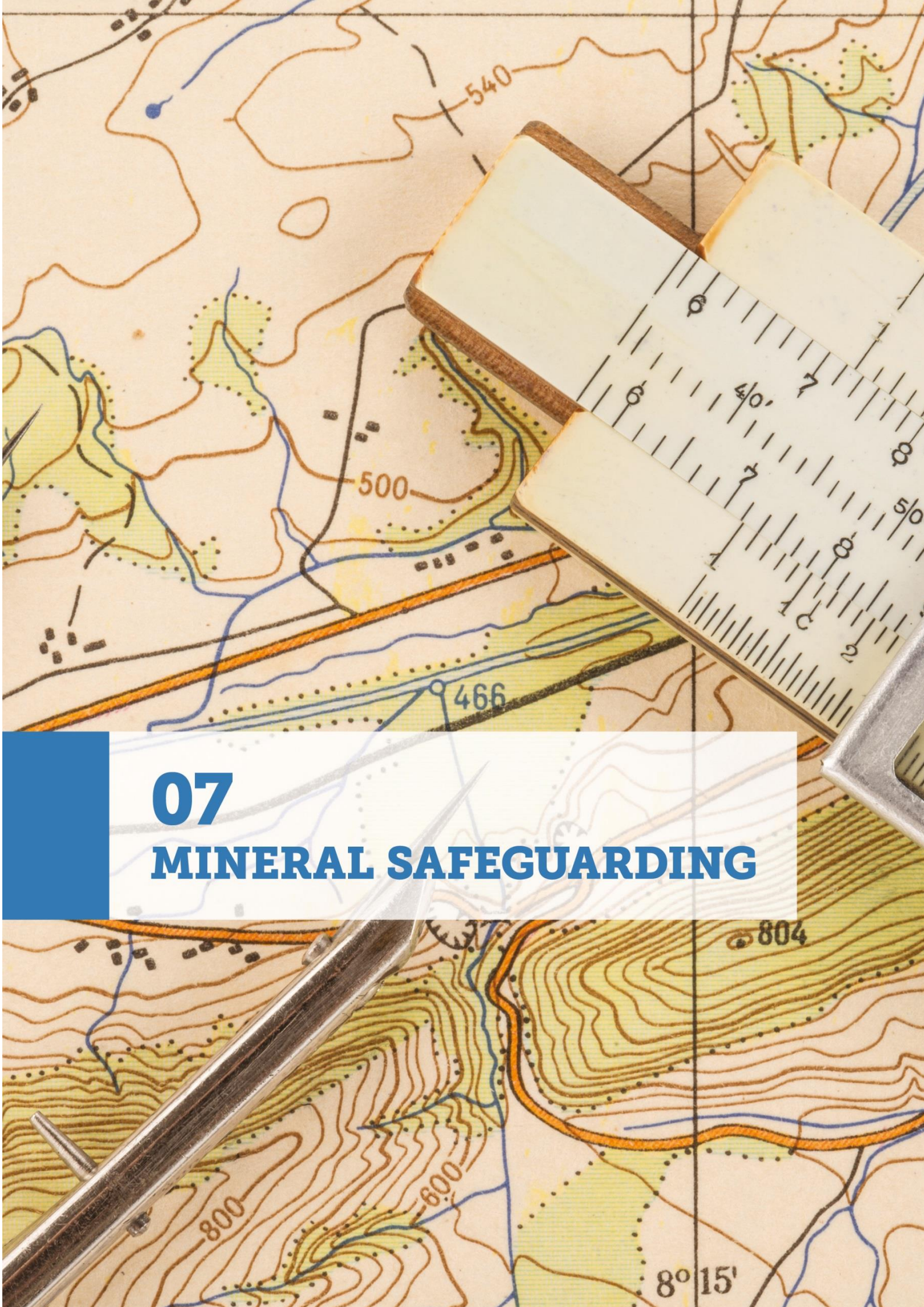

07
MINERAL SAFEGUARDING

Section 7 | Mineral safeguarding

Mineral Safeguarding Areas (MSAs)

Reasoned justification

98. Primary minerals are a finite natural resource that should be afforded protection for the benefit of future generations. Primary minerals can only be worked where they occur and with increasing pressure on land from different uses, are potentially at risk of being sterilised.

99. Sterilisation happens when surface development overlays, obstructs access to, and/or constrains the ability to work primary mineral resources. Without the opportunity to overcome these issues by way of demolition and site clearance, mineral resources become unusable and are effectively lost.

