatively, the MLP is likely to have minor positive effects on SA objective 18 (Climate change). Whilst some policies in the MLP are expected to have minor positive effects on these SA objectives, at this stage in the planning process is not possible to determine the impacts of the minerals sites or some policies on these SA objectives as it will depend on the proposal (mineral type, design, method of working etc.), which would be assessed at the planning application stage.

Monitoring

1.68 The SEA Regulations require that monitoring is undertaken in relation to the significant effects of implementing the Plan in question. **Table 14** sets out a number of suggested indicators for monitoring the potential significant effects of implementing the MLP. In order to make best use of existing monitoring arrangements, a number of indicators have been drawn from Gloucestershire's Minerals and Waste Authority Monitoring Report 2011 - 2012⁷ (shown in *italic* text), as well as Section 12 in the MLP.

Table 14: Suggested framework for monitoring potential significant sustainability effects arising from implementation of the Gloucestershire MLP

SA objectives for which potential significant effects have been identified	Policies and Allocations that are likely to lead significant effects	Proposed indicators (from Gloucestershire's Minerals and Waste Authority Monitoring Report and MLP)
Social SA Objectives		
2. Amenity of local communities	• Policy DM01: Amenity	<p><i>The number and % of minerals permissions, which include conditions relating to: Noise, hours of operations, traffic and lighting.</i></p> <p><i>The number and % of minerals refusals where amenity was cited within the</i></p>

⁷ Available at: <http://www.glos.gov.uk/extra/CHandler.ashx?id=55902&p=0>

SA objectives for which potential significant effects have been identified	Policies and Allocations that are likely to lead significant effects	Proposed indicators (from Gloucestershire's Minerals and Waste Authority Monitoring Report and MLP)
		<p><i>reason for refusal.</i></p> <p>Planning applications for minerals development being permitted where amenity issues were relevant and underwent scrutiny.</p>
Economic SA Objectives		
3. Sustainable economic development	<ul style="list-style-type: none"> • Vision • Objective 3: Provision & Supply (PS) 	<p><i>Annual production of minerals.</i></p> <p><i>Permitted reserves of minerals.</i></p> <p><i>Amount/% of minerals consumed locally/imported per year by type.</i></p>
4. Employment opportunities	<ul style="list-style-type: none"> • Vision • Objective 3: Provision & Supply (PS) 	<p><i>Number of new minerals developments permitted during the monitoring period. 'New' in this context only relates to brand new facilities and does not include extended, expanded or revised minerals operations.</i></p> <p><i>Employment in the Minerals sector in Gloucestershire.</i></p>
5. Safety of commercial or military aerodromes	<ul style="list-style-type: none"> • Policy DM11: Aerodrome safeguarding & Aviation Safety 	<p><i>Number of minerals developments permitted within aerodrome safeguarding areas.</i></p> <p>Planning applications for minerals development being permitted where aerodrome safeguarding and / or aviation safety issues were relevant and underwent scrutiny.</p>
6. Conservation of minerals resources	<ul style="list-style-type: none"> • Objective 1: Reuse & Recycling (SR) • Objective 2: Resource Management (RM) • Policy SR01: Maximising the use of secondary and recycled aggregates • Policy MS01: Non-minerals development within MSAs • Policy MS02: Safeguarding mineral infrastructure 	<p><i>The number and % of minerals developments permitted upon existing sites or Preferred Areas (Allocations) identified within the Minerals Plan.</i></p> <p><i>The number of non-minerals developments permitted upon Preferred Areas (Allocations) identified within the adopted Minerals Local Plan.</i></p> <p><i>Number of non-mineral applications determined for sites within Mineral Safeguarding Areas, which required a minerals consultation.</i></p>
Environmental SA Objectives		
7. Biodiversity	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy DM06: Biodiversity and Geodiversity 	<p><i>The number of minerals proposals determined upon international, national and local environmental designations.</i></p> <p><i>The number and % of minerals and refusals where environmental matters such as designated sites, were cited in the refusal reasons.</i></p> <p><i>The number and % of all permitted minerals applications that included conditions related to ecology and biodiversity.</i></p> <p>Planning applications for minerals development being permitted where biodiversity issues were relevant and underwent scrutiny.</p>

