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Addendum to the Sustainability Appraisal for the Minerals Local Plan for Gloucestershire: Proposed Main Modifications

Sustainability Appraisal Addendum
Prepared by LUC
July 2019

Project Title: Sustainability Appraisal of the Gloucestershire Minerals Local Plan

Client: Gloucestershire County Council

Version	Date	Version Details	Prepared by	Checked by	Approved by
1	11/07/19	Draft for client comment	Sarah Temple Olivia Dunham	Sarah Smith	Taran Livingston
2	12/07/19	Final version	Sarah Temple Olivia Dunham	Sarah Smith	Taran Livingston

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Contents

1 Introduction

1.1 Gloucestershire County Council (GCC) as Minerals Planning Authority (MPA) and Waste Planning Authority (WPA) has been working on a Minerals & Waste Development Framework (MWDF) that will replace its currently adopted Minerals Local Plan and Waste Local Plan.

1.2 In December 2018 GCC submitted the Minerals Local Plan for independent examination by a Planning Inspector appointed by the Secretary of State. An integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) Report, entitled 'SA of the Minerals Local Plan for Gloucestershire (2018-2032): Publication Plan' (April 2018) was submitted alongside the Plan (referred to hereafter as the 'April 2018 SA Report').

1.3 Following a series of Examination hearings in June 2019, GCC has prepared a schedule of Proposed Main Modifications to the Local Plan. The Proposed Main Modifications take into account matters raised during the Examination by the Inspector and participating representors.

1.4 This SA Addendum presents a sustainability appraisal of the Proposed Main Modifications and considers their implications for the SA findings reported previously. In combination with the April 2018 SA Report, this SA Addendum represents an appraisal of the Minerals Local Plan as proposed to be modified, updating the findings that were presented in the April 2018 SA Report. It should be noted that this is an Addendum to that SA Report and that the two documents should therefore be read together.

2 Approach to Appraisal of Main Modifications

Methodology

2.1 The April 2018 SA Report described the process undertaken in carrying out the SA of the Gloucestershire MLP up until Submission. It set 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), made recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the plan, and outlined proposed monitoring measures.

2.2 Each policy and site allocation in the April 2018 MLP Publication Plan was assessed against each SA objective, and a judgement was made with regards to the likely effect that the site/option would have on that objective. The SA framework used to appraise the Minerals Local Plan is presented in **Appendix 1**. The SA used colour-coded symbols (see **Figure 2.1**) to illustrate the likely sustainability effects of the policies and site allocations in relation to each SA objective.

Figure 2.1: Key to symbols and colour coding used in the SA of the MLP

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

2.3 For the Proposed Main Modifications, the SA has considered the potential sustainability effects of each Main Modification, and whether the conclusions of the April 2018 SA Report would change as a result of each of the Proposed Main Modifications being incorporated into the Minerals Local Plan. **Appendix 2** of this Addendum presents the schedule of Proposed Main Modifications with a final column added to record the implications of each Main Modification for the SA conclusions presented in the April 2018 SA Report.

3 Summary of Appraisal Findings

3.1 As shown in the final column of the schedule in **Appendix 2** of this Addendum, none of the Proposed Main Modifications to the Gloucestershire MLP have been found to change the SA findings presented in Chapter 5 of the April 2018 SA Report. However, some of the Proposed Main Modifications reinforce the existing SA findings. For example, Proposed Main Modification 44 would add to the significant positive effects identified against SA objective 15 (Air quality) for Policy DM03 because it seeks to minimise the distance that minerals are transported, whilst also requiring road-based transport to be kept to a minimum.

3.2 Proposed Main Modification 64 proposes the addition of a small number of monitoring indicators against Policies SR01 and MW01 in the Monitoring Schedule on pages 135 to 140 of the Publication (Pre-submission) Minerals Local Plan. Therefore, the SA monitoring table included in Chapter 6 of the April 2018 SA Report has been updated to reflect the new MLP monitoring indicators, see **Table 3.1**. The three new indicators, shown in <u>underlined</u> text have been added to the relevant SA objectives (3: Sustainable economic development; 8: Landscape and 18: Climate change).

Table 3.1: 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)[1]
Social SA Objectives		
2. Amenity of local communities	• Policy DM01: Amenity	*The number and % of minerals permissions, which include conditions relating to: Noise, hours of operations, traffic and lighting.* *The number and % of minerals refusals where amenity was cited within the reason for refusal.* Planning applications for minerals development being permitted where amenity issues were relevant and underwent scrutiny.
Economic SA Objectives		
3. Sustainable economic development	• Vision • Objective 3: Provision & Supply (PS)	*Annual production of minerals.* *Permitted reserves of minerals.* *Amount/% of minerals consumed locally/imported per year by type.* <u>Planning applications for development involving infrastructure for the production of secondary and/or recycled aggregates.</u>
4. Employment opportunities	• Vision • Objective 3: Provision & Supply (PS)	*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.* *Employment in the Minerals sector in Gloucestershire.*

[1] Italic text indicates that these indicators have been drawn from Gloucestershire's Minerals and Waste Authority Monitoring Report- 2011 - 2012

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)[1]
5. Safety of commercial or military aerodromes	• Policy DM11: Aerodrome safeguarding & Aviation Safety	*Number of minerals developments permitted within aerodrome safeguarding areas.* Planning applications for minerals development being permitted where aerodrome safeguarding and / or aviation safety issues were relevant and underwent scrutiny.
6. Conservation of minerals resources	• 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	*The number and % of minerals developments permitted upon existing sites or Preferred Areas* (Allocations) *identified within the Minerals Plan.* *The number of non-minerals developments permitted upon Preferred Areas* (Allocations) *identified within the adopted Minerals Local Plan.* *Number of non-mineral applications determined for sites within Mineral Safeguarding Areas, which required a minerals consultation.*
Environmental SA Objectives		
7. Biodiversity	• Vision • Objective 4: The Environment (ENV) • Policy DM06: Biodiversity and Geodiversity	*The number of minerals proposals determined upon international, national and local environmental designations.* *The number and % of minerals and refusals where environmental matters such as designated sites, were cited in the refusal reasons.* *The number and % of all permitted minerals applications that included conditions related to ecology and biodiversity.* Planning applications for minerals development being permitted where biodiversity issues were relevant and underwent scrutiny.
8. Landscape	• 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	*The number of minerals proposals determined upon international, national and local environmental designations.* *The number and % of minerals refusals where environmental matters such as landscape or designated sites, were cited in the refusal reasons.* <u>Planning applications for minerals development that have involved an assessment of landscape impacts.</u> Planning applications for minerals development being permitted where historic environment issues were relevant and underwent scrutiny.
9. Restoration of mineral sites	• Vision • Objective 6: Restoration (RA) • Policy MR01: Restoration aftercare and facilitating beneficial after-uses	*The number and % of mineral permissions that include conditions concerning the delivery of mineral restoration schemes.*
10. Material, cultural and recreational assets	• Vision	*The number and % of mineral permissions proposing the loss of material, cultural and recreational assets.*

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)[1]
11. Geodiversity	• 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	*The number of minerals proposals determined designations e.g. RIGS.* Planning applications for minerals development being permitted where geodiversity issues were relevant and underwent scrutiny.
12. Historic environment, heritage assets and their setting	• 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	*The number and % of all permitted minerals applications that included conditions related to archaeology.* *Number and % of Listed Buildings and Scheduled Ancient Monuments on Buildings at Risk Register (English Heritage)* *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.* Planning applications for minerals development being permitted where historic environment issues were relevant and underwent scrutiny.
13. Flooding	• Vision • Policy DM04: Flood Risk	*The number and % of minerals permissions located upon designated floodplain land.* *The number and % of minerals refusals where the floodplain acted as part of the reason for the refusal.* Planning applications for minerals development being permitted where flood risk issues were relevant and underwent scrutiny.
14. Soil / land quality	• Policy DM07: Soils • Allocation 06 - Land south east of Down Ampney	*The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.* Planning applications for minerals development being permitted where soil resources issues were relevant and underwent scrutiny.
15. Air quality	• Policy DM03: Transport	*The number and % of minerals approvals that included conditions concerning air pollution control.* *The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.*
16. Water quality and quantity	• Vision • Policy DM05: Water Environment	*The number and % of minerals refusals where safeguarding water supplies acted as part of the reason for the refusal.* *The number and % of minerals approvals that included conditions concerning water pollution control.* *The number and % of all minerals refusals where environmental protection acted as part of the reason for refusal.*

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)[1]
		Planning applications for minerals development being permitted where water environment issues were relevant and underwent scrutiny.
17. Impacts of lorry traffic on the environment and communities	• Policy DM03: Transport	*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.* *The number and % of all minerals refusals, where highways was cited as part of the reason for refusal.* Planning applications for minerals development being permitted where transport issues were relevant and underwent scrutiny.
18. Climate Change	• Vision	Planning applications for minerals development being permitted where climate change issues, including concerns relating to greenhouse gas emissions, were relevant and underwent scrutiny. Planning applications for minerals development being permitted where flood risk issues were relevant and underwent scrutiny. Planning applications for minerals development being permitted where transport issues were relevant and underwent scrutiny. Planning applications for minerals development that have involved the importation and/or exportation of minerals or other materials.

4 Conclusions

4.1 None of the Proposed Main Modifications to the Gloucestershire MLP would result in any changes to the SA findings presented in the April 2018 SA Report, including the cumulative effects identified in Chapter 5 of that report.

LUC

July 2019

Appendix 1
SA Framework and assumptions

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
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?*		Some minerals sites could have a minor negative effect on protecting the health of local residents, communities and visitors to the County. The risk of dust[3] from blasting/ drilling and other sources within the site (e.g. haul roads, crushers, stockpiles etc.) could affect residents and communities near to mineral extraction sites. However, research undertaken for the government in 1995[4] concluded that dust generated by surface mineral operations (i.e. sand and gravel extraction and crushed rock quarries, as opposed to underground mines) did not result in any specific public health impacts. Therefore, it is not considered likely that mineral extraction in Gloucestershire would give rise to a significant negative effect on health, but minor negative effects due to nuisance effects of dust may be experienced or perceived by some residents etc. living or working close to sites. Both the Technical Guidance to the NPPF[5] and former Annex I: Dust of Minerals Policy Statement 2, state that residents can be affected by dust up to 1km from the source, and that additional measures to control PM_{10} might be necessary if, within a site, the actual source of emission is within 1km of any residential property or other sensitive use. However, former Annex I of Minerals Policy Statement 2 also stated that concerns about dust are most likely to be experienced near to dust sources, generally within 100m depending on site characteristics and in the absence of appropriate mitigation. The NPPF is clear that minerals planning authorities should ensure that unavoidable dust emissions are controlled and mitigated or removed at source. Therefore it is assumed that mineral extraction at any of the potential sites will be well operated and that mitigation measures implemented should be sufficient to avoid any potential health effects.	Visual analysis of Ordnance Survey (OS) base maps for residential areas, schools, hospitals and faith centres and information from Gloucestershire County Council's (GCC) own site assessments.
	++	N/A	

[2] From: Gloucestershire County Council. Gloucestershire Minerals Local Plan: Sustainability Appraisal – Scoping Report Update 4, July 2013.

[3] Dust is the generic term which BS6069 (Part 2) *Characterization of air quality Glossary* (1987) uses to describe particulate matter in the size range 1–75 µm (micrometres) in diameter. Particles that are less than or equal to (≤) 10 µm in diameter are commonly referred as PM_{10}.

[4] Office of the Deputy Prime Minister (by Arup Environmental/Ove Arup and Partners). The Environmental Effects of Dust from Surface Minerals Workings, 1995.

[5] DCLG. Technical Guidance to the National Planning Policy Framework, March 2012.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	+	N/A	
	0	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.	
	-?	Potential minerals sites which are: • Within 100m of sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) could have minor negative effects on health due to the potential for dust (PM10) to have a negative effect on the health of local residents, communities and visitors to the County. However, this impact is dependent on local circumstances (such as 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), therefore in all cases these effects are uncertain (-?).	
	--	N/A, as government research has excluded any health effects of dust generated by surface minerals operations such as sand and gravel and crushed rock extraction.	
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?*	Mineral sites could have a minor negative effect on safeguarding the amenity of local residents and communities. This is because all minerals development would result in some level of noise, vibration and light pollution during site preparation, operation and restoration and associated with transport of minerals from the site. Noise and vibration from blasting/drilling and other sources within the site (e.g. haul roads, crushers, stockpiles etc.) may cause concern to residents and communities near to mineral extraction sites. Former Annex 2: Noise of Minerals Policy Statement 2 (which was superseded by the NPPF) stated that noise from surface mineral operations can have a noticeable environmental impact and is a common cause of complaint. However, research for the former Department for the Environment, Transport and the Regions (DETR) found that practice on the assessment and control of noise at surface mineral workings had improved since the publication of the earlier Minerals Planning Guidance 11 in 1993. The extent of noise and vibration effects on local amenity will depend on the type of mineral extracted on the site, the scale of the operations and the type of activities undertaken within the site. For example, noise and vibration may be greater near hard rock sites (e.g. crushed rock) due to the need for blasting prior to excavation, which is rarely needed at sand and gravel or clay operations. Additionally, potential negative effects may occur in relation to amenity if residential areas are between 100m and 1km from a potential minerals site as dust could have a nuisance effect, as highlighted under Objective 1 above.		As for SA Objective 1 - visual analysis of OS base maps for residential areas, schools, hospitals and faith centres and information from GCC site assessments. Visual analysis of relevant Local Plan maps for areas planned for future residential development, however, the certainty of these development locations depends on the status of the Local Plan in question, i.e. how close

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	The NPPF is clear that minerals planning authorities should ensure that unavoidable noise, dust and particle emissions and any blasting vibrations are controlled and mitigated or removed at source, but when developing noise limits, there should be recognition that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction. Therefore it is assumed that mineral extraction at any of the potential sites will be well operated and that mitigation measures implemented should be sufficient to avoid any potential long term amenity effects. There could be potential for land use conflict where minerals sites are in close proximity to areas planned for future residential development. The NPPF states that local planning authorities should take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality.		to Adoption it is (the date and stage of each Local Plan has been referred to in the SA matrices). GIS analysis of number of existing and potential mineral sites within 1km of existing settlement boundaries.
	++	N/A	
	+	N/A	
	0	Potential minerals sites which are: • Over 100m from sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) including areas identified or allocated for residential development in Local Plans. are expected to have no or negligible effects on local amenity. • Potential sites which are greater than 100m from an existing mineral site are not expected to have a cumulative effect on the local community. • Potential mineral sites which are adjacent to or within 100m of an existing mineral site, but over 100m from sensitive receptors are not expected to have a cumulative effect on the local community. • Settlements with no new potential minerals sites within 1km are not expected to experience cumulative effects from new mineral operations on the amenity of the local community.	
	-	Potential minerals sites which are: • Within 100m of sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) including areas identified or allocated for residential development in Local Plans. could have a minor negative impact on amenity, although this impact is very dependent on the type of mineral site, the scale of the operations and the type of activities undertaken	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		within the site and potential mitigation measures proposed, which would be assessed at the planning application stage. In addition, potential sites which are: • Within 1km from a settlement, and • There are other existing mineral sites also within 1km of the same settlement could have a cumulative effect on the amenity of the local community.	
	--	N/A, as research has highlighted that effects on amenity (e.g. noise) are improving and can be controlled, mitigated or removed.	
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?*	The location of mineral sites is unlikely to affect the promotion of sustainable economic development in Gloucestershire, as it is unlikely that new sites will encourage further investment and growth in the industry.		No data needed.
	++	N/A	
	+	N/A	
	0	No effect is likely as mineral sites are unlikely to present opportunities for spin off employment or other opportunities due to sites being self-served by the operators that own them.	
	-	N/A	
	--	N/A	
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?*	All of the sites could have a direct and indirect positive effect on increasing employment levels during site preparation, operation and restoration, as they are likely to result in a small amount of job creation for local people in both rural and urban areas. However, job creation is not expected to be significant within the Gloucestershire economy; and given that the overall number of mineral sites likely to be developed in the County will not be a large number each year, the total numbers of new employment opportunities likely to be provided within the County is not considered to be significant. Future employees of potential mineral sites are unlikely to use sustainable transport to travel to work due to the predominant rural location of most mineral sites.		No data needed.
	++	N/A	
	+	All sites are expected to have a minor positive effect on increasing employment levels.	
	0	N/A	
	-	N/A	
	--	N/A	
5. To ensure that mineral	Mineral extraction sites that are restored to open water can increase bird-strike risk if they are		Aerodrome safeguarding

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
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?*		planned near commercial or military aerodromes. This is because where birds congregate in large numbers, they can provide a hazard to aircraft at locations close to aerodromes or low flying areas. The numbers and movements of some species of birds may be influenced by the distribution of mineral sites. As part of the aerodrome safeguarding procedure (ODPM Circular 1/2003) local planning authorities are required to consult aerodrome operators on proposed developments likely to attract birds. Consultation arrangements apply within safeguarded areas (which should be shown on the proposals map in the local development framework). This effect would only apply to sites that plan to incorporate open water restoration. The NPPF states that aviation safety should be taken into account when restoring minerals sites. The type of restoration of potential mineral sites is not known at this stage, and would need to be considered once specific proposals are made.	areas are provided in GCC site assessments (relating to Gloucestershire Airport and MOD Airports).
	++	N/A	
	+	N/A	
	0	Potential minerals sites that are not within an aerodrome safeguarding area are not expected to have an effect on this objective.	
	-?	Potential minerals sites that are: • Within an aerodrome safeguarding area could have minor negative effects on the safety of commercial or military aerodromes due to the potential for birds to provide a hazard to aircraft. A ? will be used to denote uncertainty about this effect as it is dependent on the type of restoration proposed and eventually developed on a site, which may not be known until the planning application stage.	
	--	N/A	
6. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.		New potential mineral sites would not be inappropriate development as they are contributing to extraction of mineral resources, not limiting the ability to extract resources, and would therefore have no effect on this objective, which primarily relates to areas being designated as Mineral Safeguarding and Consultation areas to safeguard from sterilisation by non-mineral development.	No data needed.
	++	N/A	
	+	N/A	
	0	No effect is likely as new potential mineral sites would not be classed as inappropriate development and would therefore have no effect on this objective	
	-	N/A	
	--	N/A	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
Environmental			
7. To protect, conserve and enhance biodiversity in Gloucestershire. - *What are the potential impacts on sites which are Internationally and Nationally designated?* - *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?*		International and national sites have statutory protection through international and EU conventions (Ramsar, 1971; Bern, 1979; Bonn, 1979), directives (92/43/EC; 2009/147/EC) and national law (Wildlife and Countryside Act, 1981 as amended) and should be conserved and enhanced as outlined in the NPPF. Locally important sites of nature conservation should also be protected under the NPPF, and it will be necessary to consider those sites that are not afforded statutory protection but are of local importance; especially those that provide ecological connectivity. In addition, previously developed land will not be assumed to have no biodiversity value. Previously developed land that has been undisturbed for a significant period of time can in some instances have greater ecological value than 'greenfield sites'. Note that sites of geological interest are considered under SA Objective 11. The design of and restoration of mineral sites is increasingly adopting innovative practice to contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. There may be opportunities for sites to contribute towards national and local biodiversity targets during the restoration stage of the site, supporting ecological networks surrounding the site and incorporating the use of native species and habitats to encourage biodiversity within the site. However, this would be very dependent on the exact nature and proposed design of the planned mineral site, which would not be known until the planning application stage. It is important to bear in mind that looking in greater detail at the effects of current and completed minerals development in the same general location of potential new minerals sites can sometimes provide greater certainty than from the SA process. This can mean that biodiversity concerns flagged up by the SA methodology may not in reality be adverse but actually provide important opportunities for beneficial outcomes (e.g. because sites are near to valued biodiversity and have the potential to enhance it). Therefore, low SA scores (e.g. significant or minor negative) for this objective highlight that a cautious approach should be taken to permitting minerals development rather than ruling it out completely. Initially SA scores were based on analysis of spatial biodiversity data and proximity of the potential	GIS national datasets from Natural England's MAGIC database, plus GCC data showing Local Wildlife Sites, and information from the Council's own site assessments. There is no GIS data available for Priority Species and Habitats, however, the Council's site assessments by a GCC Ecologist have considered the proximity to or inclusion within the site of records of a legally protected species; known presence of a habitat or species on the English List* or with Strategic Nature Areas (SNAs) within the Gloucestershire Nature Map (version 1.1 Dec 2011)[7]. GCC's Habitats Regulations Assessment Report (June 2016).