100. Mineral safeguarding is the means available to avoid the needless sterilisation of primary mineral resources by non-mineral 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[47]. This approach accords the 'agent of change' planning principle that is laid down in national policy through the NPPF 2019[48].

101. The presence of MSAs should ensure that mineral resources are afforded appropriate consideration alongside all other relevant planning issues in determining non-mineral developments. Furthermore, there is no presumption that mineral resources identified within a MSA will be worked.

102. It may be that non-mineral developments can be designed in such a way as to avoid sterilisation occurring; that an alternative site(s) / location can be found; or that the prior working of minerals can be achieved before development takes place. Alternatively, on balance, the overriding need for non-mineral developments may be greater than the need to retain access to and enable the working of the mineral resources.

[47] National Planning Policy Framework (NPPF) 2012 section 13, paragraph 143, bullet point 3 and Planning Practice Guidance (PPG), Minerals section, paragraph 003, bullet point 3, reference ID: 27-003-20140306.
[48] National Planning Policy Framework (NPPF) 2019, paragraph 182

Mineral resources to be safeguarded in Gloucestershire

103. Section 2 of the plan identifies important mineral resources present within the county. This information has helped to scope the extent of MSAs across Gloucestershire.

104. The British Geological Survey (BGS) Mineral Resource Map for Gloucestershire (including South Gloucestershire) has been used as the primary source for defining local MSAs[49]. It is the best available technical information on the extent of economically important local mineral resources. It consists of superficial sands & gravels; Carboniferous limestones and sandstones; Jurassic limestones; Permian Bridgnorth and Triassic Bromsgrove Sandstones; and shallow coal resources from the Upper Carboniferous known as the Coal Measures.

105. The Coal Authority has also produced a plan of surface coal resource areas for safeguarding purposes[50]. For the county, it identifies the Newent and Forest of Dean Coalfields, which are included in local MSAs.

106. In addition, mineral deposits of known local economic value, but not set out on the BGS Mineral Map, have been identified for safeguarding. These include Devonian Brownstones (sandstone) found in the Forest of Dean and Lower Lias Jurassic clays located in the north east of the county within the Cotswolds, surrounding Moreton-in-Marsh[51].

107. Potential oil and gas resources are not included within the county's MSAs as planning practice guidance advises it is unnecessary to do so[52].

108. Non-mineral developments on land that lies beyond the known boundary of a mineral resource could also generate sterilisation issues. This is due to the heightened risk of incompatible development close to potential mineral resources. To reduce the possibility of this occurring, Gloucestershire's MSAs have been extended. The coverage of these extended areas varies to reflect the likely spheres of influence, probable size and intensity of operations and anticipated scale of impacts associated with the future working of mineral resources within Gloucestershire. Table 1 sets out the size of MSA areas beyond the extent of known local mineral resources.

[49] BGS Onshore Mineral Resource Maps can be obtained at: - https://www.bgs.ac.uk/mineralsuk/planning/resource.html
[50] The UK's surface coal resource areas as mapped by the Coal Authority can be obtained at: - http://mapapps2.bgs.ac.uk/coalauthority/home.html
[51] The BGS Solid & Drift Edition 1:50 000 series for Moreton-in-Marsh, Gloucester and Monmouth delineates the extent of potential mineral resources not included on the BGS commissioned local Mineral Resource Maps. Namely, Devonian Brownstones (sandstone) worked as a local building stone and Jurassic Lower Lias clays exploited as a brick clay.
[52] Planning Practice Guidance (PPG), Minerals section, paragraph: 108, reference ID: 27-108-20140306.

Table 1 | The size of MSA areas beyond the known extent of local mineral resources for mineral sterilisation assessment purposes

Mineral resource type	Extended area beyond known mineral resources
Limestones, sandstones	500-metre extended area
Superficial deposits, Clays and shallow coal	250-metre extended area

109. The distances in table 1 also reflect the strategic nature of the resource blocks, which often contain more than one type of mineral resource. These resources often extend beyond the county boundary. The distances are broadly consistent with those applied or being proposed by neighbouring mineral planning authorities[53]. This approach will help avoid non-minerals development in one administrative area needlessly sterilising mineral resources in another.

110. Extending mineral safeguarding areas and addressing sterilisation risks posed by inconsistency at the cross-boundary level are both matters supported by technical advice on mineral safeguarding prepared jointly by BGS and the Coal Authority[54].