SA objectives for which potential significant effects have been identified	Policies and Allocations that are likely to lead significant effects	Proposed indicators (from Gloucestershire's Minerals and Waste Authority Monitoring Report and MLP)
8. Landscape	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy DM09: Landscape • Allocation 01 – Land east of Stowe Hill Quarry • Allocation 06 - Land south east of Down Ampney 	<p><i>The number of minerals proposals determined upon international, national and local environmental designations.</i></p> <p><i>The number and % of minerals refusals where environmental matters such as landscape or designated sites, were cited in the refusal reasons.</i></p> <p>Planning applications for minerals development being permitted where historic environment issues were relevant and underwent scrutiny.</p>
9. Restoration of mineral sites	<ul style="list-style-type: none"> • Vision • Objective 6: Restoration (RA) • Policy MR01: Restoration aftercare and facilitating beneficial after-uses 	<p><i>The number and % of mineral permissions that include conditions concerning the delivery of mineral restoration schemes.</i></p>
10. Material, cultural and recreational assets	<ul style="list-style-type: none"> • Vision 	<p><i>The number and % of mineral permissions proposing the loss of material, cultural and recreational assets.</i></p>
11. Geodiversity	<ul style="list-style-type: none"> • Vision • Objective 4: The Environment (ENV) • Policy MS01: Non-minerals development within MSAs • Policy DM06: Biodiversity and Geo-diversity • Allocation 03 – Depth extension to Stowfield Quarry 	<p><i>The number of minerals proposals determined upon international, national and local environmental designations e.g. RIGS.</i></p> <p>Planning applications for minerals development being permitted where geodiversity issues were relevant and underwent scrutiny.</p>
12. Historic environment, heritage assets and their setting	<ul style="list-style-type: none"> • Policy MW02: Natural Building Stone (as part of a mixed effect) • Policy DM08: Historic Environment • Allocation 01 – Land east of Stowe Hill Quarry • Allocation 04 – Land northwest of Daglingworth Quarry • Allocation 06 - Land south east of Down Ampney 	<p><i>The number and % of all permitted minerals applications that included conditions related to archaeology.</i></p> <p><i>Number and % of Listed Buildings and Scheduled Ancient Monuments on Buildings at Risk Register (English Heritage)</i></p> <p><i>The need for, frequency and outcomes of planning enforcement investigations/planning appeals concerning aspects of the historic environment, such as damage or pollution affecting the historic environment, or the loss of locally important buildings within a Conservation Area.</i></p> <p>Planning applications for minerals development being permitted where historic environment issues were relevant and underwent scrutiny.</p>
13. Flooding	<ul style="list-style-type: none"> • Vision • Policy DM04: Flood Risk 	<p><i>The number and % of minerals permissions located upon designated floodplain land.</i></p> <p><i>The number and % of minerals refusals where the floodplain acted as part of the reason for the refusal.</i></p>

SA objectives for which potential significant effects have been identified	Policies and Allocations that are likely to lead significant effects	Proposed indicators (from Gloucestershire's Minerals and Waste Authority Monitoring Report and MLP)
		Planning applications for minerals development being permitted where flood risk issues were relevant and underwent scrutiny.
14. Soil / land quality	<ul style="list-style-type: none"> • Policy DM07: Soil resources • Allocation 06 - Land south east of Down Ampney 	<p><i>The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.</i></p> <p>Planning applications for minerals development being permitted where soil resources issues were relevant and underwent scrutiny.</p>
15. Air quality	<ul style="list-style-type: none"> • Policy DM03: Transport 	<p><i>The number and % of minerals approvals that included conditions concerning air pollution control.</i></p> <p><i>The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.</i></p>
16. Water quality and quantity	<ul style="list-style-type: none"> • Vision • Policy DM05: Water Environment 	<p><i>The number and % of minerals refusals where safeguarding water supplies acted as part of the reason for the refusal.</i></p> <p><i>The number and % of minerals approvals that included conditions concerning water pollution control.</i></p> <p><i>The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.</i></p> <p>Planning applications for minerals development being permitted where water environment issues were relevant and underwent scrutiny.</p>
17. Impacts of lorry traffic on the environment and communities	<ul style="list-style-type: none"> • Policy DM03: Transport 	<p><i>The number and % of minerals permissions that included one or more of the following highway conditions: Restricted vehicle numbers; Restricted tonnages; Restricted routings; and Highway mitigation measures – the need for wheel washing, lorry sheeting etc.</i></p> <p><i>The number and % of all minerals refusals, where highways was cited as part of the reason for refusal.</i></p> <p>Planning applications for minerals development being permitted where transport issues were relevant and underwent scrutiny.</p>
18. Climate Change	<ul style="list-style-type: none"> • Vision 	<p>Planning applications for minerals development being permitted where climate change issues, including concerns relating to greenhouse gas emissions, were relevant and underwent scrutiny.</p> <p>Planning applications for minerals development being permitted where flood risk issues were relevant and underwent scrutiny.</p> <p>Planning applications for minerals</p>

SA objectives for which potential significant effects have been identified	Policies and Allocations that are likely to lead significant effects	Proposed indicators (from Gloucestershire's Minerals and Waste Authority Monitoring Report and MLP)
		development being permitted where transport issues were relevant and underwent scrutiny.

Conclusions

1.69 The policies and site allocations in the MLP (May 2018) have been subject to a detailed appraisal against the SA objectives which were developed at the scoping stage of the SA process.

1.70 The MLP provides well-reasoned policies and a clear guide to minerals development based on sound sustainable development principles. In general, the MLP has been found to have a wide range of positive and significant positive effects on the SA objectives, although a few significant negative and a number of minor negative effects have also been identified (mainly in relation to the allocation of particular sites for crushed rock or sand and gravel extraction). The severity of these impacts will depend very much on the details of the proposed development, its proximity to sensitive receptors if only part of the Allocation is worked, and its nature and scale, which may not be known until the planning application stage. Allocations have been identified for minerals development through a comprehensive site selection methodology undertaken by the Council including additional technical assessments for hydrogeological and landscape impacts, as well as Habitats Regulations Assessment. Through this process the Council has sought to minimise the potential sustainability effects of minerals development in Gloucestershire. In addition, when the MLP is considered as a whole, and alongside the other documents in the MWDP, the SA team consider that all of the policies will work together to reduce the negative effects of minerals development.

1.71 We have inevitably had to make assumptions in coming to judgements of the effects of the MLP. Our assumption with respect to effects, cumulative or otherwise, is on the basis of the intention of the MLP (i.e. what it is trying to achieve). Past experience suggests that, when considering development proposals, there will often be tensions when applying different policies, and deciding where weight should apply. Despite the best intentions of the planning authority, it may not always be possible to deliver development that meets all policy criteria and good practice guidance, and difficult choices will often have to be made.

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