[7] http://gloucestershirebiodiversity.net/actionplan/nature-map.php

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		mineral site to designated nature conservation sites. However, where relevant, these scores were reviewed to reflect information and interpretation from the GCC Ecologist in 2014 regarding whether impacts are actually likely to occur on those designated nature conservation sites. This information and interpretation draws on the GCC Ecologist's local knowledge of the sites and the consideration of potential pathways/corridors between any designated sites and the minerals site, and consideration as to the potential impact of any minerals development at that site. This information is detailed in relevant site SA matrices. Finally, the Council's 2016 Habitats Regulations Assessment Report[6] has been reviewed to understand the likelihood of significant effects on SACs, SPAs and Ramsar sites.	
	++	N/A – unless significant biodiversity enhancement opportunities existed through restoration of the minerals extraction site, it is not considered likely that significant positive effects would occur form minerals development at any of the sites.	
	+?	Potential minerals sites for which: • The GCC assessment considers the overall impact on biodiversity is potentially uncertain/positive or neutral/positive, generally because there is unlikely to be any priority habitats or species affected, but good biodiversity enhancement opportunities exist through restoration of the site could have a minor positive effect on this objective, however these effects would be uncertain as the potential for effects will depend on the exact nature and design of new sites.	
	0	Potential minerals sites for which: • The GCC assessment considers the overall impact on biodiversity is either "potentially negative, positive or uncertain", usually because there are unlikely to be any priority habitats or species affected, and not significant enhancement opportunities; and/or • The GCC Habitats Regulations Assessment concludes no significant effects are likely on European designated nature conservation sites (Special Protection Areas, Special Areas of Conservation) and Ramsar sites are not expected to affect this objective.	
	-/+	For some sites, mixed positive and negative scores are identified, as while there may be some impacts on biodiversity during extraction at the site, there may also be opportunities for habitat creation and enhancement during restoration of the sites.	
	-?	Potential minerals sites for which: • The GCC assessment considers the overall impact on biodiversity is potentially	

[6] HRA Main Report for Gloucestershire MLP (Vers. 1.2 at Pre-Publication Stage), Gloucestershire County Council, 2016.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		negative or uncertain on nationally designated sites up to 1km distant, or the GCC assessment considers the site poses a risk to the water environment of any designated aquifer fed/surface water/ flood water dependent site over 1km distant could have a minor negative effect on this objective, however these effects would be uncertain as the potential for effects will depend on the exact nature and design of new sites.	
	--?	Potential minerals sites for which: • The GCC assessment considers the overall impact on biodiversity is potentially negative or uncertain on internationally designated sites up to 1km distant, or • The GCC assessment considers the site poses a risk to the water environment of any designated aquifer fed/surface water/ flood water dependent site over 1km distant, or • The GCC Habitats Regulations Assessment concludes significant effects are likely could have significant negative effects on this objective, however these effects would be uncertain as the potential for effects will depend on the exact nature and design of new sites.	
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?*	Areas of Outstanding Natural Beauty (AONB) have statutory protection through the Countryside and Rights of Way Act (2000). Over half of Gloucestershire has Area of Outstanding Natural Beauty (AONB) status. This comprises a substantial part of the Cotswolds to the east of the County, and also parts of the Wye Valley and the Malvern Hills AONBs. Areas of high landscape quality and the setting of settlements may be affected by the development of minerals sites. In addition, areas with poor landscape character could be enhanced through the creation of high quality restored minerals sites. However, this will not be able to be determined until the planning application stage, and will depend upon factors such as: how prominent sites are in the landscape; the level of screening; and the character of the surrounding landscape. Reference has been made in the GCC site assessments to relevant Landscape Character Areas each site is within, as well as a description in the General Comments section of the potential landscape and visual impacts for each site and whether or not mitigation could be achieved. GCC commissioned landscape assessments for each of the proposed site allocations in the Pre-publication draft of the Minerals Local Plan (September 2016). Reports have been produced by Atkins for each of the allocated sites (dated June 2015), which assess the potential for landscape and visual impacts of minerals extraction. The conclusions regarding landscape impacts from the Atkins		GIS national datasets from Natural England's MAGIC database, plus GCC data showing landscape character areas, information from the Council's own site assessments, in particular the Atkins Landscape Assessment Reports for each site (June 2015).

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	reports have been used to inform the judgement of sustainability effects for this SA objective. Where the Atkins reports highlight visual impacts for particular nearby properties, this has been referred to, but has not influenced the overall score for this SA objective as it relates more to impacts on the wider landscape.		
	++	N/A	
	+?	The restoration of minerals sites is increasingly adopting innovative practice and this could have positive effects on landscape character. However, this would be very dependent on the exact nature and proposed design of the restoration of the minerals site, which would not be known until the planning application stage and is recorded for SA Objective 9 below, rather than this objective.	
	0	Potential minerals sites which: • Are judged as having 'negligible' or 'minor/negligible' landscape impacts in the Atkins Landscape Report are considered unlikely to have an effect on the landscape.	
	-?	Potential minerals sites which: • Are judged as having 'minor' or 'moderate/minor' landscape impacts in the Atkins Landscape Report could have a minor negative effect on the landscape. These effects would be uncertain as a more detailed assessment would be required once specific proposals and mitigation measures are known.	
	--?	Potential minerals sites which: • Are judged as having 'major', 'major/moderate' or 'moderate' landscape impacts in the Atkins Landscape Report could have a significant negative effect on the landscape. This effect would be uncertain as a more detailed assessment would be required once specific proposals and mitigation measures are known.	
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.	The NPPF requires that high quality restoration and aftercare of minerals sites takes place. The restoration of minerals sites is increasingly adopting innovative practice which has the potential to have positive effects on landscape character, biodiversity, amenity and recreation. Restoration, for example, can contribute to and enhance the natural and local environment by minimising impacts on biodiversity, supporting the delivering of green infrastructure and providing net gains in biodiversity where possible. Green infrastructure is defined by Natural England as a network of multi-functional green space, both urban and rural, which supports economic growth and regeneration, delivers a		No data needed.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
- *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?*	wide range of quality of life benefits, supports natural systems and biodiversity and help reduces the negative impacts of climate change. There may also be opportunities for sites to contribute towards national and local biodiversity targets. Some sites are now also adopting landscape-scale approaches to restoration, which is supported by the NPPF. However, the standard and extent of restoration would be very dependent on the exact nature and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.		
	++	N/A	
	+?	The restoration of minerals sites is increasingly adopting innovative practice and therefore, any minerals site could have positive effects on landscape character, biodiversity, amenity and recreation in the longer term, once restored. However, this would be very dependent on the exact nature and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.	
	0	N/A	
	-	N/A	
	--	N/A	
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?*	All of the potential minerals sites could have negative effects on access to and the enjoyment of recreational facilities if they are in close proximity to the potential site, by making the recreational/cultural facilities less attractive for users or in some cases removing the access (e.g. Public Rights of way (PRoW) and cycle routes). The potential negative effects would arise because all minerals development would result in some level of noise, traffic, and light pollution during site preparation, operations and potentially during restoration as well. There may be some opportunities for enhancement to footpaths/ PRoW through development of particular sites. Protection and conservation of heritage assets is covered under SA Objective 12 below. Aggregate sites are not likely to contribute to providing traditional building materials. Traditional stone as a building material is usually produced from building stone sites which are not being considered in the scope of the potential sites for the Gloucestershire Minerals Local Plan.		GIS data from GCC for PRoW), plus analysis of OS base map for other types of leisure/recreational facilities and open spaces and information from GCC's site assessments (relating to PRoWs). Analysis of Sustrans Maps[8] will be completed for cycle routes.
	++	Potential minerals sites which are:	

[8] Available at: http://www.sustrans.org.uk/ncn/map?gclid=CIWvqcnx47kCFTIQtAodzCMACQ

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		• Assessed as having an opportunity for major enhancement and/or additional routes to be constructed, as identified in the GCC PRoW assessment for the site could have a significant positive effect on recreational assets in the County.	
	+	Potential minerals sites which are: • Assessed by the GCC PRoW Team as having no Public Right of Way network present, or presence of a PRoW network where there is an opportunity for the existing route to be enhanced. could have a minor positive effect on recreational assets in the County.	
	0	Potential minerals sites which are: • More than 250m from a leisure or recreational facility or open space, including Rights of Way, or • Identified in GCC PRoW Team assessment as being a PRoW but not requiring diversion or enhancement. are not expected to have an effect on recreation assets in the County.	
	-	Potential minerals sites which are: • Within 250m of a leisure or recreational facility or open space, including Rights of Way, or • Identified by GCC PRoW Team assessment as having an impact on the PRoW network with potential diversion required. could have a minor negative effect on recreation activities and assets in the County by making the facilities less attractive for users.	
	--	Potential minerals sites which: • Include a leisure or recreational facility or open space, including Rights of Way, or • Are identified by GCC PRoW Team as having a major adverse impact on the network with potential closure required. could have a significant negative effect on recreation activities, as development of the sites would either mean removing part of a facility/open space, or removing or temporarily closing land which has potential for recreation/access to the countryside.	
11. To protect conserve and enhance geodiversity in Gloucestershire. - *What if any are the likely impacts on geodiversity?* - *Will it enhance geodiversity?*	National and locally important sites of geological/geomorphological interest (SSSIs or Local Geological Sites, formally RIGS) should also be protected under the NPPF. The NPPF states that proposals for any development on or affecting geodiversity sites or landscape areas will be judged. The NPPF also states that18to minimise impacts on geodiversity, planning policies should aim to prevent harm to geological interests; and local planning authorities should put in place policies so that high quality restoration and aftercare of mineral sites take place, including for geodiversity. Mineral sites can potentially contribute to geodiversity by preserving and conserving geological features/landscapes that contribute towards the link between people, landscape and their culture.		GIS data from GCC relating to RIGS/LGSs, and information from GCC's site assessments, which are based on information provided by the Gloucestershire Geology Trust at the Geological Records

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	However, due to the methods of extraction and processing, this is more likely at less intensive sites (e.g. building stone) than aggregate sites.		Centre.
	++	N/A	
	+?	The working of and restoration of minerals sites is increasingly adopting innovative practice and there may be opportunities to incorporate and preserve important geological features within the site. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.	
	0	Potential minerals sites which are: • More than 500m from a national site of geological interest (SSSI) or Local Geological Site are not expected to affect this objective.	
	-?	Potential minerals sites which are: • Within 500m of a national site of geological interest (SSSI) or Local Geological Site could have a minor negative effect on this objective. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.	
	--?	Potential minerals sites which are: • Within the boundary of a national site of geological interest (SSSI) or Local Geological Site could have significant negative effects on this objective. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.	
12. To protect conserve and enhance the historic environment, heritage assets and their setting. - *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*	Listed Buildings have statutory protection through the Planning (Listed Buildings and Conservation Areas) Act 1990. The Ancient Monuments and Archaeological Areas Act (1979) protects monuments whose preservation is given priority over other land uses. The NPPF requires local authorities to conserve and enhance the historic environment and states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The development of minerals sites in proximity to heritage assets could have a negative effect on the setting of these assets.		GIS national datasets from Natural England's MAGIC database, plus GCC data showing landscape character areas, and information from GCC's site assessments, which are based on information provided by GCC's Archaeology team.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
the wider historic landscape?	Reference has been made in the GCC site assessments to the relevant Historic Landscape Characterisation status for each site, as well as a description of the proximity to nearby heritage assets and whether or not mitigation would need to be provided. GCC commissioned landscape assessments for each of the proposed site allocations in the Pre-publication draft of the Minerals Local Plan (September 2016). Reports have been produced by Atkins for each of the allocated sites (dated June 2015), which assess the potential for landscape and visual impacts of minerals extraction, including impacts on Historic Landscape Character and local heritage features. The conclusions regarding severity of the impacts on HLC and local heritage features from the Atkins reports have also been used to inform the judgement of sustainability effects for this SA objective.		
	++	N/A	
	+	N/A	
	0	Potential minerals sites which are: • Within or adjacent to industrial estates • More than 1km from a Historic Park or Garden or Registered Battlefield • More than 1km from a Scheduled Monument or Listed Building, or • More than 1km from a Conservation Area are considered to have no effect on these assets.	
	-?	Potential minerals sites which are: • Within 1km of a Historic Park or Garden or Registered Battlefield • Within 1km of a Scheduled Monument or Listed Building, or • Within 1km of a Conservation Area could have a minor negative effect on these assets. In addition, where the GCC site assessment notes some potential for impacts on historic environment there could also be a minor negative effect. These effects would be uncertain as a more detailed assessment would be required once proposals are known.	
	--?	Potential minerals sites which: • Are within or adjacent to a Historic Park or Garden or Registered Battlefield • Have Listed Buildings or Scheduled Monuments present on site, or • Are located within or adjacent to a Conservation Area could have a significant negative effect on these assets. In addition, where the GCC site assessment notes significant potential for impacts on historic environment there could also be a significant negative effect. These effects would be uncertain as a more detailed assessment would be required once proposals are known.	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
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?*		Paragraphs 100-105 of the NPPF describe how Local Authorities should apply a sequential, risk based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk by: applying the Sequential Test; if necessary, applying the Exception Test; and using opportunities offered by new development to reduce the causes and impact of flooding. As stated in the technical guidance to the NPPF[9], local authorities should take a sequential approach to developing in areas at risk of flooding, giving preference to locating development in Flood Zone 1, followed by Flood Zone 2 then Flood Zone 3. Table 2 of the technical guidance to the NPPF outlines the flood risk vulnerability classification. Minerals working and processing (except sand & gravel working) are classed as less vulnerable, which means that they are potentially compatible with all flood zones except for Flood Zone 3b, the functional floodplain[10]. Sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. Some sites, which may dewater, may hold the potential to store excess water in times of heavy rain, which would be seen as a positive in terms of preventing flood risk. However, this would not be known until the planning application stage. GCC commissioned hydrogeological assessments for each of the proposed site allocations in the Pre-publication draft of the Minerals Local Plan (September 2016). Reports have been produced by Atkins for each of the allocated sites (dated March 2016), which assess whether quarrying of crushed rock or sand and gravel at the allocated site is likely to have a significant impact on flood risk, water quality or changes in water quantity. Therefore, the conclusions of the Atkins reports have been used to inform the judgement of sustainability effects for this SA objective on flood risk, as well as for SA objective 16 below. However, the Atkins reports state that the conclusions reached are "possible effects that could occur in the absence of appropriate mitigation. It is expected that applicants will complete detailed assessment and develop appropriate mitigation measures. It is likely therefore that the impacts of any particular scheme would not approach those detailed." Although the Atkins reports conclude that there could be significant flood risk impacts from mineral extraction for many of the potential sites, there is an explanation of the measures that would be included to reduce flood risk, and a conclusion is reached regarding residual effects which are generally negligible for most of the sites. Therefore, it is assumed that the potential significant effects identified in the Atkins reports	GIS data from GCC and the Environment Agency, and GCC's site assessment (relating to flood risk).

[9] DCLG (March, 2012). Technical Guidance to the National Planning Policy Framework.
[10] Table 3 of the technical guidance to the NPPF.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	are very unlikely to occur, and only minor negative effects on flood risk have been identified, with uncertainty attached as they will depend on the detailed proposal for the site and any mitigation measures included, which would be assessed at the planning application stage.		
	++	N/A	
	+	N/A	
	0	• Sites where the Atkins hydrogeological report concludes an insignificant impact on flood risk are not expected to have an effect on flood risk.	
	-?	• Sites where the Atkins hydrogeological report concludes there is potential for a significant risk of flooding could have a minor negative effect on flood-risk, although this is uncertain because it is very likely that sufficient mitigation measures will be implemented to reduce the residual risk to negligible.	
	--	N/A	
14. To protect and enhance soil / land quality in Gloucestershire. - *What is the landtake?* - *Would it improve the soil quality?*	The NPPF states that where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land (4 and 5) in preference to that of a higher quality (1, 2 and 3). Furthermore, the NPPF states that local planning authorities should put in place policies to ensure that high quality restoration and aftercare of mineral sites takes place, including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources). Therefore, there may be opportunities to redress the loss of agricultural land. This is uncertain however, as it will depend on the specific restoration proposals put forward which will not be known until the planning application stage.		GIS national datasets from Natural England's MAGIC database and GCC's site assessment.
	++	N/A	
	+	N/A	
	0	Potential minerals sites which are: • Not within grade 1, 2 or 3 agricultural land are not expected to have an effect on protecting or enhancing soil/land quality.	
	-?	Potential minerals sites which are: • Large (i.e. over 20 ha) and partially within grade 1, 2 or within grade 3 best and most versatile (BMV) agricultural land; or • Small to medium (i.e. less than 20 ha) and entirely within grade 1, 2 or within grade 3 BMV agricultural land could have a minor negative effect on protecting or enhancing soil/land quality. However, this is uncertain as there may be opportunities to restore agricultural soils during restoration.	
	--?	Potential sites which are:	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		• Large (i.e. over 20 ha) and located entirely within grade 1 or 2 BMV agricultural land could have a significant negative effect on protecting or enhancing soil/land quality. However, this is uncertain as there may be opportunities to restore agricultural soils during restoration.	
15. To protect and enhance air quality in Gloucestershire, helping to meet local, national and international objectives for air quality. - *What is the proximity of sensitive receptors and to what extent can air emissions, including dust be controlled?*		Proposals for all types of minerals sites could contribute to increasing air pollution in the County with regards to minerals transportation by road, as well as any air pollution associated with the operation of the sites and processes used such as dust from blasting and crushing. The type and extent of air pollution (e.g. from dust or other emissions) will depend on the type of mineral extracted on the site, the scale of the operations and the type of activities undertaken within the site. For example intensive handling of hard rocks such as crushed rock (e.g. limestone and crystalline rocks) may produce large amounts of dust due to drilling and blasting. Although softer minerals, such as sand and gravel, can crumble more easily during handling and may produce a greater number of dust particles. Furthermore, the effects of traffic related pollutants (e.g. Nitrogen Dioxide, Carbon Dioxide and Particulate Matter) may differ depending on the mineral worked at sites and the level of output. For example, crushed rock quarries typically have larger annual outputs than sand and gravel sites and may therefore involve more traffic movements within and outside of the sites. For certain quarry processes, dust emissions are controlled under the Environmental Permitting (England and Wales) Regulations (2010) regulated and enforced by the Environment Agency. The requirement to meet EP permitting standards (including emissions to air) should ensure that the design and operation of minerals sites minimises any potentially significant effects on human health and the environment. In addition, many sites will meet the criteria that require a site-specific environmental impact assessment to be undertaken to accompany the planning application, which would look at the potential impacts and mitigation measures in more detail, and influence the conditions placed on the planning permission. The sub-question relating to air quality impacts on sensitive receptors due to dust emissions from the sites themselves are already covered under the assumptions for SA Objective 1 above. The assumptions discussed below for potential effects on this objective therefore relate to air emissions from road transport of mineral only and consider the proximity of sites to the strategic highway network and Air Quality Management Areas (AQMAs) identified by local authorities as areas where existing air pollution is already an issue.	Analysis of OS data, plus Defra's list of AQMA locations[12] and the GCC's site assessments relating to highways.