111. The full extent of Gloucestershire's MSAs is set out on in the plan's policies map[55].

[53] The mineral safeguarding policy approach for Oxfordshire is set out in the adopted Minerals & Waste Core Strategy Part 1 (September 2017). It contains mineral safeguarding policy M8 that refers to extending MSAs by an additional 250 metres. The emerging Warwickshire Minerals Local Plan (Publication) sets out MSAs under policies MC5 and DM10. These employ an additional 250 metre buffer for sand and gravel and a 500 metre buffer for crushed rock resources. The Worcestershire Minerals Local Plan (3rd Stage draft) includes supporting text to emerging policy MLP27. This headlines a 250 metre buffer for all local Mineral Resource Consultation Areas (MRCAs), which include the county's sand and gravel resources.

[54] BGS and Coal Authority | Minerals Safeguarding in England: good practice advice (2011) is obtained at: - http://www.bgs.ac.uk/downloads/start.cfm?id=2069

[55] The Minerals Local Plan for Gloucestershire (2018-2032) Policies Map can be found at: http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/adopted-minerals-and-waste-local-plans/adopted-policies-proposals-map/

Policy MS01 | Non-mineral developments within MSAs

Non-mineral development proposals within a Mineral Safeguarded Area (MSA) will be permitted provided: -

I. 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 concern are not economically valuable; or

IV. it is appropriate and practicable to extract minerals prior to development taking place; or

V. the overriding need for development outweighs the desirability to safeguard mineral resources.

Contributes to the delivery of plan objective 

Interpretation and implementation

112. Safeguarding mineral resources in Gloucestershire will require collaboration between the County Council as the Mineral Planning Authority, the borough, city and district local planning authorities that make up the county and those of neighbouring areas where relevant. To facilitate effective implementation, appropriate and timely consultation between key parties must be carried out. This should happen during the plan making stage and must occur when considering non-minerals development proposals.

113. Delineating Mineral Consultation Areas (MCAs) presents a statutory consultation mechanism that can be used in Gloucestershire. It is designed to ensure that mineral resource safeguarding is appropriately taken into account through the planning system in two-tier areas[56].

[56] The Town & Country Planning Act 1990, Schedule 1, Paragraph 7 , Sub paragraph 4 and 7 details consultation requirements in two-tier areas where (following notification) development is likely to affect or be affected by mineral working.

114. MCAs cover the full extent of Gloucestershire's MSAs and have been included on the plan's Policies Map.

115. Where non-mineral development proposals are located wholly or partially within a Gloucestershire MCA the local planning authority for that area is required to notify the County Council as the Mineral Planning Authority and afford them the opportunity to comment on possible mineral safeguarding matters before any decision is made to grant or refuse permission.

116. Non-mineral development proposals that pose a potential risk of needlessly sterilising mineral resources will need to be carefully scrutinised to determine whether it is significant enough to justify a recommendation to restrict or prevent development taking place.

117. Applicants of non-mineral development proposals within MSAs should consider engaging with the issue of mineral resource safeguarding at the earliest possible opportunity. Obtaining pre-application advice is strongly encouraged.

118. However, certain types of non-mineral development are, on balance, likely to have a negligible effect on the sterilisation of mineral resources. Table 2 below sets out the circumstances when this will apply. All types of non-mineral development outlined in table 2 satisfy clause 1 of policy MS01 and therefore do not need to undergo a minerals-related consultation with the County Council. In determining the acceptability in planning terms of these types of development, it would be unreasonable due to the nature of the proposal to give weight to mineral resource safeguarding matters.

Table 2 | List of non-mineral development types for which no mineral resource assessment will be required

Non-mineral development types
• All householder developments; • All minor development including fences, boundary walls, bus shelters; • Alterations and / or extensions to an existing non-residential building, unless intensified use is also proposed; • Change of use of an existing building, unless intensified use is also proposed; • Signage requiring advertisement consent; • Agricultural, forestry and telecommunications development requiring

prior notification;

- Works to trees;
- Changes to a Listed Building and demolitions in a Conservation Area requiring consent;
- Development requiring a Certificate of Lawfulness of Existing Use;
- Development requiring a Certificate of Lawfulness of Proposed Use or Development;
- All temporary development;
- All development dealt with under reserved matters unless the Mineral Planning Authority has specifically requested notification at the outline approval stage;
- All development that would accord with emerging and adopted local development plans* by way of their inclusion within a plan allocation following previous consultation with the Mineral Planning Authority and the satisfactory resolution of possible mineral resource safeguarding matters identified at that time; and
- 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.

* This also Includes any allocation contained within a Neighbourhood Plan.