[12] http://aqma.defra.gov.uk/maps.php.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		Any increases in road transport of minerals will lead to increases in local air pollution and emissions of CO2. The further vehicles transporting minerals have to travel along local roads (i.e. not on the primary road network), the higher the potential for more localised air pollution as they are likely to travel more slowly on local roads. In addition, if the mineral site is within, or vehicles are travelling through, AQMAs where existing air pollution issues have been identified, there is more potential for negative effects on air quality. The Gloucestershire Joint Technical Evidence Paper 1: Transport[11] states that transport is a major issue when considering proposals for mineral development, as the generation of significant amounts of road traffic can and does have negative impacts on the amenity of the local community and the environment. The potential of each site to reduce the distance minerals travel by road (through the use of more sustainable transport modes) is covered under SA Objective 17 below.	
	++	N/A	
	+	N/A	
	0	Potential minerals sites which are: • Within 1km of the strategic highway network <u>but</u> not within 1km of an AQMA are expected to have a negligible impact on protecting air quality, although this impact is very dependent on the type of mineral site, the scale of the operations and the type of activities undertaken within the site and potential mitigation measures proposed, which would be assessed at the planning application stage.	
	-	Potential minerals sites which are: • Within 1km of an Air Quality Management Area (AQMA); and/or • More than 1km from the strategic highway network (and therefore travelling further along local roads) are expected to have a minor negative impact on protecting air quality, although this impact is very dependent on the type of mineral site, the scale of the operations and the type of activities undertaken within the site and potential mitigation measures proposed, which would be assessed at the planning application stage.	
	--	N/A	
16. To protect and enhance water quality and quantity in	The Water Framework Directive[13] applies to all surface freshwater bodies (including lakes, streams and rivers), groundwater, groundwater dependent ecosystems, estuaries and coastal waters out to		GIS data from GCC relating to Source

[11] The Gloucestershire Minerals and Waste Core Strategies Joint Technical Evidence Paper 1: Transport (Living Draft – January 2008)

[13] The European Water Framework Directive into force in December 2000, and was transposed into UK law by December 2003.

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
Gloucestershire, and to ensure that minerals development does not compromise sustainable sources of water supply. - *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?*		one mile from low-water. It aims to improve inland and coastal waters and protect them from diffuse pollution in urban and rural areas; increase the sustainable use of water as a natural resource and create better habitats for wildlife that lives in and around water. The extent to which a minerals site will affect ground and surface water on a potential site depends on the type of mineral worked, site design and characteristics, and the geological conditions. Mineral sites that are in Source Protection Zone (SPZ) 1 or adjacent to a water body could potentially lead to loss of contaminants or accidental pollution incidents. However, the NPPF states that local planning authorities should set out environmental criteria against which planning applications will be assessed so as to ensure that permitted operations do not have unacceptable adverse impacts on the natural environment, including from impacts on the flow and quantity of surface and groundwater and migration of contamination from sites. GCC commissioned hydrogeological assessments for each of the proposed site allocations in the Pre-publication draft of the Minerals Local Plan (September 2016). Reports have been produced by Atkins for each of the allocated sites (dated March 2016), which assess whether quarrying of crushed rock or sand and gravel at the allocated site is likely to have a significant impact on flood risk, water quality or changes in water quantity. Therefore, the conclusions of the Atkins reports have been used to inform the judgement of sustainability effects for this SA objective on water quality and quantity, as well SA objective 13 above on flood risk. However, the Atkins reports state that the conclusions reached are "possible effects that could occur in the absence of appropriate mitigation. It is expected that applicants will complete detailed assessment and develop appropriate mitigation measures. It is likely therefore that the impacts of any particular scheme would not approach those detailed." Although the Atkins reports conclude that there could be a number of significant impacts on water quality from mineral extraction at the potential sites, there is an explanation of the measures that would be included to reduce these impacts, and a conclusion is reached regarding residual effects which are generally negligible for most of the sites. Therefore, it is assumed that the potential significant effects identified in the Atkins reports are very unlikely to occur, and only minor negative effects on water quality have been identified, with uncertainty attached as they will depend on the detailed proposal for the site and any mitigation measures included, which would be assessed at the planning application stage.	Protection Zones, analysis of OS base maps for surface water bodies, and information within GCC's site assessments on water-related issues.
	++	N/A	
	+	N/A	
	0	• Sites where the Atkins hydrogeological report concludes an insignificant impact on water quality and quantity	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
		are not expected to have an effect this objective.	
	-?	• Sites where the Atkins hydrogeological report concludes a significant impact for either water quality or quantity could have a minor negative effect on this objective, although this is uncertain because it is very likely that sufficient mitigation measures will be implemented to reduce the residual risk to negligible.	
	--	N/A	
17. To reduce the adverse impacts of lorry traffic on the environment and communities through means such as: a) reducing the need to travel b) promoting more sustainable means of transport e.g. by rail or water c) sensitive lorry routing d) the use of sustainable alternative fuels - *What is the capacity of the site and transport infrastructure to support the sustainable movement of minerals and products arising from resource recovery?*	All mineral sites will involve road transportation of minerals with some involving more movements that others. For example, crushed rock quarries typically have larger annual outputs than sand and gravel sites and may therefore involve more traffic movements within and outside of the sites. However, proximity to rail lines/depots/sidings, rivers/canals or wharves could provide opportunities to explore more sustainable modes of transporting waste. The NPPF states that plans and decisions should ensure developments that generate significant movements can maximise the use of sustainable transport modes; and that plans should protect and exploit opportunities for the use of sustainable transport modes for the movements of goods. As discussed above under SA Objective 15, air emissions from transport of minerals are likely to have more of an effect on the environment and communities than air emissions from the facility itself, therefore, opportunities to reduce road transport of minerals would have positive effects on this objective. Direct impacts of lorry traffic (i.e. noise, nuisance, safety, congestion as opposed to air pollution) on communities relates to how much access is reliant on local roads, therefore to provide some indication of this, the proximity to the strategic high network has been used to assess the potential effects on this objective. For potential sites which are closer to the strategic highway network, it is assumed that lorry traffic would spend less time on local roads, and have less of an impact on nearby communities. Where GCC's site assessment notes that new access routes may be required, this could also have a positive effect on communities as it may reduce impact on existing local roads. Some of the sub-questions for this objective are also covered under the assumptions for SA Objectives 4 and 15 above in relation to employee transport opportunities and air quality impacts of lorries travelling on local roads.		National datasets and OS base map.
	++	N/A	
	+	Potential sites which are: • Within 1km of the strategic highway network could have a minor positive effect on reducing the impacts of lorry traffic on the environment and communities.	

SA Objective and Sub Questions[2]	Score	Justification/reasons for score	Data sources (and limitations)
	0	N/A	
	-	Potential sites which are: • More than 1km from the strategic highway network could have a minor negative effect on reducing the impacts of lorry traffic on the environment and communities.	
	--	N/A	
18. To reduce contributions to and to adapt to Climate Change. - *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.*	Aggregate quarrying is energy intensive and consequently reducing energy consumption and the industry's overall carbon footprint are important matters. Quarry operations should and do aim to be as energy efficient as possible and implement measures to offset or reduce the size of their carbon footprint, whereby some sites calculate their carbon output per tonne of product. However, it is very difficult to take carbon footprint and therefore potential contributions to and adaptations to climate change into account at this stage in the planning process; as it will depend on the information that proposed developments can provide at the application stage.		No data needed.
	++	N/A	
	+	N/A	
	0	N/A	
	?	At this stage in the planning process it is not possible to determine the impacts of minerals sites on their ability to reduce contributions to and to adapt to climate change as it will depend on the proposal, which would be assessed at the planning application stage.	
	-	N/A	
	--	N/A	

Appendix 2
Detailed Schedule of Main Modifications and Implications for SA Findings

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
MM1 (New proposed modification)	Introduction (paragraph 13, page 4)	Revise Publication MLP paragraph 13: - Minerals of economic value in Gloucestershire that are presently worked and / or could be in the foreseeable future include: - clay; coal; limestone; sand & gravel **(including sharp and soft sands)**; and sandstone. These minerals are mostly found at or near the surface and are concentrated in four main resource areas – the Cotswolds; Forest of Dean; Seven Vale; and the Upper Thames Valley. Coal is present underground, although at relatively shallow depths within the Forest of Dean resource area.	It is not considered that this Main Modification will change the findings of the SA because it is a minor wording clarification that will not affect any policies contained within the Minerals Local Plan.
MM2 (New proposed modification)	The Strategy (page 26)	Revise the Publication MLP Strategy: - **Secondary & recycled aggregate supplies (see section 6)** To **make provision for the supply of secondary and recycled aggregates and** support local decision makers in giving weight to the planning merits of increasing the use of recycled and secondary aggregates **in development** as an alternative to primary land-won aggregates.	It is not considered that this Main Modification will change the findings of the SA because the additional wording proposed for the MLP Strategy is already reflected in the policies that were assessed.
MM3 (New proposed modification)	The Strategy (page 27)	Revise the Publication MLP Strategy: - **The future supply of minerals (see section 8) and Areas for future aggregate working (see section 9)** To make provision for the steady and adequate supply of **nationally important minerals found locally including aggregates made up of crushed rock, sharp and soft sands and gravel; secondary and recycled aggregates; and the industrial**	It is not considered that this Main Modification will change the findings of the SA because the change in wording is largely for clarification purposes.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		mineral brick clays ~~key local minerals (clay, brick clay and aggregates~~ throughout the plan period and beyond where necessary, which will contribute towards meeting ~~identified~~ **local, sub-national and national** needs as advised appropriately through the monitoring of relevant landbanks of permitted reserves; To provide for the future working of aggregates **principally** from within allocated areas located in the Forest of Dean, Cotswold and Upper Thames Valley resource areas~~.~~**, but acknowledging that some aggregates may also be sourced from outside of allocated areas under certain circumstances.** ~~Aggregate working outside of allocated areas will only be allowed in certain circumstances;~~ To make provision for the supply of **important and valuable** local natural building stone**s**, ~~which will~~ **that** contribute~~**ing**~~ towards ~~maintaining~~ the **maintenance of Gloucestershire's** historic built environment**, heritage assets further afield** and **the** promoti**o**n~~g~~ **of** local distinctiveness **through the design of** ~~in~~ new build **development.** ~~design;~~	
MM4 (New proposed modification)	The Strategy (pages 27 and 28)	Revise the Publication MLP Strategy: - **Development management (see section 10)** To **support actions for tackling and responding to climate change and to** ensure that the natural (including water) and historic environment, health, wellbeing and quality of life of local communities, the efficient, effective and safe functions of the highway network, and the economic **prosperity of Gloucestershire** ~~viability of local businesses,~~ will not suffer unacceptable adverse impacts caused by mineral developments, through: - • demanding that all proposals set out sufficiently detailed and evidenced appraisals of potential adverse impacts **including making reasonable allowances for the impacts of climate change**, their possible significance	It is not considered that this Main Modification will change the findings of the SA because the additional text (including the bullet point on decarbonising the economy and minimising greenhouse gas emissions) will not affect the overall aim of any of the policies contained within the Minerals Local Plan.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		and a clear demonstration of how these could be avoided or that effective mitigation measures will be employed; • giving prominence to the potential risk of cumulative impacts through either multiple impacts from a single mineral development or a number of mineral developments clustered within one of Gloucestershire's mineral resource areas or another equivalent resource area within a neighbouring local authority area; • **pursuing actions that contribute towards decarbonising the economy and minimising greenhouse gas emissions by requiring: - increasingly efficient mineral operations that will achieve a reduction in journey frequency and the distance travelled by minerals, the use where practicable of alternative and more sustainable modes of non-road based transport and / or haulage vehicles that use increasingly reduced emissions technology or are able to employ more sustainable alternatives to the internal combustion engine; and** • seeking to avoid, wherever possible, future working of ~~aggregate~~ minerals from within AONB designations or where the setting of such designations might be affected. ~~But~~ **However**, where **mineral** working is justified and allowed, an appropriate balance will be achieved that is reflective of the **importance of the mineral resource** ~~reasonableness of these areas~~ to contribute towards ~~key~~ **aggregate and other** mineral supplies **such as natural building stones,** having given great importance to the protection of landscape quality, scenic beauty, cultural heritage and wildlife conservation.	
MM5 (New proposed modification)	The Strategy (page 28)	Revise the Publication MLP Strategy: - **Mineral restoration (see section 11)** To make certain that the 'temporary nature' of minerals development is upheld and that opportunities to maximise beneficial after uses are realised by: - • requesting appropriately detailed reclamation site plans that demonstrate how effective, progressive restoration will be achieved to a high environmental standard and in the shortest possible timescale to the effect of ensuring the	It is not considered that this Main Modification will change the findings of the SA because the additional wording regarding carbon footprint will not affect the overall aim of any policies in the MLP.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		• minimum amount of disturbance occurs; and • positively encouraging restoration that contributes towards the achievement of sustainable development, which will not limit the range of potential acceptable after-uses and that, will secure long lasting community and environmental benefit**s** particularly in terms of biodiversity, geological conservation interest, resilience to and adaptation to climate change**, contributing towards minimising the carbon footprint of mineral activities through increasing vegetation and / or open water bodies** and where appropriate, the reinstatement of soil resources including to the highest possible achievable grade of best and most versatile agricultural land.	
MM6 (New proposed modification)	Policy SR01 (page 30)	Revise Publication MLP Policy SR01:- **Part a | Mineral developments** **Mineral development proposals will be permitted where they adopt best practice in the extraction, processing and transportation of primary minerals in order to minimise the amount of waste generated and make provision for the sustainable production of secondary and recycled aggregates, subject to the requirements to policy MW06 | Ancillary minerals development.** **Part b | Non-mineral developments** Non-mineral development~~s~~ **proposals will be permitted where they adopt sustainable design principles, construction methods and procurement policies that are in line with the adopted Gloucestershire Waste Core Strategy Policy WCS 2: Waste reduction. This includes using the minimal amount of primary minerals; reusing or facilitating the recycling of mineral wastes generated on-site and using alternative construction materials sourced from** ~~should use~~ secondary and recycled aggregates ~~in preference to primary aggregates wherever reasonable and practicable to do so~~. ~~Major non-mineral developments should maximise the use of~~	Although the Main Modification includes a section on minerals development, the primary purpose of this policy remains to promote use of secondary and recycled aggregates. Therefore, it is not considered that the addition of this new section will change the findings of the SA in relation to Policy SR01. In stating that proposals will be permitted where they adopt best practice transportation of primary minerals (e.g. co-transportation) this policy adds to minor positive effects identified with regards to SA objective 18 (Climate change), but this is not enough to raise the effect from minor positive to significant positive. It is also not considered that the further information provided on sustainable design, construction and procurement of non-mineral developments will change the findings of the SA, although this is positive in terms of general sustainability.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		~~secondary and recycled aggregates including building products made from these materials, and demonstrate this through supporting evidence.~~ **Part c | Non-mineral developments involving the production of secondary aggregates** **Non-minerals development proposals involving the production of secondary aggregates will be permitted subject to such operations meeting the applicable requirements of other local development plan policies such as those concerned with amenity protection and environmental acceptability.**	
MM7 (New proposed modification)	Supporting text to Policy SR01 (paragraph 89, page 30)	Revise Publication MLP paragraph 89:- The aim of policy SR01 is to **support measures that will achieve the best use of primary minerals and to facilitate increased availability and use of alternative secondary and recycled aggregates in development throughout Gloucestershire. This will contribute towards achieving increasingly sustainable local mineral supplies.** ~~increase awareness of and to encourage greater uptake of recycled and secondary aggregates within new development. In turn this may help stimulate local markets in favour of alternatives to primary land won aggregates. A stimulated local market may also generate a more attractive investment environment that could further enhance alternative aggregate supplies over time through more efficient and effective infrastructure and product innovation.~~	It is not considered that this Main Modification will change the findings of the SA because the change in wording will not alter the overall aim of Policy SR01, which is to support the use of secondary and recycled aggregates in development.
MM8 (New proposed modification)	Supporting text to Policy SR01 (paragraph 90, page 30)	Revise Publication MLP paragraph 90:- ~~All non-minerals development should use as much secondary and recycled aggregates as possible within reasonable construction and design quality constraints, environment limits and where potential impacts on local communities are not made worse.~~	It is not considered that this Main Modification will change the findings of the SA because the new wording regarding production of secondary and recycled aggregates will not alter the overall aim of Policy SR01.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		In recognition of potential synergies between mineral working and inert recycling operations, due consideration should be given to the possibility of secondary and recycled aggregates production derived from inert waste taking place at mineral development sites. However, such proposals must not prejudice the delivery of permitted mineral working incorporating previously agreed restoration plans and avoid generating unacceptable adverse impacts on the environment and amenity of surrounding local communities. The acceptability of any secondary and recycled aggregate production at mineral development sites will need to meet the relevant criteria set out in policy MW06 | Ancillary minerals development.	
MM9 (New proposed modification)	Supporting text to Policy SR01 (paragraph 91, page 30)	Revise Publication MLP paragraph 91:- ~~Specific efforts should be made with major non-minerals development proposals to maximise the use of secondary and recycled aggregates and this must be shown through supporting evidence. A focus on major development offers an opportunity to achieve meaningful change by way of economies of scale. It also enables an effective means of monitoring policy SR01.~~ **Non-mineral development proposals brought forward throughout Gloucestershire over the coming years will need to demonstrate their sustainable credentials in order to meet local development plan requirements. This includes adherence to the principles of waste minimisation, the re-use of materials and the adoption of high sustainable construction standards. The adopted Gloucestershire Waste Core Strategy Policy WCS 2 | Waste Reduction requires the submission of a Waste Minimisation Statement (WMS) that demands the monitoring of waste generated during construction (including minerals where they have been used), and the demonstration of how construction and**	It is not considered that this Main Modification will change the findings of the SA because the new wording on non-mineral developments will not alter the overall aim of Policy SR01, which is to support the use of secondary and recycled aggregates in development.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		demolition waste materials may be re-used on-site or will be recycled for later use off-site.	
MM10 (New proposed modification)	Supporting text to Policy SR01 (paragraph 92, pages 30 and 31)	Revise Publication MLP paragraph 92:- ~~92. The definition of major development is set out in planning regulations and this should equally apply to major non-minerals development . It involves 10 dwellings or more, or a site for housing of over 0.5 hectares; and for all other development types, any building that creates floor space of 1,000m2 or more, or will be carried out on a site of 1 hectare or more.~~ **In relation to construction materials used in non-minerals development proposals, there are adopted local plan policies that seek the achievement of high sustainable construction standards, including some support for exceeding the minimum requirements under the building control framework. This could be achieved through meeting the Building Research Establishment Environmental Assessment Method (BREEAM) technical standards, which includes demonstrating material efficiency through the procurement of materials with high levels of recycled content [retain footnote 50] or securing credits towards Leadership in Energy and Environmental Design (LEED) certification by way of using materials that include a recycled element. In addition, the adopted Gloucestershire Waste Minimisation in Development Projects Supplementary Planning Document (WM-SPD) which supports Policy WCS 2 contains a target of 10% (by value) for major development to be constructed from materials derived from recycled and sustainable sources.**	It is not considered that this Main Modification will change the findings of the SA because the change in wording will not alter the overall aim of Policy SR01, which is to support the use of secondary and recycled aggregates in development.
MM11 (New proposed modification)	Supporting text to Policy SR01 (paragraph 93, page 31)	Revise Publication MLP paragraph 93:- ~~93. Collaboration between the MPA and local planning authorities will be essential to achieve desirable increases in the demand and subsequent use of secondary and recycled aggregates.~~	It is not considered that this Main Modification will change the findings of the SA because the change in wording will not alter the overall aim of Policy SR01, which is to support the use of secondary and recycled

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		~~Local planning authorities will largely be responsible for determining accordance with policy SR01, but may seek advice from the MPA from time-to-time to ensure the realistic deliverability of proposals through confirmation of proposed sources and uses of secondary and recycled aggregates .~~ **The MPA will work closely with Gloucestershire's local planning authorities to support the implementation of local development plan policy requirements relating to matters of waste reduction, reuse and sustainable construction, specifically where this relates to mineral matters. The MPA may advise decision makers in response to any applicants' analysis of availability and possible sources of local alternative secondary and recycled aggregates [retain footnote 46]. This is alongside a review of evidence provided by applicants on meeting the principles of waste minimisation, which has been available from the County Council in its capacity as Waste Planning Authority (WPA) since the adoption of the Gloucestershire Waste Core Strategy in 2012.**	aggregates in development.
MM12 (New proposed modification)	Supporting text to Policy SR01 (paragraph 94, page 31)	Revise Publication MLP paragraph 94:- ~~94. For major non-minerals development proposals, consideration will need to be given to the arrangements put in place to assess and monitor materials used in the construction phase of the development. This should include scoping the potential use of secondary and recycled aggregates to determine what is realistic, and practicably achievable. Availability, viability and technical suitability are all valid matters that should be reviewed. This scoping exercise could be secured through a pre-commencement condition.~~ **For non-mineral development proposals that could involve the production of secondary aggregates, permission should be granted subject to all relevant site-specific matters such as protecting the amenity of local communities and**	It is not considered that this Main Modification will change the findings of the SA because the change in wording will not alter the overall aim of Policy SR01, which is to support the use of secondary and recycled aggregates in development.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		safeguarding the environment are appropriately addressed. Decision makers must consider the wider benefits of supporting the supply of an alternative construction material to primary minerals against the implications of any intensification of development that could result from the production of secondary aggregates such as increased highway movements.	
MM13 (New proposed modification)	Supporting text to Policy SR01 (paragraph 95 to 98, pages 31 and 32)	Delete paragraphs 95 to 98:- ~~95. The adopted Gloucestershire Waste Minimisation in Development Projects Supplementary Planning Document (WM SPD) contains a target of 10% (by value) for major development to be constructed from materials derived from recycled and sustainable sources47. The use of secondary and recycled aggregate as advocated by policy SR01 could make an invaluable contribution to the achievement of this target. It is important to note that major non minerals development proposals that fall short of this target should be required to present a robust justification for doing so.~~ ~~96. The content of the WM SPD may be subject to a review over the time horizon of the plan. As such any new target(s) put forward covering recycled and / or sustainable materials in construction, will need to be taken into account.~~ ~~97. In the majority of instances, evidence needed to support policy SR01 will relate to other local development plan policy requirements for major non minerals development in Gloucestershire. The use of recycled aggregate is also actively encouraged under both waste reduction and sustainable construction policies48. For example, Adopted Waste Core Strategy Policy WCS 2 (Waste Reduction) requires the submission of a Waste Minimisation Statement (WMS) that includes a requirement to monitor and measure waste generated during construction, and to show how its re use on / or off site will be encouraged. Adopted Gloucester Cheltenham Tewkesbury Joint Core Strategy policy SD3 (Sustainable Design and~~	It is not considered that this Main Modification will change the findings of the SA because the removal of text will not alter the overall aim of Policy SR01.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		~~Construction) also contains an expectation that development will incorporate the principles of waste minimisation and re-use. The policy's supporting text goes on to explain that higher standards for sustainable construction than those required through the building control framework will be encouraged. This could be achieved by meeting or exceeding the Building Research Establishment Environmental Assessment Method (BREEAM) technical standards. These include demonstrating material efficiency through evidence of the procurement of materials with high levels of recycled content.~~ ~~98. To avoid unnecessary duplication and excessive and overly burdensome information it would be wholly appropriate for matters relating to policy SR01 to be incorporated with other evidential requirements for major non-minerals development. For example an expanded WMS or an addendum to a submission report tasked with demonstrating how sustainable construction and design standards are to be met.~~	
MM14 (New proposed modification)	Supporting text to Policy SR01 (paragraph 99, page 32)	Revise Publication MLP paragraph 99:- **Non-mineral developments that provide for a supply of recycled aggregates** ~~Infrastructure matters related to the supply of secondary and recycled aggregates~~ are dealt with through other local development plan policies covering the county. The policies contained within the adopted Gloucestershire Waste Core Strategy (WCS) are more likely to be of key importance. New, expanded or maintained recycled aggregate sources will largely be influenced by the successful implementation of Core Policy WCS 4, which is concerned with inert waste recycling & recovery, and Core Policy WCS 11 that deals with the safeguarding of sites for waste management.	It is not considered that this Main Modification will change the findings of the SA because the minor wording change will not alter the overall aim of Policy SR01.
MM15 (New proposed modification)	Supporting text to Policy MS01 (paragraph 102, page 33)	Revise Publication MLP paragraph 102: - Mineral safeguarding is the means available to avoid the needless sterilisation of primary mineral resources by non-minerals~~s~~	It is not considered that this Main Modification will change the findings of the SA because the additional information will not alter the overall aim of Policy MS01.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		developments. National policy and practice guidance advises this can be achieved through defining Mineral Safeguarding Areas (MSAs), which identify the location of specific minerals of local and national importance and an appropriate policy framework to assess the significance of the matter and **to** consider mitigation where appropriate. **This approach accords the 'agent of change' planning principle that is laid down in national policy through the revised NPPF 2018 [new footnote].** New footnote **National Planning Policy Framework (NPPF) 2018, paragraph 182**	
MM16 (Previously PMM01)	Policy MS01 (1st sentence and the 1st, 3rd , 4th and 5th clauses, page 35)	Revise the 1st sentence and the 1st, 3rd, 4th and 5th clauses of Publication MLP Policy MS01: - Non-mineral developments **proposals** within a Mineral Safeguarded Area (MSA) will be permitted provided: - I. it is **they are** exempt from **safeguarding requirements** as set out in the list contained in table 2; or II. needless sterilisation of mineral resources will not occur; or III. the mineral **resources of** concerned is **are** not economically valuable; or IV. it is appropriate and practicable to extract the mineral**s** prior to development taking place; or V. the overriding need for the development outweighs the desirability to safeguard mineral resources.	It is not considered that this Main Modification will change the findings of the SA because the minor wording changes will not alter the overall aim of Policy MS01.
MM17 (Previously PMM02)	Supporting text to Policy MS01 (Table 2, page 37)	Add a new bullet point item at the end of the list in Table 2 of Publication MLP page 37: - • **All development considered under the 'Permission in Principle' consent route unless the Mineral Planning Authority (MPA) specifically requests that a Mineral Resource Assessment is included on the local Brownfield Land Register entry or a 'Permission in Principle' decision notice.**	It is not considered that this Main Modification will change the findings of the SA because the additional bullet point on exceptions to development considered under the 'Permission in Principle' consent route will not alter the overall aim of Policy MS01.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
MM18 (Previously PMM03)	Supporting text to Policy MS01 (paragraph 122, pages 37-38)	Revise Publication MLP paragraph 122: - ~~A MRA will need to consider the site-specific nature of the mineral resources present along with an analysis of the relationship between these resources and the proposed non-minerals development.~~ **The MRA must meet PERC Reporting Standards [New footnote]. It must determine the category of mineral resources that are present (i.e. 'Inferred', 'Indicated' or 'Measured') and carefully analyse site-specific circumstances to determine whether there will be a risk of sterilisation from proposed non-minerals development.** ~~In addition to assessing~~ **In making a judgement, careful consideration will be given to technical details concerning** the extent to which non-minerals development may **affect access to currently worked minerals and / or unworked, but potentially exploitable, resources on the application site and / or nearby, within the sphere of influence of the proposal** ~~overlay mineral resources, attention should be given to accessibility issues affecting the potential to exploit unworked and currently worked resources.~~ The risk of unreasonably curtailing / constraining permitted mineral working activities should also be investigated. **[New footnote] PERC refers to Pan-European Reserves and Resources Reporting Committee Standard of Exploration, Results and Mineral Resources -** http://www.percstandard.eu	It is not considered that this Main Modification will change the findings of the SA because the changes in wording will not alter the overall aim of Policy MS01.
MM19 (New proposed modification)	Supporting text to policy MS02 (paragraph 130, page 39)	Revise Publication MLP paragraph 130:- Effective site safeguarding for the county's mineral infrastructure is therefore needed to avoid conflicting land uses from disrupting supply networks and / or generating a loss of handling capacity or future capability. **Safeguarding in this manner also accords with the 'agent of change' planning principle that is laid down in national policy through the revised NPPF 2018 [new footnote].**	It is not considered that this Main Modification will change the findings of the SA because the additional wording on the 'agent of change' planning principle will not alter the overall aim of Policy MS02.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		New footnote **National Planning Policy Framework (NPPF) 2018, paragraph 182**	
MM20 (Previously PMM04)	Policy MW01 (1st clause, page 47)	Revise the 1st clause of Publication MLP Policy MW01: - I. they will make a contribution towards maintaining throughout and at the end of the plan period an aggregate landbank requirement of at least 10 years for crushed rock or at least 7 years for sand & gravel, ~~calculated using the rolling 10 years' sales~~ **based on the LAA rate** ~~data presented~~ **published** in the **most recent** annual Gloucestershire Local Aggregates Assessment; and	It is not considered that this Main Modification will change the findings of the SA because the minor wording changes that will not alter the overall aim of Policy MW01.
MM21 (Previously PMM05)	Supporting text to Policy MW02 (paragraph 174, page 51)	Revise the final sentence of Publication MLP paragraph 174: - In carrying out an assessment of sustainability, a review of the potential impacts on key designations will be required. Attention must be given to key designations present in the locality such as the valued landscapes of the Cotswolds and Wye Valley AONBs. The scale and significance of any impacts on the conservation of the landscape and scenic beauty, and ability to protect wildlife and cultural heritage will be of paramount importance. Meeting the relevant criteria set out in policies DM06, DM08 and DM09 and MR01 will be crucial. However, as supported by national policy, a degree of flexibility may be shown when analysing individual proposals for small-scale natural building stone working**s**~~, which are likely to operate over a protracted timescale, experience low rates of working and / or periods of intermittency~~ **Subject to the merits of any given proposal and consideration of possible environmental impacts, on a case by case basis it may be justified for proposals to involve relatively low rates of extraction, periods of intermittent working and as a consequence, relatively longer planning permission timeframes than would otherwise be desirable**[84].	It is not considered that this Main Modification will change the findings of the SA because the additional supporting text will not alter the overall aim of Policy MW02.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
MM22 (Previously PMM06)	Supporting text to Policy MW02 (paragraph 176, page 51)	Revise Publication MLP paragraph 176: - Natural building stone working ~~may~~ positively contribute**s** to the economic well-being and cultural heritage of the county's rural local communities. ~~This may arise~~ **It does so** ~~through the~~ direct**ly** ~~and indirect~~ **through** local employment opportunities **and indirectly by contributing to the localities attractiveness as an area for tourism, recreation and other businesses.** ~~being offered~~. Support for new or sustained local skilled labour, particularly traditional quarrying-related skills **will** ~~may~~ be a noteworthy benefit **with mineral development proposals for the working of building stone**. Appropriate provision for local apprenticeships secured either by way of a planning condition or a planning obligation could **also prove to** be materially significant **in the decision making process**[86]. However, **in accordance with the 'agent of change' planning principle, proposals for new or extended natural building stone working that could have a significant adverse effect on the operation of other existing established businesses will need to provide suitable mitigation measures.** **(new footnote)** **This will ensure the broader local economy is not unduly weakened or suffers from a net decline as a consequence of new mineral developments. In assessing 'agent of change' impacts consideration will be given to the temporary nature of mineral working, that some adverse impacts are unavoidable and there may be a lack of alternative options given minerals can only be worked where they are found. Advice should be sought from the MPA at the earliest possible opportunity and ideally at the early pre-application stage, to establish whether matters relating to the 'agent of change' are relevant or to what extent they will need to be addressed.** ~~it is equally important to demonstrate how any potential negative economic impacts will be sufficiently outweighed. An assessment of possible impacts on the future economic performance of other industries that are operating locally~~	It is not considered that this Main Modification will change the findings of the SA because the new wording on the 'agent of change' planning principle will not alter the overall aim of Policy MW02.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		~~and / or which are being promoted through regeneration and growth initiatives may represent justified and credible evidence.~~ **New footnote** **National Planning Policy Framework (NPPF) 2018, paragraph 182**	
MM23 (New proposed modification)	Supporting text to Policy MW06 (paragraph 210, page 63)	Revise Publication MLP paragraph 210: - Worked minerals may need to undergo some form of processing before they can be put to use. This may include washing, screening, crushing, cutting and bagging. It could also involve secondary processing such as the manufacturing of coated materials (e.g. asphalt); batching for mortar and concrete; and block, tile and brick-making, often this will include bringing other materials and minerals to the site to manufacture the final product. **In addition, the production of secondary and / or recycled aggregates could be incorporated to complement primary mineral working and processing, and to support the delivery of post-working site restoration.** Where this takes place within an existing mineral site it is termed ancillary minerals development.	It is not considered that this Main Modification will change the findings of the SA because the additional wording on the production of secondary and recycled aggregates will not alter the overall aim of Policy MW06.
MM24 (Previously PMM07)	Policy MW06 (2nd and 5th clauses, pages 63 and 64)	Revise the 2nd and 5th clauses of Publication MLP Policy MW06: - II. any importation of minerals **and other materials used to produce secondary and / or recycled aggregates** from elsewhere will represent an environmentally acceptable and sustainable option; and V. a positive contribution will be made to sustaining or growing the local economy and **/ or** upholding cultural heritage throughout Gloucestershire.	It is not considered that this Main Modification will change the findings of the SA because the inclusion of a reference to materials used to produce secondary and/or recycled aggregates will not alter the overall aim of Policy MW06.
MM25 (New proposed modification)	Supporting text to Policy MW 06 (paragraph 214, page 64)	Revise Publication MLP paragraph 214: - Proposals for ancillary minerals development will need to demonstrate how they will be beneficial to and function alongside mineral working activities at the site. In doing so information will be	It is not considered that this Main Modification will change the findings of the SA because the inclusion of a reference to materials used to produce secondary and/or recycled aggregates will not alter the overall aim

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		required to show how mineral processing **and the production of secondary and / or recycled aggregates** will support diversity of mineral supplies and / or will be able to achieve certain mineral product specifications. Details of the arrangements concerning the temporary nature of any built structures will be necessary. This should incorporate a timetable for closure and dismantling, which will ensure previously approved mineral site restoration will not be prejudiced.	of Policy MW06.
MM26 (New proposed modification)	Supporting text to Policy MW 06 (paragraph 215, page 64)	Revise Publication MLP paragraph 215:- Proposals that incorporate the importation of minerals **and other materials to support the production of secondary and / or recycled aggregates** from elsewhere must be shown to be environmentally acceptable and accord with the principles of sustainable development.	It is not considered that this Main Modification will change the findings of the SA because the inclusion of a reference to materials used to produce secondary and/or recycled aggregates will not alter the overall aim of Policy MW06.
MM27 (Previously PMM08)	Supporting text to Policy MW06 (paragraph 217, page 65))	Revise the 1st sentence of Publication MLP paragraph 217: - A comparative analysis will be required **for ancillary mineral development proposals involving the importation of any minerals and other materials** where existing, permitted alternative **processing** arrangements are potentially available nearby. Evidence as to why it is not practicable and / or viable to use alternative facilities will be necessary. The ability to achieve certain product specifications and / or to facilitate the creation of desirable blended products could be a reasonable justification, although this will need to be demonstrated through supporting evidence. In addition, information concerning the efficient movement of minerals could also prove to be significant. A justification will be necessary to show how allowing ancillary development rather than using alternative facilities will make a positive contribution to reducing transport-related impacts and / or greenhouse gas emissions by way minimising freight miles travelled or the use of more appropriate freight routes. The plans for site	It is not considered that this Main Modification will change the findings of the SA because it is a minor wording clarification that will not alter the overall aim of Policy MW06.

<table>
<tr><th>Main Modification (MM) Number</th><th>Paragraph/Policy/Page No.</th><th>Proposed Main Modification</th><th>Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?</th></tr>
<tr><td></td><td></td><td>restoration and the impact on its timely delivery at the proposal site ~~and alternative facilities~~ should also be factored into the analysis.</td><td></td></tr>
<tr><td>MM28 (New proposed modification)</td><td>Supporting text to Policy MA01 (page 66)</td><td>Introduction of a new table after paragraph 223: -

Forest of Dean (FoD) Limestone resource area:
<table>
<tr><th>MLP Allocations</th><th>Resource area requirement (at 2016)* (after landbank deductions)</th><th>Potential yield</th><th>% Contribution to the resource area requirement</th></tr>
<tr><td>Allocation 01</td><td rowspan="3">10.426mt (FoD)</td><td>Between 10 and 17mt</td><td>96% - 100% +</td></tr>
<tr><td>Allocation 02</td><td>Between 3 and 4mt</td><td>29% - 38%</td></tr>
<tr><td>Allocation 03</td><td>7.4mt</td><td>71%</td></tr>
<tr><td>Total for allocations 01, 02, 03</td><td></td><td>Between 20.4mt and 28.4mt</td><td>100% +</td></tr>
</table>
Cotswolds (C’wolds) Limestone resource area:
<table>
<tr><th>MLP Allocations</th><th>Resource area requirement (at 2016)* (after landbank deductions)</th><th>Potential yield</th><th>% Contribution to the resource area requirement</th></tr>
<tr><td>Allocation 04</td><td>3.016mt (C/wolds)</td><td>Up to 9mt</td><td>100% +</td></tr>
</table></td><td>It is not considered that this Main Modification will change the findings of the SA because the new tables will not alter the overall aim of Policy MA01.</td></tr>
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<tr><th>Main Modification (MM) Number</th><th>Paragraph/Policy/Page No.</th><th>Proposed Main Modification</th><th>Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Allocation 05</td><td></td><td>Up to 10mt</td><td>100% +</td></tr>
<tr><td>Total for allocations 04 and 05</td><td>3.016mt (C'wolds)</td><td>Up to 19mt</td><td>100% +</td></tr>
</table>
Sand and gravel (countywide):
<table>
<tr><th>MLP Allocations</th><th>Resource area requirement (at 2016) (after landbank deductions)</th><th>Potential yield</th><th>% Contribution to the resource area requirement</th></tr>
<tr><td>Allocation 06</td><td rowspan="2">9.456mt</td><td>7.8mt</td><td>82%</td></tr>
<tr><td>Allocation 07</td><td>3mt</td><td>32%</td></tr>
<tr><td>Total for allocations 06 and 07</td><td>9.456mt</td><td>10.8mt</td><td>100% +</td></tr>
</table>
+ The resource area requirements are based on the MLP's provision approach, which presents a'70/30 split' between the Forest of Dean and Cotswold limestone resource areas (see pages 45 to 46 for more details).
</td><td></td></tr>
<tr><td>MM29 (New proposed modification)</td><td>Supporting text to Policy MA02 (paragraph 233, page 69)</td><td>In Gloucestershire, proposals for the working of aggregates outside of allocations may still come forward and could prove to be acceptable in planning terms. This could include the prior-working of aggregate bearing land to avoid needless sterilisation by other development, (see policy MS01); or ~~relatively small-scale residual working related to an~~ <u>working adjacent to / or within close proximity of an</u> existing permitted site <u>that would otherwise be</u></td><td>It is not considered that this Main Modification will change the findings of the SA because the minor wording changes will not affect the overall aim of Policy MA02.</td></tr>
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		impractical to exploit in any other way and / or could secure enhancements to the restoration of the existing permitted site.	
MM30 (Previously PMM09)	Policy MA02 (1st sentence and 1st, 2nd, 3rd, 4th and 5th clauses, page 70)	Revise 1st sentence and 1st, 2nd, 3rd, 4th and 5th clauses and add two new clauses (6th and 7th) to Publication MLP Policy MA02: - Mineral development proposals for aggregate working outside of allocations will be permitted only where **one or more of the following** ~~it~~ can be demonstrated: - I. the plan's allocations as set out in policy MA01 are not able to contribute towards maintain**ing** minimum landbank levels in accordance with policy MW01; ~~and / or~~ II. constraints on the availability of existing permitted reserves and / or productive capacity are likely to limit output or restrict the range of available products over the plan period; ~~and / or~~ ~~III. they represent the residual working of an area of aggregate mineral resource that is permitted or planned to be worked and would otherwise be impractical to exploit in any other way; and / or~~ **III. they represent the working of an area of aggregate mineral resource that is adjacent to / or within close proximity to an existing permitted aggregate working that would otherwise be impractical to exploit in any other way;** ~~IV. they will facilitate enhancements to previously approved plans for mineral restoration and the achievement of beneficial after-uses that will outweigh the desirability to restrict working from outside of allocated areas; and / or~~ **IV. they would function as enabling development to allow an allocation for future aggregate working to be delivered or a permitted working to be worked in a more efficient manner;** ~~V. they will facilitate the working of aggregate minerals prior to non-~~	The Main Modification proposed to this policy provides further information and clarification on the existing list of circumstances in which mineral development proposals will be permitted outside of allocations, as well as the addition of three further circumstances under which this would be permitted. However, it is not considered that these additions will change the effects identified for each SA objective, particularly the minor negative effects identified against SA objectives 1 (Sustainable development), 2 (Residential amenity), 5 (Safety), 13 (Flooding), 14 (Soil/land quality), 15 (Air quality), 16 (Water quality and quantity) and 17 (Lorry traffic) in the April 2018 SA Report. This is due to the fact these additions do not change the overall aim of Policy MA02.