119. For all non-mineral development proposals that need to be assessed against clauses 2 to 4 of policy MS01, a Mineral Resource Assessment (MRA) should be prepared.

120. The MRA must meet PERC Reporting Standards[57]. 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 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,

[57] PERC refers to Pan-European Reserves and Resources Reporting Committee Standard of Exploration, Results and Mineral Resources - http://www.percstandard.eu

within the sphere of influence of the proposal. The risk of unreasonably curtailing / constraining permitted mineral working activities should also be investigated.

121. In terms of economic viability matters, a MRA will need to look at the quantity and quality of mineral resources and their likely commercial interest. This may require a review of previously collated and published geological information, the undertaking of borehole investigations and seismic surveys. Regard will also need to be given to the specification requirements of minerals to meet intended uses including the ability to fulfil BSI standards or equivalent (with or without processing). Evidence of marketing to operators to work resources, potential operational factors and costs, and a review of the proximity to markets with associated transport costs should also form part of the assessment.

122. Where there is potential for prior extraction, MRAs will need to show how feasibility issues have been carefully considered. Key issues likely to require scrutiny include: - the degree to which the implementation of non-minerals development will be affected (e.g. economic viability, timescales etc...); civil engineering challenges or opportunities resulting from prior extraction; and the identification, and significance of possible environmental and amenity constraints and / or opportunities from any mineral working.

123. Ordinarily the prior extraction of minerals should be dealt with as a stand alone planning proposal determined by the Mineral Planning Authority. However, it may be possible to deal with the matter as part of a non-mineral development proposal. This can only be decided on a case-by-case basis, although will be influenced by the nature of the planning proposal (e.g. full or outline application) and the size, scale and expected timeframe for prior extraction.

124. Nevertheless, irrespective of how applications for prior extraction of minerals are handled, primary consideration will be given to the relevant adopted mineral planning policies that form part of the local development plan and which are in force at the time.

125. Overriding need for non-mineral development, which is contained under clause 5 of policy MS01, will be for the local planning authority to determine. However, any decision to override the safeguarding of mineral resources should only be taken having had access to sufficiently detailed supporting information, which should normally include a MRA.

Safeguarding minerals infrastructure

Reasoned justification

126. Efficient and effective mineral infrastructure is vital to ensuring mineral supplies from Gloucestershire are steady and adequate. This may include 'added value' processing plant and transport facilities that move minerals in and out of the county.

127. In Gloucestershire, mineral infrastructure is often sited close to other development types due to the mutual benefits of well connected transport links and proximity to local markets. However, this can create strong competition for the use of land that increases the risk of incompatible developments located within close proximity of each other and / or the encroachment of one land use over another.

128. 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 NPPF 2019[58].

129. National policy and practice guidance recognise the importance of safeguarding mineral infrastructure and identifies several different types of facility that may reasonably be subject to its requirements[59].

Policy MS02 | Safeguarding mineral infrastructure

Non-mineral developments located on / or adjoining a safeguarded mineral infrastructure site will not be permitted unless: -

I. the risk of incompatibility with current and future mineral-related operations is sufficiently mitigated or avoided; or

II. there is no longer a requirement to safeguarded the site for mineral infrastructure purposes to support the supply of minerals serving Gloucestershire and beyond; or

[58] National Planning Policy Framework (NPPF) 2019, paragraph 182
[59] National Planning Policy Framework (NPPF) 2012 section 13, paragraph 143, bullet point 4; and Planning Practice Guidance (PPG) paragraph: 006 Reference ID: 27-006-20140306

III. a suitable replacement mineral infrastructure site has been identified and permitted; or

IV. the overriding need for the development outweighs the desirability to safeguard mineral infrastructure.

Contributes to the delivery of plan objectives 

Interpretation and implementation

130. Mineral infrastructure sites safeguarding under policy MS02 are contained in Appendix 2 and their location and extent are set out in the plan's policies map[60]. However, the number and location of sites may evolve over time due to new permissions being granted and facilities closing down. Where changes occur these will be headlined within the next available authorities monitoring report prepared by the MPA and the plan's policies map will also be revised.

131. The effective safeguarding of mineral infrastructure sites requires collaboration between the County Council as the Mineral Planning Authority and local planning authorities. Consequently, for non-minerals development proposals located on / or adjoining a safeguarded infrastructure site, the local planning authority for that area should notify the County Council and afford them the opportunity to comment on possible infrastructure safeguarding matters before any decision is made to grant or refuse permission.