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		~~minerals development taking place in accordance with policy MS01.~~ **V. they will not prejudice the delivery of previously approved restoration plans and facilitate enhancements to site restoration that will support the achievement of beneficial after-uses and satisfactorily meet the requirements of policy MR01 (Restoration, aftercare and facilitating beneficial after-uses);** **VI. they will facilitate the working of aggregate minerals prior to non-minerals development taking place in accordance with policy MS01;** **VII. they represent a borrow pit that is justifiably required to facilitate the delivery of a specific adjacent / or nearby development project(s) and will be fully reclaimed as part of the project(s).**	
MM31 (Previously PMM10)	Supporting text to Policy MA02 (paragraph 239, page 71)	Revise the 1st, 2nd, 4th and 5th sentences of Publication MLP paragraph 239: - Aggregate working outside of allocations~~, which represents~~ **that is adjacent to / or within close proximity to an existing permitted aggregate working and would otherwise be impractical to exploit in any other way** or **enabling development**, will need careful consideration. Proposals will be assessed **on a case by case basis** with regards to their size, scale and timeframe compared to the~~characteristics of the~~ existing **or planned for** aggregate working site it relates to. ~~Ensuring that mineral working will not be excessively extended will be a critical factor~~ **Evidence of the operational, economic viability, amenity and / or environmental case for allowing non-allocated aggregate working to take place in the manner proposed**. ~~Furthermore,~~ **The deliverability of** previously approved mineral site restoration **and aftercare schemes** must not be unduly **affected** ~~inhibited~~. Although, where **it is necessary to make any**	It is not considered that this Main Modification will change the findings of the SA because the new wording does not alter the overall aim of Policy MA02.

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		amendments to any existing ~~revised mineral~~ restoration **and aftercare schemes for operational reasons, due consideration will be given to any potential enhancement opportunities that may be achieved (e.g. an increase in public access, improvement in the provision of green infrastructure, facilitating biodiversity gains or the creation of a landform that would be more sympathetic to the local landscape character).** ~~is submitted, this must be acceptable in principle and offer demonstrable benefits with regard to future land use opportunities.~~	
MM32 (Previously PMM11)	Supporting text to Policy MA02 (after paragraph 240, page 71)	New paragraph to be inserted after Publication MLP paragraph 240: - **A borrow pit cannot be precisely defined in terms of quantity of mineral worked or duration. However, in order for mineral working to be classified as such, a direct functional link between the exploitable mineral and the potential delivery of a specific, named development that is either subject to a planning application or benefits from a planning consent must be shown. The consequences of the relationship must also meaningfully contribute towards the achievement of sustainable development. To demonstrate this, evidence of environmental or other planning benefits compared to obtaining minerals from alternative sources will be necessary. In addition, all mineral operations must be tied to the development and the timeframe associated with site restoration and aftercare will need to be aligned with the completion of the development. A borrow pit is typically located next to, or nearby to the development it is supporting. It is also usually the case that any restoration materials that may be required will arise, at least in part, from the inert construction wastes of the supported development. However, under all circumstances site restoration of a borrow pit must be acceptable in planning**	It is not considered that this Main Modification will change the findings of the SA because the new paragraph on borrow pits does not affect the overall aim of Policy MA02.

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		terms having been appropriately assessed against the relevant development management plan policies from DM01 to DM11 and policy MR01.	
MM33 (New proposed modification)	Supporting text to Policy DM01 (paragraph 267, page 77)	Revise Publication MLP paragraph 267: - Amenity impacts can be numerous and differ in frequency, significance and complexity on a case-by-case basis related to the types of activities taking place and the relationship to nearby land uses. Nevertheless, for minerals development there are usual risks that arise such as: - noise; air pollution from fumes and / or dust; vibration and visual intrusion, which can incorporate light pollution and loss of privacy. The way in which minerals are worked, how they are stored and ~~moved~~ **transported in, out and** around the site, whether ancillary processing takes place to create saleable products; and the phase of development (e.g. site preparation, working of minerals, implementing restoration etc.) are likely to be influential factors.	It is not considered that this Main Modification will change the findings of the SA because it is a minor wording clarification that will not affect the overall aim of Policy DM01.
MM34 (New proposed modification)	Supporting text to Policy DM01, (paragraph 268, page 77)	Revise Publication MLP paragraph 268: - It is important that a balance is struck between enabling the need for minerals to be met through their working ~~and~~, processing **and transportation** and ensuring that those who might be affected are afforded protection. The extent to which a good standard of amenity is achievable for all users and occupants of land and buildings now and in the future is a measure of success in this regard and is a core land-use planning principle set out in national policy[127].	It is not considered that this Main Modification will change the findings of the SA because it is a minor addition to the wording that will not affect the overall aim of Policy DM01.
MM35 (New proposed modification)	Supporting text to Policy DM01, (paragraph 271, page 78)	Revise Publication MLP paragraph 271: - Mineral development proposals must be accompanied by thorough investigations concerning amenity impacts. These investigations must be clear in their presentation of outcomes and be able to be scrutinised. They must highlight the potential for adverse amenity impacts to occur and their possible significance. Furthermore, details	It is not considered that this Main Modification will change the findings of the SA because the additional sentence on amenity buffer zones will not affect the overall aim of Policy DM01.

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		of any proposed mitigation measures and what commitments and resources will be afforded to them to ensure implementation and routine monitoring must be provided. **This could include the delineation on a case-by-case basis of amenity buffer zones between minerals development and sensitive receptors.** All monitoring programmes will be carefully scrutinised before any development is allowed to take place.	
MM36 (Previously PMM12)	Supporting text to Policy DM01 (paragraph 272, page 78)	Revise the 2nd sentence of Publication MLP paragraph 272: - Health Impact Assessments (HIAs) provide information to help decision-makers consider how a proposal might impact, directly or indirectly, on people's health **and wellbeing**. Mineral development proposals may benefit from the carrying out of ~~a~~**an** HIA, as ~~public~~ health **and wellbeing** ~~status and needs~~ are **potentially important** ~~critical~~ matters that ~~should be~~ **need to be considered** ~~taken account~~ in the **determination of planning proposals** **(New footnote)**. ~~decision-making process, as required by national policy~~. ~~A successfully completed HIA should present sufficient evidence to determine whether potential significant health-related effects will arise from on-site mineral working and other associated activities such as restoration, the transportation of minerals and any importation, and where relevant, facilitated after-uses following restoration. HIA information may contribute to the reasoned justifications for why certain actions, such as mitigation measures will be necessary. An important feature of a HIA is that it offers a way of ensuring all sections of an affected community will be afforded sufficient scrutiny including those that already experiencing disadvantage and / or present vulnerable health characteristics.~~ **A proportionate approach to determining whether a HIA is required will be taken based on the scale and significance of mineral development proposals having regard to the health and wellbeing of local communities. Major mineral schemes that must be accompanied by an Environmental Statement will represent the threshold for considering the need to**	It is not considered that this Main Modification will change the findings of the SA because the change in wording to clarify the need for an HIA will not affect the overall aim of Policy DM01.

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		prepare a HIA. However, major mineral development proposals that are within close proximity to potentially sensitive uses such as schools, child care centres, hospitals, adult and older persons' facilities and leisure and recreational centres will likely require a HIA. Advice from the Director of Public Health should be sought at the earliest possible opportunity and ideally at the early pre-application stage, to establish whether preparing a HIA would represent the most efficient and effective way of presenting supporting evidence on health matters and for determining the scope and level of detail necessary. A HIA can be undertaken as a stand-alone assessment or integrated into a wider Environmental Statement, although in all instances it should be closely aligned with other technical investigations such as those covering environmental and transport impacts **New footnote – Planning Practice Guidance (PPG), Health and wellbeing section, paragraph: 001, reference ID: 53-001-20140306.)**	
MM37 (Previously PMM13)	Supporting text to Policy DM01 (paragraph 273, page 79)	Revise Publication MLP paragraph 273: - **Where a HIA is completed it should present sufficient evidence to determine whether potential significant health-related effects (positive and / or negative) will arise from on-site mineral working and other associated activities such as restoration, the transportation of minerals and any importation, and where relevant, facilitated after-uses following restoration. HIA information may contribute to the reasoned justification(s) for why certain actions, such as mitigation measures will be necessary or not required. An important feature of a HIA is that it offers a way of ensuring the health and wellbeing of all sections of an affected community will be afforded sufficient scrutiny including those that already experiencing disadvantage and / or**	It is not considered that this Main Modification will change the findings of the SA because the inclusion of a paragraph on HIA will not affect the overall aim of Policy DM01.

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		present vulnerable health characteristics. ~~At the early preparation stage for minerals development proposals, a HIA screening exercise should to be carried out. This must establish whether preparing a HIA will represent the most efficient and effective way of presenting supporting evidence on health matters and for determining the level of detail necessary. A HIA can be undertaken as a stand-alone assessment or integrated into a wider Environmental Statement, although in all instances it should be closely aligned with other technical investigations such as those covering environmental and transport impacts. In the event that a HIA is to be prepared, the screening exercise should provide a sound basis for understanding the size and nature of the local communities likely to be affected and to identify in the broadest of terms, what potential risks and impacts on health could occur – positively and / or negatively and in terms of their significance.~~	
MM38 (New proposed modification)	Supporting text to Policy DM01 (paragraph 274, page 79)	Delete Publication MLP paragraph 274: - ~~Early engagement with the County Council's as an advisor on local public health matters across Gloucestershire is strongly encouraged. This will ensure that the most appropriate and up to date evidence is being used and to help establish the most effective approach for preparing an HIA. Good practice guidance is also available on HIA in respect of carrying out a screening or scoping exercise and for formal HIA preparations.~~	It is not considered that this Main Modification will change the findings of the SA because the deletion of this paragraph will not affect the overall aim of Policy DM01.
MM39 9Previously PMM14)	Supporting text to Policy DM01 (paragraph 281, page 81	Revise the 4th sentence of the Publication MLP paragraph 281: - Mineral developments can impact upon local air quality. This may occur through the release of particulates from emissions and dust, and **in**~~on~~ some instances, through unpleasant odours. Air pollution can arise from on-site mineral working activities, but may also be caused by vehicles using unsurfaced roads, from wind blowing across stockpiles and quarry waste storage, and the exposure of unconsolidated, bare ground. An air quality impact assessment	It is not considered that this Main Modification will change the findings of the SA because the clarification on the need for an air quality impact assessment will not affect the overall aim of Policy DM01.

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		~~founded on the advice contained in planning practice guidance should be provided alongside~~ **may be necessary to accompany a mineral development proposal and the requirement for such an assessment, will be decided on a case-by-case basis having considered the nature and scale of development and the level of concern about air quality** ~~mineral development proposals~~[135]. **Where** ~~Aa~~assessments **are required, they** must take into account existing air quality levels prior to development and establish whether any new sources of air pollution are likely to arise and what their influence on existing air quality could be. The impact on air quality from changes to local traffic linked to minerals development both near to the site and / or further afield along defined freight routes will need to be included. Account should also be given to the scale, duration, hours of operation, type of activities being proposed; whether they are likely to be temporary or continuous and the existence of other operations in the same locality.	
MM40 (New proposed modification)	Supporting text to Policy DM01 (after 286, page 82)	New paragraph to be inserted after Publication MLP paragraph 286:- **Adverse impacts associated with ground vibration may also be generated by the movement of minerals to and from mineral workings. In Gloucestershire, this is most likely to be a concern with the use of heavy goods vehicles on local roads for means of access and / or local delivery. In the event there is a risk of unacceptable adverse impacts occurring with mineral development proposals, careful consideration must be given to the size, scale and frequency of vehicle movements that cause ground vibration and whether it is reasonable and justified to impose operational restrictions through the use of planning conditions.**	It is not considered that this Main Modification will change the findings of the SA because this new paragraph on ground vibration will not affect the overall aim of Policy DM01.
MM41 (New proposed	Supporting text to Policy DM02 (paragraph 294,	Revise Publication MLP paragraph 294: - Mineral development proposals will be expected to identify potential	It is not considered that this Main Modification will change the findings of the SA because the new wording on seeking advice from the Minerals Planning Authority

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modification)	page 84	cumulative impacts and to show how these will be avoided or sufficiently mitigated to prevent unacceptable adverse impacts from arising. In respect of cumulative impacts related to intensified development across a locality, the parameters for this will need to be agreed on a case-by-case basis depending upon prevailing environmental conditions and geography, the scale of development proposed **in relation to permitted activities** and the nature of the individual matter of **amenity and / or environmental** concern subject to a cumulative impact assessment. **Nevertheless, in all instances advice should be sought from the MPA at the earliest possible opportunity and ideally at the early pre-application stage, to establish how cumulative impact matters should be addressed.**	will not affect the overall aim of Policy DM02.
MM42 (New proposed modification)	Supporting text to Policy DM03 (paragraph 297, page 86)	Revise Publication MLP paragraph 297: - Mineral developments are heavily reliant on Gloucestershire's highway networks and those of surrounding areas. They allow for the hauling of minerals to markets or for further processing and provide the means by which staff and customers can gain access. The county's mineral supplies are predominately local in nature and follow well established routes that are strongly aligned with the existing road infrastructure. This presents very limited opportunities for more sustainable modes of **non-road** transport such as rail, ports or other inland waterways to attract the necessary interest and accompanying investment to act as a viable alternative. Nevertheless, Gloucestershire still contains numerous rail links, navigable waterways and canals that under the right circumstances could be used as an alternative to the movement of minerals by road.	It is not considered that this Main Modification will change the findings of the SA because it is a minor wording change that will not affect the overall aim of Policy DM03.
MM43 (New proposed modification)	Supporting text to Policy DM03 (new paragraph between	New paragraph to be inserted between paragraphs 299 and 300:- **In addition, significant technological advancements across the transport sector are anticipated over the coming years,**	It is not considered that this Main Modification will change the findings of the SA because it is a new paragraph on technological advancements associated with transport, which will not affect the overall aim of

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	paragraphs 299 and 300)	**which will also make a valuable contribution towards tackling climate change. These are likely to include major improvements in fuel efficiency, the introduction of low and ultra-low emission haulage vehicles, and in time, zero emission vehicles that employ only non-fossil based means of power [new footnote].** **[New footnote] - BEIS (2017) Clean Growth Strategy: An ambitious blueprint for Britain's low carbon future** https://www.gov.uk/government/publications/clean-growth-strategy	Policy DM03.
MM44 (Previously PMM15)	Policy DM03 (part a, and part c, 1st clause, page 87)	Revise part a and part c of Publication MLP Policy DM03: - Part a | ~~Alternatives to road~~ **Sustainable** transport Mineral development proposals **that minimise** ~~will be permitted~~ **the miles travelled by minerals and demonstrate how road-based transport will also be kept to a minimum will be permitted. Wherever possible alternative and** ~~that use~~ more sustainable~~,~~ ~~alternative~~ modes of non-road transport **must be used along with fuel efficient and / or low, ultra-low or zero greenhouse gas emitting haulage vehicles.** Part c | Public Rights of Way (ProW) Network and open access land Mineral development proposals will ~~only~~ be permitted where it can be demonstrated: - I. public rights of way routes and / or open access land will be retained and their safe use maintained, and unacceptable adverse impacts will be avoided or satisfactor**il**y mitigated; and / or	This Main Modification requires mineral development proposals to set out the ways in which the miles travelled by minerals and road-based transport will be minimised. The policy still seeks to use more sustainable modes of non-road transport, but now states that more sustainable modes of non-road transport must be used along with fuel efficient and/or low, ultra-low or zero greenhouse gas emitting haulage vehicles, which would add to the significant positive effects already identified with regards to air quality (SA objective 15) and sustainable transport (SA objective 17). However, it is not considered that this change in wording will affect the overall findings of the SA.
MM45 (New proposed modification)	Supporting text to policy DM03 (New paragraph between paragraphs 305 and 306)	New paragraph to be inserted between paragraphs 305 and 306:- **Furthermore, the benefits resulting from a transition away from fossil-based road haulage should be taken into account. Increasing significance should be given to the most advanced technology available at the time, moving from increased fuel**	It is not considered that this Main Modification will change the findings of the SA because this new paragraph on moving away from fossil-based road haulage does not affect the overall aim of Policy DM03.

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		efficiency to low emission vehicles, then ultra-low emission vehicles, and ultimately zero emission vehicles.	
MM46 (Previously PMM16)	Supporting text to Policy DM03 (paragraph 303, page 88)	Revise Publication MLP paragraph 303: - For new mineral development proposals that use the local and / or strategic highway network, the potential for adverse impacts arising must be carefully scrutinised. National policy provides a clear threshold in this respect, focused on ensuring severe impacts on the highway network is prevented[151]. Particular issues likely to be scrutinised include: - network capacity; ~~maintenance~~, safety of road users, debris on the highway and related amenity impacts such as noise, dust, vehicular vibration, and air and water pollution **(see also Policy DM01)**. These impacts may be of significance to a variety of sensitive receptors located along mineral haulage routes and not just those local communities that are close by to the proposal site. **For matters relating to potential impacts on the maintenance of the highway, this is dealt with under s.59 of the Highways Act 1980 and the provision available to recover expenses due to extraordinary traffic.**	It is not considered that this Main Modification will change the findings of the SA because the addition of a sentence on highway matters will not affect the overall aim of Policy DM03.
MM47 (Previously PMM18)	Policy DM04 (1st clause, 2nd clause, 3rd clause, part a, part b, part c and part d, pages 91 to 93)	Revise 1st, 2nd. and 3rd clauses; add new 4th, 5th ,6th, 7th and 8th clauses and a new bullet-pointed sentence; delete part a, part b and part c and replace part d with a new bullet-pointed sentence for Publication MLP Policy DM04: - Mineral development proposals will be permitted, where it can be demonstrated: **-** **I.** ~~they will be resilient to the impacts of flooding;~~ **there will be no increase in the risk of flooding on site and elsewhere from all sources of flooding now and in the future;** **II.** ~~there will be no increase in the risk of flooding from all sources now and in the future; and~~ **wherever possible, flood risk reduction initiatives will be incorporated that will achieve a reduction in the risk of flooding overall;**	It is not considered that these changes to the policy wording will affect the minor positive effects identified in relation to SA objectives 1 (Sustainable development), 2 (Residential amenity), 7 (Biodiversity), 8 (Landscape), 9 (Restoration), 12 (Historic environment) and 18 (Climate Change) because they do not alter Policy DM04 enough to make these effects significant positive. Policy DM04 directly seeks to reduce the risk of flooding. The Main Modification contains additions to the list setting out the various ways in which mineral development proposals are required to address flood risk, such as the use of SuDS and the removal of obstructions from flood flow routes. The revised policy

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		III. ~~wherever possible, flood risk betterment initiatives will be delivered.~~ **appropriate measures will be put in place to manage and wherever possible, reduce surface water run-off including through the use of sustainable drainage systems (SuDS);** **IV. wherever possible, a net increase in flood water storage capacity will be achieved;** **V. where applicable, flood flow routes will be improved such as through the removal of obstructions;** **VI. where applicable, there will be no detriment to the integrity of existing flood defences and that access to allow for their future maintenance or improvement will not be impeded;** **VII. they accord with the policies contained in the River Severn, Severn Tidal Tributaries and Thames Catchment Flood Management Plans; and** **VIII. any mineral processing plant, associated building(s), and / or equipment should be designed to remain operational, safe for users, and flood resilient during a flood event.** ~~The application of a sequential test that will favour the location of development within Flood Zone 1 is fundamental to assessing the acceptability of mineral developments and will be required as part of the supporting evidence for proposals.~~ **Mineral development proposals will only be permitted in areas of flood risk (Flood Risk Zones 2, 3a or 3b) having taken into account climate change, where they have passed the Sequential Test and, where applicable, the Exception Test as set out in national policy.** **Mineral development proposals involving sand and gravel working along with water-compatible development(New footnote) may be appropriate within 'Flood Risk Zone 3b' or any identified 'functional floodplain', providing that: -** • **there will be no net loss in flood storage and flood risk reduction measures (betterment opportunities)**	wording also sets out that mineral development proposals will only be permitted in areas of flood risk having taken into account climate change, where they have passed the Sequential Test and, where applicable, the Exception Test. It states that where mineral development proposals in areas of flood risk exceed 1ha, that they must be accompanied by a Flood Risk Assessment. Despite the additional requirements, a significant positive effect was already identified for SA objective 13: Flooding, therefore the Main Modification reinforces but does not alter the SA findings in the April 2018 SA Report.

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		are provided where possible; • **there will be no impediment to water flow routes; and** • **any mineral processing plant, associated building(s), and / or equipment is designed to remain operational, safe for users, and flood resilient during a flood event.** **New Footnote - Water compatible development types other than sand and gravel working is set out under Planning Practice Guidance (PPG), Flood risk and coastal change section, paragraph 066,reference ID: 7-066-20140306)** ~~Part a | Proposals located within Flood Zone 2~~ ~~Mineral development proposals will be permitted in Flood Zone 2, where it can be shown no reasonable alterative locations within Flood Zone 1 are available.~~ ~~Part b | Proposals located within Flood Zone 3a~~ ~~Mineral development proposals will only be permitted in Flood Zone 3a, where they are classified as 'less vulnerable' or 'water compatible' and it can be demonstrated that no reasonable alternative locations are available within both Flood Zones 1 and 2.~~ ~~Part c | Proposals located within Flood Zone 3b (the functional floodplain)~~ ~~Mineral development proposals will only be permitted in Flood Zone 3b, where it can be demonstrated: -~~ ~~I. they are classified as 'water compatible'; and~~ ~~II. there will be no net loss of floodplain storage, no impediment to water flows, and no increase in flood risk elsewhere; or~~ ~~III. wider sustainability benefits to the community exist that outweighs the risk of flooding as determined through an exception test.~~	

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		~~Part d | Proposals exceeding 1 ha within Flood Zone 1 and all other proposals within Flood Zones 2, 3a or 3b~~ **Mineral development proposals in areas of flood risk and where they exceed 1ha must be accompanied by a Flood Risk Assessment (FRA) that ~~will~~ shows how the risk of flooding on-site and elsewhere from all sources will not increase and, where possible could be reduced. The FRA must identify and assess the following: -** • **all current and future sources of flooding, appropriately taking into account the anticipated impacts of climate change;** • ~~set out~~ **how flood risk on-site and elsewhere will be effectively managed for the lifetime of the proposal including during site restoration and aftercare; and** • **identify measures to prevent increased flood risk including through the use of sustainable drainage systems (SuDS) and compensatory works if any loss of flood storage capacity is expected to occur.**	
MM48 (Previously PMM19)	Supporting text to Policy DM04 (paragraph 322, page 94)	Revise the 2nd and 3rd sentences of Publication MLP paragraph 322: - Mineral development proposals must be able to demonstrate how an increase in flood risk at their immediate location, elsewhere and in the future ~~—~~**(**taking into account the impacts of climate change**)** will not occur. **Climate Change Allowances have been published by the Government and these must be applied unless exceptional circumstances indicate alternative local assessments would be more appropriate. Engagement with the EA in respect of this matter will be necessary and should be undertaken at the earliest opportunity.** All elements of minerals development must **form part of the assessment of flood risk** ~~adhere to these requirements~~, including all built structures, the working of minerals themselves and also the carrying out of restoration and aftercare.	It is not considered that this Main Modification will change the findings of the SA because the inclusion of a reference to Climate Change Allowances will not affect the overall aim of Policy DM04.

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MM49 (Previously PMM20)	Policy DM05 (1st, 2nd, 3rd, 4th, 5th clauses, page 97)	Revise 1st, 2nd, 3rd, 4th and 5th clauses to Publication MLP Policy DM05: - Mineral development proposals will be permitted where it can be demonstrated: - **I.** there will be no ~~**deterioration**~~ **decline** in water quality **that would lead to a deterioration of EU Water Framework Directive (WFD) water body status and that measures to improve water quality and water body status will be incorporated wherever possible to help achieve good ecological status;** **II.** ~~**they will not prejudice the quantity of water contained within water bodies;**~~ **measures will be incorporated to enhance and protect water quality, including Gloucestershire's groundwater resources;** **III.** ~~**due regard has been given to the actions and objectives of the Severn and / or Thames River Basin Management Plan (RBMP) in striving to protect and improve the quality of water bodies**~~ **the actions and objectives set out in the Severn and / or Thames River Basin Management Plan (RBMP) will be supported in striving to protect and improve the quality of water bodies;** IV. **Unless justifiable and agreeable change is achievable to the** physical integrity of watercourses **(New Footnote), they** will be preserved **and wherever possible enhanced, including riverside habitats. Where necessary, management and mitigation measures will be incorporated to improve and / or enhance water quality and habitats of aquatic environments in or adjoining the development site; and** **V.** Wherever possible, measures to achieve the efficient use of water will be delivered **including incorporating appropriate water conservation techniques.** **New Footnote - A watercourse is defined as any channel through which water flows. Watercourses can be natural or man made, open on the surface or enclosed. Watercourses serve to drain the land and can assist in supporting flora and fauna.**	This Main Modification provides further information on water quality, with specific reference to the EU Water Framework Directive, Gloucestershire's groundwater resources and clarification on the definition of watercourse. It is not considered that these policy wording changes will affect the positive effects already identified in relation to SA objectives 1 (Sustainable development) and 7 (Biodiversity) because they do not alter the overall aim of Policy DM05, which is to protect and improve water bodies. We have already identified a significant positive effect for Policy DM05 against SA objective 16: Water quality and quantity.

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		They include rivers, brooks, becks, ditches, streams, leats, goyles, rhynes and culverts.	
MM50 (Previously PMM21)	Supporting text to Policy DM05 (paragraph 335, pages 97 and 98)	Revise Publication MLP paragraph 335: - Mineral development proposals **may benefit from** ~~should be supported by~~ a hydrological and hydrogeological assessment that ~~provides~~ **incorporates** an analysis of ~~risk to~~ water **quality and quantity** ~~resources and how any possible adverse~~ impacts ~~will be avoided or mitigated~~. ~~In line with planning practice guidance,~~ ~~t~~**T**he assessment **must be carried out where it is anticipated water quality impacts pose a significant** ~~should identify the water bodies that represent potential~~ planning concern ~~– those directly affected through proposed modifications or as a consequence of indirect activities178~~. ~~The assessment must~~ ~~also consider the nature of potential adverse impacts upon identified water bodies and the options for reducing impacts to acceptable levels including an analysis of the delivery of effective and deliverable mitigation measures.~~ In certain circumstances a specific WFD Compliance Assessment may also be necessary. **A WFD Compliance Assessment will need to consider biological quality, physio-chemical conditions and hydro-morphological conditions of surface water bodies and quantity and chemical status of groundwater bodies. In line with planning practice guidance, the assessment of water quality should be undertaken where a proposal involves the physical modification of a water body and / or could indirectly affect a water body. Key aspects of the assessment should include the nature of potential adverse impacts upon identified water bodies and the options for reducing impacts to acceptable levels including an analysis of the delivery of effective and deliverable mitigation measures.** The **overarching** objective must be to demonstrate at least, how the current **WFD** status of identified water bodies will not suffer any deterioration.	It is not considered that this Main Modification will change the findings of the SA because the minor wording changes and reference to the Water Framework Directive Compliance Assessment will not affect the overall aim of Policy DM05.

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MM51 (Previously PMM22)	Supporting text to Policy DM05 (paragraph 336, page 98)	Revise the 1st, 4th and 6th sentences to Publication MLP paragraph 336: - ~~In preparing a hydrological and hydrogeological~~ **The** assessment **of water quality and quantity impacts will need to pay** particular attention ~~should be paid, where relevant~~ to the Severn River and / or Thames River Basin Management Plans[179]. These plans implement the WFD at the sub-national level by way of a catchment-based approach to water management, which will ensure a holistic view is taken over hydrological influences affecting a larger-than-local area. A catchment**-**based approach to water management is encouraged through planning practice guidance[180]. The Severn River and Thames River Basin Management Plans identify key technical information concerning the hydrological characteristics of Gloucestershire and surrounding areas and set out actions to be taken to ensure **improvements, where possible, or to secure** ~~there is~~ no deterioration in the quality of water bodies from their current status. The plans also consider the means of delivering improved water quality status. Consequently, mineral development proposals should incorporate measures~~,~~ wherever possible, that will contribute to the ~~improvements~~ **ambitions** outlined within the relevant River Basin Management Plan.	It is not considered that this Main Modification will change the findings of the SA because the minor changes in wording will not affect the overall aim of Policy DM05.
MM52 (Previously PMM23)	Supporting text to Policy DM05 (paragraph 337, page 98)	Revise the 4th and final sentence of Publication MLP paragraph 337: - Mineral development proposals involving dewatering activities should be supported by detailed technical evidence as part of a wider hydrological and hydrogeological assessment. The approach put forward must accord with advice published on this matter by the Environment Agency[181]. Furthermore, for locations which contain significant archaeological deposits, potential risks associated with dewatering will need to be careful scrutinised. Where minerals development proposals ~~are located near to~~ **could affect** watercourses, it will always be preferable for their physical integrity	It is not considered that this Main Modification will change the findings of the SA because the minor changes in wording and the inclusion of a section on what to do when the integrity of a watercourse may be affected, will not alter the overall aim of Policy DM05.

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		to be preserved. The provision of 'stand-off' strips or areas between the banks of the watercourse affected and mineral working may be an effective means of achieving this **and might** ~~which may~~ also present a number of complementary activities. Through the appropriate treatment of stand-off areas, visual and / or landscape impacts of mineral developments could be reduced (see policies DM01 and DM09). Stand-off areas may also be used to positively contribute to the management of flood risk (see policy DM04) and / or facilitate tangible biodiversity enhancements (see policy DM06) that in turn may aid the delivery of ecological improvements to the status of water bodies. **In the event that the integrity of a watercourse may be unavoidably affected, robust and credible evidence to justify this matter must be provided. All proposals under these circumstances will be rigorously scrutinised including through consultation with the Environment Agency and / or the Lead Local Flood Authority where necessary, to ensure that an acceptable and deliverable scheme is brought forward that will secure the least amount of change and / or alteration possible.**	
MM53 (Previously PMM24)	Policy DM06 (Part a and Part b, pages 101 to 103)	Revise the 1st sentence of Part a and 2nd paragraph of Part B of Publication MLP Policy DM06: - Part a | Biodiversity and geodiversity outside of designated areas Mineral development proposals that demonstrate the conservation of biodiversity and/or geodiversity, in addition to providing net gains ~~where possible~~, will normally be permitted. Potential adverse impacts on natural environment assets must be avoided or satisfactorily mitigated in line with Gloucestershire Local Nature Partnership objectives. ~~In exceptional circumstances~~**Exceptionally**, where an impact cannot be avoided or mitigated, then compensatory measures including the use of ~~biodiversity and / or geodiversity~~ offsets **for habitat or geological feature losses** will be considered **provided these deliver significant net gain**.~~as a~~	This Main Modification states that in exceptional circumstances, biodiversity and/or geodiversity offsets must only be considered provided they deliver significant net gain. It goes on to further state that irreplaceable habitat and geological assets must be retained and protected unless exceptional reasons of public benefit override this. Whilst this further contributes to the significant positive effect identified with regards to biodiversity (SA objective 7) and geodiversity (SA objective 11), it is not considered that this Main Modification will change the overall findings of the SA.

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		~~means to provide an overall net gain.~~ **Irreplaceable habitat and geological assets must be retained and protected from deterioration unless this cannot be avoided because there are exceptional overriding reasons of demonstrable public benefit.** Part b | Designated sites and protected species Mineral development proposals which, alone or in combination with other plans and projects, are likely to have a significant effect on any Internationally Important Site designated as a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site will only be permitted, where they have been subject to an Appropriate Assessment, which has determined that either:- I. there will be no adverse effect upon the integrity of such designated sites; or II. where adverse effects on integrity have been concluded, has satisfactorily addressed the subsequent stages in the Habitats Regulations Assessment (HRA) process as set out in table 3, which present imperative reasons of overriding public interest. Mineral development proposals will only be permitted within designated Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and in localities that could have an impact upon such designations, where it can be demonstrated: - I. there will be no conflict with the conservation, management and enhancement of a designation; II. that any potentially harmful aspects of mineral development can be satisfactorily mitigated; and III. there would be no wider indirect and/or cumulative impact on the national network of SSSIs; or where the benefits of mineral development clearly outweigh the potential adverse impacts upon the key features of any designation. Mineral development proposals on local sites that include Local Nature Reserves (LNR), Gloucestershire ~~Key~~ **Local** Wildlife Sites (~~K~~**L**WS) and Regionally Important Geological Sites (RIGS) and in	

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		localities that could have an impact upon such designations will be permitted where it can be demonstrated: - I. adverse impacts can be avoided and /or satisfactorily mitigated; or II. where the benefits of minerals development clearly outweigh the potential adverse impacts upon the key features of any designation. Mineral development proposals that could adversely affect legally protected species will only be permitted where it can be demonstrated that suitable safeguarding measures will be provided.	
MM54 (New proposed modification)	Supporting text to Policy DM06 (paragraph 353, page 106)	Revise Publication MLP paragraph 353: - As highlighted in national policy, irreplaceable habitats including ancient woodland and aged or veteran tress found outside of ancient woodland, which clearly cannot be replaced should not be subject to loss or deterioration in condition. **However, in extreme circumstances where a significant public benefit can be proven, which clearly overrides the loss or deterioration of irreplaceable habitats, development may be acceptable** [new footnote]. ~~Mitigation will only be acceptable where it will result in a reduction in residual adverse impacts to such an extent, that the benefits of the development will outweigh any occurrence of loss[189].~~ Standing advice prepared by Natural England and the Forestry Commission on development with ancient woodland and veteran trees should be reviewed at **the** earliest **possible** opportunity **and** ideally ~~during~~ **at** the ~~initial~~ pre-application ~~preparations~~ stage[190]. **New footnote National Planning Policy Framework (NPPF) 2018, paragraph 175**	It is not considered that this Main Modification will change the findings of the SA because the changes to the wording, specifically the inclusion of a sentence on public benefit, will not affect the overall aim of Policy DM06.
MM55 (Previously PMM25)	Policy DM07 (2nd and 4th clause, page 108)	Revise the 2nd, 3rd and 4th clauses of Publication MLP Policy DM07: - Mineral development proposals will be permitted where they have been informed by and are sympathetic to the protection of soil	This Main Modification gives greater weight to improvements in soil quality. The Main Modification also seeks to restore Best and Most Versatile Agricultural

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		resources by demonstrating: - I. unacceptable adverse impacts on the quality of soil including as a result of disturbance and / or from contamination will be avoided or satisfactorily mitigated; and II. **wherever possible, measures to achieve improvements in** ~~opportunities for~~ soil quality ~~enhancement~~ will be **delivered** ~~facilitated~~; and III. where Best and Most Versatile Agricultural Land (BMVAL) is present, it will be avoided, or where this is not possible, it will be restored to the highest grade possible **unless in doing so, beneficial restoration that outweighs the importance of protecting soil resources would be compromised** ~~and any other potential adverse impacts will be kept to a minimum~~; or IV. the **overall** benefits of minerals development will clearly outweigh unacceptable adverse impacts on the quality of soil **and / or opportunities to achieve soil quality improvements** to justify ~~the grant of~~ planning permission **being granted.**	Land to the highest grade possible, unless beneficial restoration that outweighs the importance of protecting soil would be compromised. Whilst this further contributes to the significant positive effect with regards to soil/land quality (SA objective 14), it is not considered that this Main Modification will change the overall findings of the SA.
MM56 (Previously PMM26)	Supporting text to Policy DM08 (paragraph 372, page 112)	Revise Publication MLP paragraph 372: - However, in recognition that certain archaeological assets may not be identifiable or fully appreciated early on in the decision-making process, it ~~may be~~ **is** reasonable for a phased approach to be adopted for assessing significance and determining the subsequent treatment of assets, which involves initial desk-based assessment and / or field evaluations. A clear national framework for assessing the significance of heritage assets is provided by national policy, which sets out specific requirements of prospective applicants and expectations for determining planning authorities[209]. There is a necessity for the G-HER to be consulted and technical expertise	It is not considered that this Main Modification will change the findings of the SA because these minor wording changes will not affect the overall aim of Policy DM08.

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		should also be **sought** ~~employed~~, where necessary.	
MM57 (Previously PMM27)	Supporting text to Policy DM08 (paragraph 374, page 113)	Revise the 1st and 2nd sentences of Publication MLP paragraph 374: - From a minerals planning perspective, the ability to maintain steady and adequate supplies of an important mineral is a material consideration that may **outweigh any** substantial degree of harm caused to the significance of an affected heritage asset. ~~It should however~~ **Nevertheless,** ~~be noted that~~ **attempts to avoid harm should be explored wherever possible.** ~~it is expected that to avoid harm, alternative options should first be considered.~~	It is not considered that this Main Modification will change the findings of the SA because these minor wording changes will not affect the overall aim of Policy DM08.
MM58 (New proposed modification)	Supporting text to Policy DM09 (paragraph 392, page 120)	Revise Publication MLP paragraph 392: - A robust comparative analysis must also be undertaken with **major mineral developments** to show that non-AONB sources of the type of mineral proposed to be worked and / or processed will not be appropriate. Careful consideration will be given to evidence concerning the present and forecast future availability of non-AONB mineral supplies and its suitability to meet the same technical specifications. Before any judgement can be made, information must be submitted to establish the size and scale of the pattern of mineral supplies that could be affected; whether productive capacity issues might arise with non-AONB supplies; and a robust explanation of any other possible supply challenges, **including matters of sustainability** that might emerge from having to rely upon alternative non-AONB sources. **The fact that minerals can only be worked where they occur and that their distribution is therefore limited will be a defining factor in determining whether a comparative analysis is necessary. Furthermore, the importance of the mineral to be worked in meeting local, sub-national and national needs will be an important matter that will be taken into account by decision makers. At the earliest possible opportunity and ideally at the initial pre-**	It is not considered that this Main Modification will change the findings of the SA because the wording changes and inclusion of a section on minerals working, will not affect the overall aim of Policy DM09.