132. Non-mineral development proposals located on / or adjoining a safeguarded infrastructure site will need to be accompanied by a Mineral Infrastructure Safeguarding Assessment to show how the risk of incompatibility will be minimised to an acceptable level or will be avoided. Proposed mitigation measures to reduce potential adverse impacts on the operations of mineral infrastructure or the sensitivity to mineral infrastructure will be carefully considered. Particular attention will be given to the extent to which existing, planned or potential capacity for mineral storage, processing and transportation could be affected.

133. Where a non-mineral development proposal would require the closure of safeguarded mineral infrastructure or the disposal of an unoccupied, but safeguarded site, consideration must be given to its contribution to the wider network of mineral

[60] The Minerals Local Plan for Gloucestershire Policies Map can be found at: - http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/adopted-minerals-and-waste-local-plans/adopted-policies-proposals-map/

infrastructure facilities serving Gloucestershire and beyond. Evidence of the site's mineral infrastructure use over time should be included as part of the Mineral Infrastructure Safeguarding Assessment. The recent occupation history and the intentions of existing occupier(s) will also be essential.

134. In addition, if a site is unoccupied / or an existing occupier is seeking to close or relocate, potential interest from other mineral infrastructure operators should be established. This may be achieved through an appropriate intelligence gathering exercise involving consultation with the mineral industry.

135. The overriding need for non-minerals development will be for the local planning authority to determine. However, any decision to override the safeguarding of mineral infrastructure should only be taken having had access to a Mineral Infrastructure Safeguarding Assessment that contains information relating to the current and / or potential contribution the infrastructure site may have on the wider network of mineral infrastructure facilities serving Gloucestershire and beyond.

08
THE FUTURE SUPPLY OF MINERALS

Section 8 | the future supply of minerals

136. Facilitating sufficient supplies of minerals is essential in achieving sustainable economic growth and prosperity. However, in doing so a balance needs to be struck between contributing towards meeting the need for minerals both locally and beyond, and ensuring this is undertaken in a timely way and proportionately within environmental limits and without generating unacceptable adverse impacts on local communities.

137. Local mineral supplies specific to Gloucestershire and covered by the plan include: - primary land-won aggregates – crushed rock and sand and gravel; sandstone and limestone used for natural building stone; clay for brick-making and other civil engineering purposes; and hydrocarbons made up of coal, oil and gas.

138. Supplies of minerals are also heavily dependent upon the support of local infrastructure such as processing plant used to develop raw minerals into a range of different products needed in construction and other industrial processes. Other ancillary activities support increasingly efficient and effective mineral working and the movement of minerals from place to place.

Crushed rock and sand and gravel aggregates

Influencing factors on future aggregate provision

Establishing local supply trends and forecasting future demand using Local Aggregate Assessments (LAAs)

139. A Local Aggregate Assessment (LAA) is an assessment of trends in supply and demand for aggregates from within a mineral planning authority's area[61]. It is updated annually and is based on collated information, which sets out a rolling average of 10 years worth of primary aggregate sales. It also includes other relevant local data and an assessment of other supply options including marine dredged and secondary & recycled aggregate sources.

[61] Planning Practice Guidance (PPG), Planning for aggregates Section, paragraph: 067 Reference ID: 27-067-20140306.

140. The LAA for Gloucestershire was first published in November 2013 and contained supply data up to the end of 2011. A 6th version LAA was published in November 2017 and covers the period up to the end of 2016[62].

141. The 6th version LAA identifies that for the 10 years between 2007 and 2016 (inclusive), average annual sales of primary aggregates from within the county stood at 1.452 million tonnes for crushed rock and 0.742 million tonnes for sand and gravel.

142. In making provision for aggregates, significant weight should be given to the prospect of average annual sales as expressed within the LAA, being effectively maintained.

The role and significance of National and Sub-National Guidelines

143. Historically, deciding how much aggregate should be provided for was achieved under a centrally-led process. National government predicted the need for aggregates across the country and then apportioned this total to each sub-national area (region) of England. A further breakdown was then undertaken for each mineral planning authority at the local level. Making decisions at a sub-national level involves technical advisory groups called Aggregates Working Parties (AWPs). For the South West of England an AWP has been in existence for many years. The South West AWP is made up of all local mineral planning authorities in the South West of England, the minerals industry and other government agency representatives.

144. The current aggregate apportionment for the South West of England covers the period from 2005 to 2020. It amounts to 412 million tonnes of crushed rock and 85 million tonnes of sand and gravel[63]. For Gloucestershire the recommendation of the AWP, which supported the then emerging South West Regional Spatial Strategy (SW-RSS)[64], was for provision to be made for a local apportionment equal to 36.01 million tonnes for crushed rock and 16.07 million tonnes for sand and gravel[65] [66].

145. National policy advises that making a contribution towards national and sub-national guidelines should be a factor when deciding upon how much local provision should be

[62] Information on Gloucestershire's Local Aggregate Assessments (LAAs) can be found at: - http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/local-aggregates-assessment-laa/

[63] Published CLG National and Regional guidelines for aggregate provision in England (2005-2020) can be found at: - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7763/aggregatesprovision2020.pdf

[64] The South West Regional Spatial (SW-RSS) was designed to provide a regional level planning framework for the South West region including Gloucestershire and was introduced through the Planning & Compulsory Purchase Act (2004). An emerging SW-RSS was prepared throughout the mid 2000s but this was never formally adopted and therefore not included in the Development Plan for Gloucestershire. The emerging SW-RSS was revoked through the provision of the Localism Act (2011) by way of an order laid before the UK Parliament in April 2013.

[65] The MPA-level recommendations made by the SW AWP towards meeting the present sub-national aggregate guidelines, are published in South West Aggregates Working Party Annual Report (2010): - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/201196/SWRAWP_Report_10_Final_WEB.pdf

[66] The annual expression of the local apportionment for Gloucestershire between 2005 and 2020 is equal to 2.25 mtpa for crushed rock and 1.0mtpa for sand and gravel.

planned for[67]. The guidelines are a valid material consideration when making decisions on planning proposals for aggregate mineral developments. However, the relatively short timeframe afforded to the current guidelines (i.e. to 2020), means their importance will likely diminish over the plan period unless new guidelines are forthcoming.

The monitoring of aggregate landbanks

146. Monitoring primary land-won aggregate landbanks is an established method in helping to determine how much provision might be needed through the preparation of a minerals local plan. Aggregate landbanks are made up of the remaining mineral reserves within valid planning permissions for a type of aggregate over a given location, which is commonly the mineral planning authority area.

147. Primary land-won aggregate landbanks are expressed in years based on how long the remaining reserves would in theory be available to keep pace with demand as determined using the latest LAA.

148. National planning policy advises upon the use of thresholds, described as – *minimum landbank levels* – for different types of primary aggregate. These are applicable when preparing new local planning policies and making planning decisions. They act as a justification for new minerals development that will add to the level of local aggregate reserves. For crushed rock, national policy states that at least a 10 year landbank of permitted reserves should be maintained. For sand and gravel the figure is at least 7 years[68].

149. Seeking to maintain sizeable minimum landbank levels is a reflection of the timeframes involved in moving from a submitted planning proposal to an active site that is working minerals. Minimum landbank levels are deemed proportionate for ensuring local supplies that are kept steady and adequate over time. They also give some certainty to the mineral industry and their investors who are needed to provide vital up-front capital investment[69].

150. The existence of primary aggregate landbanks at or above the minimum landbank levels should not be seen as a justifiable reason to restrict the creation of further aggregate reserves. Circumstances may prevail where local markets are insufficiently supplied despite the existence of a maintained landbank at or above the minimum level. For example; transport links between mineral sites and local markets may not be of sufficient capacity to ensure worked minerals can be delivered in large enough

[67] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 145, bullet point 4
[68] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 145, bullet point 6
[69] Planning Practice Guidance (PPG) minerals section, paragraph: 081 Reference ID: 27-081-20140306

quantities to keep up with demand. There may also be a lack of the right quality and type of aggregates to meet specific requirements for end users. Furthermore, productive capacity constraints at mineral sites can also make it unachievable to sustain supplies at a steady and adequate rate[70], even at the strategic level, where a group of mineral sites may be involved. In addition, where reserves are increasingly concentrated in a small number of mineral workings, beneficial competition may be put at risk. This can unduly expose local supply chains to the commercial fortunes of just a few operators.

151. In Gloucestershire the countywide primary land-won aggregate landbanks as of the end of 2016, amounted to 16.75 years for crushed rock and 5.94 years for sand and gravel[71].

Making provision for crushed rock

Supporting explanation

152. Based on the data set out within the 6th version LAA, the plan will consider how best it can facilitate the provision based on a continued supply of at least 1.452 million tonnes of crushed rock aggregate per annum from Gloucestershire through to the end of 2032. It will also look to ensure that a sufficient landbank of reserves is always maintained at or above the minimum level of 10 years. To achieve this, provision equal to 37.752 million tonnes will need to be made[72].