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		application stage, advice should be sought from the MPA regarding the preparation of a comparative analysis of potential, alternative non-AONB mineral supplies.	
MM59 (Previously PMM28)	Supporting text to Policy DM10 (paragraph 397, pages 122 and 123)	Revise 1st and 2nd sentence of Publication MLP paragraph 397: - National policy also makes provision for mineral **extraction** ~~working~~ to be allowed to take place in principle within the Green Belt where openness is preserved and no conflict will occur with purposes of the designation[231]. **Evidence that considers both anticipated visual impacts and spatial effects of mineral extraction on the openness of the Green Belt will be required by decision makers.** ~~This is reflective of the temporary nature and low intensity of any built structures such as certain forms of plant that usually accompanies this type of activity.~~	It is not considered that this Main Modification will change the findings of the SA because the additional sentence regarding evidence does not affect the overall aim of Policy DM10.
MM60 (Previously PMM29)	Policy MR01 (1st clause, page 126)	Revise the 1st clause of Publication MLP Policy MR01: - Mineral development proposals will be permitted where it can be demonstrated high quality restoration and aftercare will: - I. take place at the earliest opportunity and without generating unacceptable adverse impacts; **and** II. be delivered to a high environmental standard; and III. facilitate beneficial after-uses that will contribute to the delivery of sustainable development.	It is not considered that this Main Modification will change the findings of the SA because it is a minor wording change that will not affect the overall aim of Policy MR01.
MM61 (Previously PMM30)	Supporting text to Policy MR01 (paragraph 413, page 127)	Revise the 2nd, 3rd and 4th sentences of Publication MLP paragraph 413: - Provision for site restoration and aftercare will be heavily **dependent**~~dependant~~ upon the nature of the minerals development under consideration and site-specific circumstances present at the time. ~~For existing permitted workings, evidence will be required as to how previously agreed restoration and aftercare commitments will not be adversely affected. Existing planning conditions related to the~~	It is not considered that this Main Modification will change the findings of the SA because the change to the wording on restoration does not affect the overall aim of Policy MR01.

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		~~cessation of operations, equipment removal and end-dates should not be compromised without justification. Proposals that seek to vary previously permitted restoration and aftercare schemes will be subject to rigorous scrutiny.~~ ~~Information must be presented to show how the environmental condition of previously approved development, will not be degraded.~~ **Where restoration and aftercare proposals of permitted mineral workings need to be revised, careful consideration must be given to any potential adverse impacts on the envisaged, final environmental status of the site once it has been restored. In all cases the possibility of environmental degradation must be avoided. If revised restoration aims to deliver enhancement opportunities, these must be clearly identified in the supporting evidence.** ~~Further enhancement opportunities deemed achievable through a modified restoration and aftercare scheme will be careful assessed and only where positive change is materially significant and delivered to a high quality standard, will this be seen as beneficial~~. **For** ~~M~~**m**ore substantial mineral development proposals or those ~~likely to~~ involv**ing**~~e~~ a fundamental change to an existing restoration and aftercare **scheme**~~plan~~, ~~will need to be accompanied by~~ a detailed revised restoration strategy **will be required.**	
MM62 (Previously PMM31)	Supporting text to Policy MR01 (paragraph 427, page 132)	Delete Publication MLP paragraph 427: - ~~Possible benefits linked to importing materials for restoration purposes such as improving in soil conditions must be justified in terms of their wider sustainability credentials. This should include consideration of the proposed time period over which importation will occur; the impact importation may have on the timescales for completing restoration and facilitating the delivery of future beneficial after uses; and the transport implications incorporating effects and significance on the safe and efficient functioning of the highway network and possible impacts on local actions for tackling climate change. Evidence used to show the relevant criteria of policies DM01, DM03, DM05, DM08, DM07 and DM09 have been~~	It is not considered that this Main Modification will change the findings of the SA because the deletion of this paragraph will not affect the overall aim of Policy MR01.

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		~~met, could reasonably be applied in these circumstances.~~	
MM63 (Previously PMM32)	Supporting text to Policy MR01 (paragraph 428, page 132)	Revise the 1st and final sentence of Publication MLP paragraph 428: - Importing ~~recovered~~ waste[259] for use in mineral restoration may be considered **a recovery operation that is** acceptable as outlined in paragraph 4.43 of the adopted Gloucestershire Waste Core Strategy[260]. Imported waste suitable for mineral restoration but managed by way of disposal to landfill, might also be justified[261]. ~~However,~~ **For the latter,** the relevant criteria contained within adopted Gloucestershire Waste Core Strategy policy WCS 8 (Landfill) **(or future replacement)** will need to be successfully addressed[262].	It is not considered that this Main Modification will change the findings of the SA because these minor wording changes will not affect the overall aim of Policy MR01.
MM64 (New proposed modification)	Monitoring Schedule (page 135)	Revise Publication MLP Monitoring Schedule: - Add indicators for Policy SR01 | **Planning applications for minerals development involving infrastructure for the production of secondary and / or recycled aggregates;** **Planning applications for non-minerals development involving infrastructure for the production of secondary aggregates** Revise existing indicator for Policy SR01 | Planning applications for major (non-minerals) development ~~that will require aggregates for construction~~ **accompanied by a Waste Minimisation Statement (WMS) that incorporate the re-use of construction, demolition and excavation waste in construction and the procurement of construction materials with a recycled content.** Revise existing target for Policy SR01 | 100% of permitted major (non-minerals) development applications	The monitoring table, Table 6.1, on pages 84-87 of the 'Monitoring' chapter in the 2018 SA Report can be updated to include the following: Planning applications for development involving infrastructure for the production of secondary and/or recycled aggregates – to be added to monitoring for SA objective 3: Sustainable economic development. Planning applications for minerals development that have involved an assessment of landscape impacts – to be added to monitoring for SA objective 8 (landscape). Planning applications for minerals development that have involved the importation and/or exportation of minerals or other materials – to be added to monitoring for SA objective 18: Climate change.

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		~~committing to the use of secondary and / or recycled aggregates in their construction~~ **accompanied by a Waste Minimisation Statement (WMS) that incorporate re-use of construction, demolition and excavation waste in construction and the procurement of construction materials with a recycled content.** Add indicators for Policy MW01 | **Most recently published landbank of permitted reserves for crushed rock aggregate covering the West of England (WoE) Authorities;** **Most recently published landbank of permitted reserves for sand and gravel aggregate covering the neighbouring Mineral Planning Authorities of Herefordshire, Oxfordshire, Wiltshire and Worcestershire.** Ass review triggers for Policy MW01 | **Evidence of a significant annual decline and / or declining trend of least 3 years in the published landbank of permitted reserves for either crushed rock or sand and gravel aggregates for neighbouring and / or nearby authority areas as reported within Local Aggregate Assessments (LAAs) and Aggregate Working Party (AWP) Annual Reports and / or at Duty to Cooperate (DtC) meetings.**	
MM65 (New proposed modification)	Appendix 2 (page 142)	Revise the schedule of safeguarded mineral infrastructure sites: - Add two sites for handling and / or processing and distributing recycled and secondary aggregates - **Land at Cowfield Mill, Northway Lane, Tewkesbury GL20 8JG** **Land at Shurdington Road, Shurdington, Cheltenham GL51 4HU**	The mineral infrastructure sites are safeguarded under Policy MS02. It is not considered that this Main Modification will change the overall findings of the SA because the SA assessed Policy MS02 (Safeguarding mineral infrastructure) as a whole, rather than assessing the safeguarded sites individually.

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MM66 (New proposed modification)	Appendix 4 ('Water resources' theme of Allocation 01: Land east of Stowe Hill Quarry, page 145)	Revise the Water resources theme for Publication MLP Allocation 01: - A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing 24-months prior to development, continuing throughout the operational phase, and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (up to 5km) will require scrutiny. These include: - several tributaries of Oakwood Brook, a small spring and the resulting flow into the Slade Brook, several unnamed springs to the north of the allocation, Valley Brook, Warth Brook and Cannop Brook. However, a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Particular attention will need to be given to the potential hydrological / hydrogeological impacts on the Slade Brook SSSI. This contains a karst feature – an active tufa-forming stream, which is likely to be sensitive to local hydrological and hydro-geochemical change. There are known hydrological linkages between the SSSI and the allocated area.. An holistic approach should be adopted when considering the Slade Brook SSSI with technical advice on this matter sought from both the EA and Natural England at the earliest possible opportunity. Avoiding the derogation of the SSSI must be the primary focus. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as proposed restoration and aftercare at the existing Stowe Hill Quarry and the adjacent	It is not considered that this Main Modification will change the findings of the SA because the assessment of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.

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		Clearwell Quarry. The HIA will need to establish mitigation requirements and where necessary provide a strategy for their implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and improving the water environment in line with the Severn River Basin Management Plan (RBMP)[275] **and Wye and Severn Vale Catchment Management Plans** **New web linked footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans.	
MM67 (New proposed modification)	Appendix 4 ('Economic development' theme of Allocation 01: Land east of Stowe Hill Quarry, page 146)	Revise the Economic development theme for Publication MLP Allocation 01: - An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of further aggregate working at Stowe Hill Quarry. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at	It is not considered that this Main Modification will change the overall findings of the SA because, whilst the wording requiring an EcIA to be undertaken is no longer as firm ('should' rather than 'required', the economic impacts of further aggregate working at Stowe Hill Quarry will still need to be considered as part of the planning application process.

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		Stowe Hill Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	
MM68 (New proposed modification)	Appendix 4 ('Economic development' theme of Allocation 02: Land west of Drybrook Quarry, page 152)	Revise the Economic development theme for Publication MLP Allocation 02: - An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of further aggregate working at Drybrook Quarry. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence that will show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Drybrook Quarry must also be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	It is not considered that this Main Modification will change the overall findings of the SA because , whilst the wording requiring an EcIA to be undertaken is no longer as firm ('should' rather than 'required', the economic impacts of further aggregate working at Drybrook Quarry will still need to be considered as part of the planning application process.
MM69 (Previously	Appendix 4 ('Water	Revise the Water resources theme for Publication MLP Allocation 02:	It is not considered that this Main Modification will change the findings of the SA because the assessment

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PMM33)	resources' theme of Allocation 02: Land west of Drybrook Quarry, page 153)	- A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny. These includes: - Cinderford Brook to Blackpool Brook, Dry Brook, Bailey Brook, Lodgegrove Brook and the quarry lagoons within the existing Drybrook Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / incombination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as proposed restoration and aftercare at the existing Drybrook Quarry. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and improving the water environment in line with the Severn River Basin Management Plan (RBMP)[281] **and Wye and Severn Vale Catchment Management Plans** **New web linked footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.
MM70 (New proposed	Appendix 4 ('Economic development' theme of Allocation 03: Depth	Revise the Economic development theme for Publication MLP Allocation 03: -	It is not considered that this Main Modification will change the findings of the SA because, whilst the wording requiring an EcIA to be undertaken is no longer

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
modification)	extension to Stowfield Quarry, page 157)	An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of further aggregate working at Stowfield Quarry. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Stowfield Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	as firm ('should' rather than 'required', the economic impacts of further aggregate working at Stowfield Quarry will still need to be considered as part of the planning application process..
MM71 (Previously PMM34)	Appendix 4 ('Water resources' theme of Allocation 03: Depth extension to Stowfield Quarry, page 159)	Revise the Water resources theme for Publication MLP Allocation 03: - A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a	It is not considered that this Main Modification will change the findings of the SA because the assessment of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny. These includes: - Whippington Brook, an unnamed drain, tributary and pond at Swan Pool, and the lagoon within Stowfield Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities such as proposed restoration and aftercare at the existing Stowfield Quarry should also be considered. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Severn River Basin Management Plan (RBMP)[286] **and Wye and Severn Vale Catchment Management Plans.** **New web linked Footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	
MM72 (New proposed modification)	Appendix 4 ('Economic development' theme of Allocation 04: Land northwest of Daglingworth Quarry, page 162)	Revise the Economic development theme for Publication MLP Allocation 04: - An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of further aggregate working at Daglingworth Quarry. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-	It is not considered that this Main Modification will change the findings of the SA because , whilst the wording requiring an EcIA to be undertaken is no longer as firm ('should' rather than 'required', the economic impacts of further aggregate working at Daglingworth Quarry will still need to be considered as part of the planning application process.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence which shows how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Daglingworth Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	
MM73 (Previously PMM35)	Appendix 4 ('Water resources' theme of Allocation 04: Land northwest of Daglingworth Quarry, page 164)	Revise the Water resources theme for Publication MLP Allocation 04: - A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. The allocation also lies within a Source Protection Zone 1 (SPZ1). This will require a very specific risk assessment to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies. Beyond the allocation, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny.	It is not considered that this Main Modification will change the findings of the SA because the assessment of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		These include: - Elkstone Brook and Daglington Stream. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. For example, the River Churn is just over 3 km to the South East of the allocation. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities such as proposed restoration and aftercare at the existing Daglingworth Quarry should also be considered. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP) and also the Severn RBMP, which covers an area that may be within the sphere of influence of the allocation[291] **and Thames Catchment Management Plans** **New web linked Footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	
MM74 (Previously PMM36)	Appendix 4 ('Historic environment including archaeology' theme of Allocation 04: Land northwest of Daglingworth Quarry, page 165)	Revise the final sentence of the historic environment including archaeology theme for Publication MLP Allocation 04: - A Heritage Statement (HS) will be required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in	The SA already contains reference to the Bronze Age barrow and the fact the earthwork forms part of the late Iron Age/early Roman settlement of Bagendon. Therefore, it is not considered that this Main Modification will change the findings of the SA.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance **that could result in restrictions upon future working proposals,** ~~to the allocation~~ is the grade II listed milestone (NL list entry: 1090206); **a possible Bronze Age barrow;** ~~and the linear,~~ **and an** earthwork**s that borders the** ~~located close to the~~ south eastern boundary **of the allocation and forms part of the late Iron Age / early Roman settlement of** . ~~Other archaeological features associated with the historic settlement of~~ Bagendon. ~~may need investigation.~~	
MM75 (New proposed modification)	Appendix 4 ('Economic development' theme of Allocation 05: Land south and west of Naunton Quarry, page 168)	Revise the Economic development theme for Publication MLP Allocation 05: - An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of further aggregate working at Naunton Quarry. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to	It is not considered that this Main Modification will change the findings of the SA because, whilst the wording requiring an EcIA to be undertaken is no longer as firm ('should' rather than 'required', the economic impacts of further aggregate working at Naunton Quarry will still need to be considered as part of the planning application process..

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Naunton Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	
MM76 (Previously PMM37)	Appendix 4 ('Water resources' theme of Allocation 05: Land south and west of Naunton Quarry, page 170)	Revise the Water resources theme for Publication MLP Allocation 05:- A hydrological / hydrogeological impact assessment (HIA) in accordance with EA guidance will be required. As the underlying geology of the allocated units has been classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny. These includes: - the River Windrush, River Eye, several springs feeding an unnamed tributary of the Windrush; and small ponds and a small lake that are linked to existing and previous mineral working at the existing Naunton Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as	It is not considered that this Main Modification will change the findings of the SA because the assessment of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		proposed restoration and aftercare proposals at the existing Naunton Quarry and also the nearby Tinker's Barn Quarry. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocated units may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP) and the Severn RBMP, which covers an area that may be within the sphere of influence of the allocation[296] **and Thames Catchment Management Plans** **New web linked Footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	
MM77 (Previously PMM38)	Appendix 4 ('Economic development' theme of Allocation 06: Land south east of Down Ampney, page 174)	Revise the Economic development theme for Publication MLP Allocation 06:- An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of aggregate working taking place at land south east of Down Ampney. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well-being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence to show how existing direct and	It is not considered that this Main Modification will change the findings of the SA because, whilst the wording requiring an EcIA to be undertaken is no longer as firm ('should' rather than 'required', the economic impacts of further aggregate working at land south east of Down Ampney will still need to be considered as part of the planning application process.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from aggregate working starting up at land south east of Down Ampney must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	
MM78 (Previously PMM39)	Appendix 4 ('Highways' theme of Allocation 06: Land South east of Down Ampney, page 175)	Revise the 2nd sentence and last sentence of the highways theme for Publication MLP Allocation 06: - A Transport Assessment (TA) will be required. Advice on the necessary content of a TA should be sought from the Local Highway Authority, Highways England and also the neighbouring Local Highway Authority for Wiltshire (Wiltshire Council) at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated include: - the creation of a safe and suitable means of vehicular access that will achieve the shortest possible route to the A419; ~~and~~ **the** avoid**ance**, wherever possible, of **associated vehicular movements through** the locally significant settlement of Latton; and the establishment of acceptable freight routes using the A419, which do not create a conflict with Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4, and follow the advice contained within the Gloucestershire Freight Gateway **or its future replacement**, In addition, where it is relevant, consideration should be given to the Wiltshire Local Transport Plan Freight Strategy. **For matters relating to potential impacts on the maintenance of the highway, this is dealt with under s.59 of the Highways Act 1980 and the provision available to recover expenses due to extraordinary traffic.**	This Maid Modification provides information on highway maintenance. It is not considered that this additional information will change the findings of the SA, because it simply highlights the Highways Act 1980, which would apply anyway.
MM79 (Previously	Appendix 4 ('Water resources' theme of	Revise the Water resources theme for Publication MLP Allocation 06: -	This Main Modification provides further information on the very specific risk assessment that is required to consider potential pollution of potable water supplies

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PMM40)	Allocation 06: Land South east of Down Ampney, page 176)	A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. The superficial deposits of the allocation host a Secondary 'A' shallow aquifer for which little information is known as to its properties. Consequently, a detailed analysis of the existing local groundwater regime will be essential. The assessment must also afford attention to identifying and quantifying groundwater risks associated with all possible minerals-related development activities (e.g. working, processing, site restoration including aftercare) and establish a stringent monitoring regime commencing at least 12-months prior to the commencement of the development, continuing throughout the operational phase and including site restoration and aftercare. The allocation mostly lies within a Source Protection Zone 2 (SPZ2) although a small area falls within a Source Protection Zone 1 (SPZ1). A very specific risk assessment will therefore need to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies **in order to demonstrate there will be no significant environmental impacts and that appropriate protection and / or mitigation and management measures will be put in place. Any landfill or deposit for recovery (DfR) activities will require an appropriate EA permit. Advice from the EA in respect of this matter should be sought at earliest opportunity.** Beyond the allocation, potential hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny. These include: - Marston Meysey Brook; Ampney and Poulton Brooks; River Thames (from the River Churn to River Coln); River Churn (Baunton to Cricklade); Thames & Severn Canal; a number of unnamed tributaries and drains to the River Thames and Ampney Brook; and several ponds and lakes some of which can be traced back to previous and existing mineral workings in the locality. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible	and other sensitive commercial water supplies. It states that the assessment is required to ensure that appropriate protection, mitigation and management measures are put in place, whilst also clarifying that any landfill or deposit for recovery activities will require an EA permit. It is not considered that this change to the policy wording will affect the minor negative uncertain effect identified for Allocation 06 against SA objective 16 (Water quality and quantity), as this already acknowledges the likelihood that any impacts will be mitigated.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		cumulative / incombination hydrological / hydrogeological impacts associated with nearby permitted mineral workings and other related activities such as restoration and aftercare should also be considered. This includes: - Whetstone Bridge Quarry and Roundhouse Farm Quarry and Eysey Manor Quarry (the final two are located across the administrative border in Wiltshire). An early up-to-date survey of the status of nearby mineral workings would be beneficial to this exercise. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP)[303] **and Thames Catchment Management Plans** **New web linked Footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	
MM80 (Previously PMM41)	Appendix 4 ('Natural environment' theme of Allocation 06: Land South east of Down Ampney, page 176)	Revise the natural environment theme for Publication MLP Allocation 06: A comprehensive assessment of the natural environment will be required. This should include those natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development ((e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - North Meadow and Clattinger Farm SAC; North Meadow SSSI / NNR; and Down Ampney Pits ~~K~~**L**WS**. In the event that** ~~The re-notification of~~ the Cotswold Water Park SSSI **is re-notified** for its breeding and overwintering bird assemblages, **an assessment** should ~~also~~ be ~~assessed~~ **carried out** to establish whether adverse effects from proposed mineral developments may occur including	It is not considered that this Main Modification will change the findings of the SA because these minor wording changes do not alter the overall meaning of the paragraph.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		the disturbance of the important bird assemblages. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures deemed necessary to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arise~~ing~~, have been considered in a holistic manner and within a strategic context. In particular it must be clear ~~as to~~ how **local ecological networks** ~~the nearby: - Ampney Corridor; Eysey; Cleveland Lakes; and Roundhouse Farm Strategic Nature Areas (SNAs) as expressed upon the Gloucestershire Nature Map~~ will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits, due consideration should be given to possible collaborations and coordination with the programme of nature conservation actions identified for the Cotswold Water Park Nature Improvement Area (NIA).	
MM81 (Previously PMM42)	Appendix 4 (`Historic environment – including archaeology' theme of Allocation 06: Land South east of Down Ampney, page 177)	Revise the historic environment theme for Publication MLP Allocation 06: A Heritage Statement (HS) is required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. **This could include limitations on operations including the working of**	It is not considered that this Main Modification will change the overall findings of the SA because it is a minor clarification that will not change the overall aim of this paragraph.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		minerals. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. The settlement at Bean Hay Copse Scheduled Monument (NH list entry: 1003446) and several grade II listed buildings at Castle Hill Farm (NH list entries: 1341032 and 1304915) are located near to the boundary of the allocation and will likely require some degree of analysis. There are also numerous records of prehistoric and Roman activity in the locality, which will likely require further investigation. In addition, 20th century military activity within the allocation is very evident and should also be carefully assessed[304].	
MM82 (Previously PMM43)	Appendix 4 ('Aerodrome safeguarding' theme of Allocation 06: Land South east of Down Ampney, page 178)	Revise the aerodrome safeguarding theme for Publication MLP Allocation 06: A Bird Hazard Management Scheme (BHMS) will be required. Advice with respect to its scope and content should be sought at the earliest possible opportunity from Defence Infrastructure Organisation (DIO) Safeguarding. The BHMS should establish the nature, scale and significance of any potential bird hazards associated with all mineral-related activities that support the working of the allocation. Particular~~ly~~ attention will need to be given to the functioning of nearby RAF Fairford due to the location of the allocation within ~~a~~**the statutory safeguarding aerodrome height, technical and** ~~B~~**b**irdstrike **safeguarding consultation** zone**s** and an area where Instrumental Landing Systems (ILS) may need to operate. Although, other nearby aerodromes could also	This Main Modification clarifies the requirement for consultation with the DIO, as well as requirements regarding bird hazard risks. However, these clarifications do not affect the effects already identified for Allocation 06, which include a minor negative yet uncertain effect against SA objective 5: Safety of commercial or military aerodromes, because it falls within a safeguarding zone for RAF Fairford and may be restored to a form of open water use because it is located close to the Cotswold Water Park. With regard to SA objective 9: Restoration, the additional reference to restoration in Main Modification 82 will not affect the minor positive yet uncertain effect that is already recorded against this allocation because it simply states

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		require investigation and may need to be taken into account. **Consultation with the DIO will be required if any equipment is proposed that exceeds 15.2 metres in height above ground level**. Details of the deliverable measures and securable commitments to manage and reduce the frequency and severity of any possible bird hazard risks **to an acceptable level** and **that** ~~the~~ effective monitoring of their success over time, **including post-mineral working, restoration and aftercare, should** ~~will likely~~ form a major element of the BHMS.	limitations for wet restoration, which were already considered in the SA as set out above. Overall, this Main Modification will not change the findings of the SA.
MM83 (Previously PMM44)	Appendix 4 ('Restoration opportunities and constraints' theme of Allocation 06: Land South east of Down Ampney, page 178)	Revise the restoration opportunities and constraints theme for Publication MLP Allocation 06: A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the entire allocation. Progressive restoration techniques should be applied unless it is demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how integration can be achieved with the existing local environment. Particular attention must be given to continued aviation safeguarding and the avoidance of any increased risk of bird strike at nearby RAF Fairford **and / or other nearby aerodromes**. **This may significantly restrict opportunities to achieve wet restoration, particularly involving the introduction of new open water bodies.** Where the public rights of way network has been affected by development of the allocation, attention will need to be given to the integration of acceptable long term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the nearby Eysey and Ampney Corridor Strategic Nature Areas (SNAs) and the nature conservation actions for the Cotswold Water Park Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses	This Main Modification includes reference to nearby aerodromes and the fact that this may significantly restrict opportunities to achieve wet restoration. However, this clarification does not affect the effects already identified for Allocation 06, which include a minor negative yet uncertain effect against SA objective 5: Safety of commercial or military aerodromes. This is because Allocation 06 falls within a safeguarding zone for RAF Fairford and may be restored to a form of open water use because it is located close to the Cotswold Water Park. With regard to SA objective 9: Restoration, the reference to restoration in Main Modification 83 will not affect the minor positive yet uncertain effect that is already recorded against this allocation because it simply states limitations for wet restoration, which were already considered in the SA as set out above. Overall, this Main Modification will not change the findings of the SA.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Cotswold District Local Plan and the Cotswold Water Park Master Plan. This could, under the right circumstances, include facilitating new infrastructure that will contribute towards the long-term restoration and possible expansion ambitions of the Thames and Severn Canal network[305]. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.	
MM84 (New proposed modification)	Appendix 4 (‘Economic development’ theme of Allocation 07: Land at Lady Lamb Farm, west of Fairford, page 174)	Revise the Economic development theme for Publication MLP Allocation 07:- An Economic Impact Assessment (EcIA) **should be carried out** ~~will be required~~ to identify potential economic impacts and their significance as a result of aggregate working taking place at land at Lady Lamb Farm. ~~The~~ **Whether a dedicated** EcIA **is prepared or related information is to be presented as part of another type of assessment, it** must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EcIA should	It is not considered that this Main Modification will change the overall findings of the SA because , whilst the wording requiring an EcIA to be undertaken is no longer as firm (‘should’ rather than ‘required’, the economic impacts of further aggregate working at Lady Lamb Farm will still need to be considered as part of the planning application process..

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EcIA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from aggregate working starting up at land at Lady Lamb Farm must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EcIA.	
MM85 (Previously PMM45)	Appendix 4 ('Water resources' theme of Allocation 07: Land at Lady Lamb Farm, west of Fairford, page 182)	Revise the water resources theme for Publication MLP Allocation 07: A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. The superficial deposits of the allocation host a Secondary 'A' shallow aquifer for which little information is known as to its properties. Consequently, a detailed analysis of the existing local groundwater regime will be essential. The assessment must also afford attention to identifying and quantifying groundwater risks associated with all possible minerals-related development activities (e.g. working, processing, site restoration including aftercare) and establish a stringent monitoring regime commencing at least 12-months prior to the commencement of the development, continuing throughout the operational phase and including site restoration and aftercare. The allocation also lies within a Source Protection Zone 1 (SPZ1). This will require a very specific risk assessment to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies. Beyond the allocation, possible hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny.	It is not considered that this Main Modification will change the findings of the SA because the assessment of the effects of site allocations on water quality was based on the Atkins hydrogeological report, as set out in the assumptions for site assessments, set out in Table 4.2 on pages 30 to 49 of the April 2018 SA Report.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		These include: Marston Meysey Brook; Dudgrove Brook; River Coln; a network of drains and tributaries to the River Coln; and several ponds and lakes some of which can be traced back to previous mineral workings in the locality. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP)[310] **and Thames Catchment Management Plans** **New web linked Footnote -** https://www.gov.uk/government/collections/catchment-flood-management-plans	
MM86 (Previously PMM46)	Appendix 4 ('Aerodrome safeguarding' theme of Allocation 07: Land at Lady Lamb Farm, west of Fairford, page 183)	Revise the aerodrome safeguarding theme for Publication MLP Allocation 07: A Bird Hazard Management Scheme (BHMS) will be required. Advice with respect to its scope and content should ideally be sought at the earliest possible opportunity from Defence Infrastructure Organisation (DIO) Safeguarding. The BHMS should establish the nature, scale and significance of any potential bird hazards associated with all mineral-related activities that support the working of the allocation. Particular~~ly~~ attention will need to be given to the functioning of nearby RAF Fairford due to the location of the allocation within ~~a~~**the** statutory **safeguarding aerodrome height, technical and b**~~B~~irdstrike **safeguarding consultation** zone**s** and an area where Instrumental Landing Systems (ILS) may need to operate. **Consultation with the DIO will be required if any equipment is proposed that exceeds 15.2 metres in height above ground level.** Although, other nearby aerodromes could require investigation and may need to be taken into account. Details	This Main Modification clarifies the requirement for consultation with the DIO, as well as requirements regarding bird hazard risks. However, these clarifications do not affect the effects already identified for Allocation 07, which include a minor negative yet uncertain effect against SA objective 5: Safety of commercial or military aerodromes. This is because Allocation 07 falls within a safeguarding zone for RAF Fairford and may be restored to a form of open water use because it is located close to the Cotswold Water Park. With regard to SA objective 9: Restoration, the additional reference to restoration in Main Modification 86 will not affect the minor positive yet uncertain effect that is already recorded against this allocation because it does not add additional details as to the nature of restoration. Overall, this Main Modification will not change the findings of the SA.

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification	Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		of the deliverable measures and securable commitments to manage and reduce the frequency and severity of any possible bird hazard risks **to an acceptable level** and ~~the~~ **that** effective monitoring of their success over time, **including post- mineral working, restoration and aftercare, should** ~~will likely~~ form a major element of the BHMS.	
MM87 (Previously PMM47)	Appendix 4 ('Restoration opportunities and constraints' theme of Allocation 07: Land at Lady Lamb Farm, west of Fairford, page 184)	Revise the restoration opportunities and constraints theme for Publication MLP Allocation 07: A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the entire allocation. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how compatibility and wherever possible, integration can be achieved with the existing local environment. Particular attention must be given to continued aviation safeguarding and the avoidance of increased risk of bird strike at nearby RAF Fairford~~.~~ **and / or other nearby aerodromes. This may significantly restrict opportunities to achieve wet restoration, particularly involving the introduction of new open water bodies.** Where the public rights of way network has been affected by development of the allocation, attention will need to be given to the integration of acceptable long term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the nearby Bibury and Coln Corridor Strategic Nature Areas (SNAs) and the nature conservation actions for the Cotswold Water Park Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the	This Main Modification includes reference to nearby aerodromes and the fact that this may significantly restrict opportunities to achieve wet restoration. However, this clarification do not affect the effects already identified for Allocation 07, which already include a minor negative yet uncertain effect against SA objective 5: Safety of commercial or military aerodromes. This is because Allocation 07 falls within a safeguarding zone for RAF Fairford and may be restored to a form of open water use because it is located close to the Cotswold Water Park. With regard to SA objective 9: Restoration, the reference to restoration in Main Modification 87 will not affect the minor positive yet uncertain effect that is already recorded against this allocation because it simply states limitations for wet restoration, which were already considered in the SA as set out above. Overall, this Main Modification will not change the findings of the SA.

<table>
<tr><th>Main Modification (MM) Number</th><th>Paragraph/Policy/Page No.</th><th>Proposed Main Modification</th><th>Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?</th></tr>
<tr><td></td><td></td><td>Fairford Neighbourhood Plan, Cotswold District Local Plan and the Cotswold Water Park Master Plan. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for the carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</td><td></td></tr>
<tr><td>MM88 (Previously PMM48)</td><td>New Appendix 5, after page 184</td><td>Insert a new appendix into the Publication MLP that contains a schedule of the existing ‘saved’ policies that would be replaced: -
<table>
<tr><th>Policy</th><th>Title</th><th>Status (i.e. saved or not saved under transitional arrangements)</th><th>Proposed Action</th></tr>
<tr><td>E1</td><td>International and European Sites of Nature Conservation</td><td>Not Saved</td><td>Replaced by Policy DM06 | Biodiversity and Geodiversity</td></tr>
<tr><td>E2</td><td>Areas of Outstanding Natural Beauty</td><td>Saved</td><td>Replaced by Policy DM09 | Landscape</td></tr>
</table></td><td>It is not considered that this Main Modification will change the findings of the SA because the new appendix records which ‘saved’ policies would be replaced by the plan and does not affect the content of the plan itself or the aim of any of the policies contained within the Minerals Local Plan.</td></tr>
</table>

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		E3	Nationally Important Sites of Nature Conservation	Not Saved	Replaced by Policy DM06 | Biodiversity and Geodiversity	
		E4	Nationally Important Archaeological Sites (including Scheduled Ancient Monuments)	Saved	Replaced by Policy DM08 | Historic Environment	
		E5	Listed Buildings and Conservation Areas	Not Saved	Replaced by Policy DM08 | Historic Environment	
		E6	Other Nationally Important Sites of Historic Interest	Saved	Replaced by Policy DM08 | Historic Environment	
		E7	Best and Most Versatile Agricultural Land	Not Saved	Replaced by Policy DM07 | Soil Resources	
		E8	Regionally and Locally Important Designated Sites	Saved	Replaced by Policy DM06 | Biodiversity and Geodiversity	
		E9	Green Belt	Saved	Replaced by Policy DM10 | Gloucester-Cheltenham Green Belt	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		E10	National, Regional and Local Biodiversity	Saved	Replaced by Policy DM06 | Biodiversity and Geodiversity	
		E11	Protection of the Water Environment	Saved	Replaced by Policy DM05 | Water resources	
		E12	Flood Risk/Flood Plain Development	Not Saved	Replaced by Policy DM04 | Flood risk	
		E13	Riparian Buffer Zones	Saved	Replaced by a combination of Policy DM04 | Flood risk and Policy DM05 | Water resources	
		E14	Protecting the Local Environment – County-Wide	Saved	Replaced by DM01 | Amenity, DM02 | Cumulative impact and DM09 | Landscape	
		E15	Protecting the Local Environment – Cotswolds Water Park	Saved	Replaced by DM01 | Amenity, DM02 | Cumulative impact, and DM09 | Landscape	
		E16	Economic Development	Saved	Replaced by DM01 | Amenity and DM02 | Cumulative	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
					impact	
		E17	Safeguarding Public Access	Saved	Replaced by DM03 | Transport	
		E18	Opportunities for Improved Access	Saved	Replaced by DM03 | Transport	
		E19	Transport	Saved	Replaced by DM03 | Transport	
		E20	Highways	Saved	Replaced by DM03 | Transport	
		E21	Safeguarding Railhead and Wharves	Not Saved	Replaced by MS02 | Safeguarding mineral infrastructure	
		A1	County Contribution to the local apportionment of the Regional Guidelines	Saved	Replaced by MW01 | Aggregate provision	
		A2	Landbanks	Saved	Replaced by MW01 | Aggregate provision	
		A3	Future Aggregates Mineral Development within Preferred	Saved	Replaced by MA01 | Aggregate working within allocations and	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
			Areas		MW01 | Aggregate provision	
		A4	Future Aggregates Mineral Development outside Preferred Areas	Saved	Replaced by MA02 | Aggregate working outside of allocations and MW01 | Aggregate provision	
		A5	Areas of Future Crushed Rock Aggregates Mineral Development – Forest of Dean	Saved	Replaced by MA01 | Aggregate working within allocations and MW01 | Aggregate provision	
		A6	Areas of Future Crushed Rock Aggregates Mineral Development – Cotswold	Saved	Replaced by MA01 | Aggregate working within allocations and MW01 | Aggregate provision	
		A7	Areas of Future Sand and Gravel Aggregates minerals Development – Upper Thames Valley	Saved	Replaced by MA01 | Aggregate working within allocations and MW01 | Aggregate provision	
		NE1	Supply of Building Stone	Saved	Replaced by Policy MW02 | Natural	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
					building stone	
		NE2	Clay	Saved	Replaced by Policy MW03 | Clay for civil engineering purposes and Policy MW04 | Brick clay	
		EM1	Opencast Coal Extraction	Saved	Replaced by Policy MW05 | Coal	
		EM2	Small Scale Underground Mining	Saved	Replaced by Policy MW05 | Coal	
		EM3	Colliery Spoil	Saved	Replaced by Policy MW05 | Coal	
		EM4	Existing Colliery Spoil Tips	Saved	Replaced by Policy MW05 | Coal	
		EM5	Reworking Colliery Spoil Tips	Saved	Replaced by Policy MW05 | Coal	
		EM6	Oil and Gas	Not Saved	The policy has not been replaced and as it was not saved, does not remain in force. Please refer to paragraphs 55-64 of the new MLP for an explanation.	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
		EX1	Mineral Exploration	Not Saved	The policy has not been replaced and as it was not saved, does not remain in force. Please refer to paragraphs 55-64 of the new MLP for an explanation.	
		SE1	Processing Secondary Materials	Not Saved	Replaced by SR01| Maximising the use of secondary and recycled aggregates, MS02 | Safeguarding mineral infrastructure and MW06 | Ancillary minerals development	
		SE2	Minerals Waste Minimisation	Not Saved	Replaced by MR01 |Restoration, aftercare and facilitating beneficial after-uses and MA02 | Aggregate working outside of allocations	
		SE3	Safeguarding	Not Saved	Replaced by MS01 | Non-mineral	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
			Mineral Resources		developments within MSAs and MS02 | Safeguarding mineral infrastructure	
		SE4	Prior Extraction of Mineral Resources	Not Saved	Replaced by MS01 | Non-mineral developments within MSAs	
		R1	Beneficial Reclamation of Worked-Out Mineral Sites	Saved	Replaced by MR01 |Restoration, aftercare and facilitating beneficial after-uses	
		R2	After-use	Saved	Replaced by MR01 |Restoration, aftercare and facilitating beneficial after-uses	
		R3	Progressive Restoration	Saved	Replaced by MR01 |Restoration, aftercare and facilitating beneficial after-uses	
		R4	Enhancing Worked-	Saved	Replaced by MR01	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
			Out Mineral Sites		|Restoration, aftercare and facilitating beneficial after-uses	
		DC1	Mitigation of Environmental Effects	Saved	Replaced by DM01 | Amenity, DM02 | Cumulative impact, DM03 | Transport, DM05 | Water resources, DM06 | Biodiversity and Geodiversity and DM07 | Soil Resources	
		DC2	Ancillary Development	Saved	Replaced by MW06 | Ancillary minerals development	
		DC3	Importation of Material	Saved	Replaced by MR01 |Restoration, aftercare and facilitating beneficial after-uses	
		DC4	Safeguarding Aerodromes	Saved	Replaced by Policy DM11 | Aerodrome safeguarding and aviation safety	
		DC5	Planning	Saved	This policy has	

Main Modification (MM) Number	Paragraph/Policy/Page No.	Proposed Main Modification				Would the Main Modification result in different sustainability effects from those identified in the April 2018 SA Report?
			Obligations		been superseded by the CIL Regulations. As such it no longer remains in force and has not been replaced.	
		DC6	Planning Obligations – Eastern Spine Road	Saved	This policy has been superseded by the CIL Regulations. As such it no longer remains in force and has not been replaced.	
		DC7	Borrow Pits	Saved	Replaced by policies MA02 | Aggregate working outside of allocations, MW01 | Aggregate provision, MW02 | Natural building stone, MW03 | Clay for civil engineering purposes, Policy MW04 | Brick clay and MW05 | Coal	