153. Remaining permitted reserves of crushed rock will undoubtedly make a significant contribution to the plan's future provision requirement, but are insufficient on their own to meet it in full. As a result a shortfall is anticipated. This is equal to 13.432 million tonnes or the equivalent of over 9 years of additional sales.

154. However, local circumstances exist within the county that mean applying a countywide approach to future provision requirements for crushed rock aggregate, may present some difficulties. To do so could inadvertently undermine the maintenance of steady and adequate aggregate supplies throughout the plan period, particularly once any anticipated shortfalls in provision start to occur. The county's two resource areas for crushed rock aggregate – the Forest of Dean and the Cotswolds, both have the

[70] These matters are all noted as reasonable justifications to adopt a degree of flexibility when applying landbank indicators within National Planning Policy Framework (NPPF) 2012, section 13, paragraph 145, bullet point 6; and Planning Practice Guidance (PPG) mineral section, paragraph: 064, reference ID: 27-064-20140306 and paragraph: 084 reference ID: 27-084-20140306.
[71] Based on the 6th LAA for Gloucestershire
[72] For a full breakdown of the calculations informing future provision covered by the plan see Appendix 3

potential to experience different aggregate supply challenges regarding the quality and local capacity of available aggregates.

155. Furthermore, a countywide approach could also be at odds with national policy in respect of future aggregate working from within valued environments. MPAs are encouraged to facilitate the maintenance of aggregate landbanks from outside of AONB designations[73]. The majority of the Cotswold resource area lies within the Cotswolds AONB, while a significant proportion of the Forest of Dean resource area falls outside of the Wye Valley AONB.

156. Consequently, a local approach to future provision requirements for crushed rock aggregate is considered to offer a way of overcoming both supply challenges and national policy. It also affords the plan a deliverable strategy for demonstrating how steady and adequate supply throughout the plan period can be effectively enabled.

157. The local approach seeks to acknowledge the historic trend in the supply of crushed rock aggregate between the Forest of Dean and Cotswold resource areas as a means of distributing the shortfall in provision. It equates to a split of 70:30 respectively in the contribution made by the two resource areas.

158. Overall the amount of additional provision that the plan should be considered remains unchanged at 13.482 million tonnes. However, based on the landbank of reserves as at 31st December 2016 and the 70:30 split, the requirement from the Forest of Dean is 10.426 million tonnes. For the Cotswold resource area it is 3.016 million tonnes. Appendix 3 details the application of the local approach and calculations used to determine the future provision requirements for crushed rock from Gloucestershire.

159. Section 9 of the plan sets out in detail how the anticipated shortfall in aggregate provision will be handled across the two resource areas. It includes the allocation of sites with the potential to support future crushed rock aggregate working (policy MA01). It also establishes criteria for assessing the acceptability of minerals development proposals for aggregate working outside of site allocations (policy MA02).

[73] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 144, bullet point 2

Making provision for sand and gravel

Supporting explanation

160. In line with the 6th version LAA, the plan aims to support steady and adequate supplies of sand and gravel aggregate of at least 0.742 million tonnes per annum throughout to the end of 2032. It will also look to ensure that a sufficient landbank of reserves is always maintained at, or above the minimum level of 7 years. To achieve this, provision equal to 17.066 million tonnes will need to be made.

161. Remaining permitted reserves of sand and gravel will make a contribution to meet the plan's provision requirements, although they are insufficient to meet it in full. As a result, a shortfall will be generated amounting to 9.456 million tonnes. This is equivalent to a little under 13 years of additional working.

162. Section 9 of the plan sets out in detail how the anticipated shortfall in aggregate provision will be handled. It includes the allocation of sites with the potential to support future sand and gravel aggregate working (policy MA01). It also establishes criteria for assessing the acceptability of mineral development proposals for aggregate working outside of site allocations (policy MA02).

Policy MW01 | Aggregate provision

Mineral development proposals for aggregate working will be permitted, where it can be demonstrated: -

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 and gravel, based on the LAA rate published in the most recent annual Gloucestershire Local Aggregates Assessment; and

II. the requirements of policy MA01 (Aggregate working within allocations can be satisfactorily met; or

III. the requirements of policy MA02 (Aggregate working outside of allocations) can be satisfactorily met.

Contributes to the delivery of plan objective 

Limestone and sandstone for natural building stone

Reasoned justification

163. The working of natural building stone is important to Gloucestershire. It is integral to efforts to protect and maintain the county's iconic built character and is a small, but no less important contributor to maintaining the diversity and sustainability of the local economy. Local supplies of natural building stone are heavily relied upon in historic building conservation projects and make an invaluable contribution to the upkeep of key green infrastructure features that support cultural heritage and biodiversity interest locally, regionally and nationally[74]. They are also a key component in the promotion of local distinctiveness within new build schemes. Design codes and planning guidance active across Gloucestershire promote the use of natural building stone[75].

164. The county's key natural building stone resources are found within or nearby to high value landscapes such as the Cotswold and Wye Valley AONBs. They are derived from sandstone and limestone resource blocks that are broadly contiguous with the Cotswold and Forest of Dean crushed rock aggregate resource areas.

165. Many natural building stone workings are also located in or near to highly sensitive environments and are often close to local communities that contain cherished and locally distinctive built assets including those which contribute towards the county's green infrastructure network such as field enclosures that incorporate traditional walling stone, many of which have historic origins. This circumstance has resulted in well-established and often harmonious local relationships being developed over time linked to the availability, supply and use of natural building stone and the evolution of the 'working' landscapes, rural settlements and cultural heritage of Gloucestershire. A careful balance must be maintained to ensure good relations are enduring.

166. Natural building stone production in Gloucestershire has historically been low in comparison to aggregate working[76]. It is largely characterised by small, often independently-run quarry units that are dispersed throughout the resource areas and, which usually only generate a few thousand tonnes worth of sales per year[77]. There is considerable variability in the colour, texture, quality and availability of the county's

[74] Nationally significant restoration projects that have utilised natural building stone sourced from the Cotswolds include St. George's Chapel at Windsor Castle; The Houses of Parliament and Hampton Court Palace in London; and Truro Cathedral, Cornwall. Natural building stone from the Forest of Dean has also been used in the regeneration of Bath Spa Railway Station and Hereford Cathedral.

[75] For example; the Cotswold Design Code (CD-Code) specifically references 'natural Cotswold stone' as a preferable local material with new development. The CD-Code has supplementary planning guidance status and is supported by policy 42 of the adopted Cotswold District Local Plan (2001 – 2011). A revised CD-Code forms part of the emerging Cotswold District Local Plan 2011-2031, which was submitted to the Secretary of State earlier in 2017.

[76] The Gloucestershire Authorities Monitoring Report (AMR) for 2014 shows that over the 10-year period (2005-2014) natural building stone has on average represented just 9% of all limestone and sandstone production in the county.

[77] Based on recent data from the MPA Annual Mineral Survey Returns average sales of natural building stone from each of Gloucestershire's active quarry units is just over 2,500 tonnes per annum.

supply of natural building stone with marked differences occurring often even within individual quarry units. Working can be intermittent with demand and subsequent market value for different types of stone subject to considerable uncertainty and volatility.

167. In addition there are a number of mineral workings supplying natural building stone that are also capable of supplying aggregates and other mineral products such as agricultural lime and for industrial uses. For reasons of effective site management and in certain circumstances, economic viability[78], it has been allowable for these other types of mineral developments to occur in parallel where demonstrably justified. Nevertheless, very strict controls are needed to manage multi-mineral workings originally founded on their ability to supply natural building stone. This is to avoid unbalancing the acceptability of such sites due to overly intensified development. The heightened risk of generating unacceptable adverse impacts on the environment and local communities, and / or degrading the quality of valued landscapes and / or the setting of historic built assets must be prevented.

Policy MW02 | Natural building stone

Mineral development proposals for natural building stone working will be permitted, where it can be demonstrated: -

I. there are no alternative suitable supplies available to meet demand that are viable and represent a more sustainable source;

II. a positive contribution will be made to the ability to maintain historic built assets and achieve high quality design and local distinctiveness or its reinforcement within new development;

III. a positive contribution will be made to sustaining or growing the local economy and upholding the cultural heritage of the Cotswolds or Forest of Dean; and

IV. the requirements of policy MR01 (Restoration, aftercare and facilitating beneficial after-uses) can be satisfactorily met.

Contributes to the delivery of plan objectives 

[78] Whilst acknowledging that the unit price for building stone is higher than other quarry products, it is recognised that it can often have a higher production cost.

Interpretation and implementation

168. Natural Building stone is the collective term used to describe naturally-occurring construction materials used as a walling stone, roofing slate, dimension stone or stone for ashlar, rubble masonry, quoins, lintels, and other architectural masonry. It excludes however, manufacturing to produce 'reconstituted' or 'artificial' stone[79]. All mineral development proposals that involve the working of natural building stone must be considered against policy MW02. Although, scrutiny of policy MW06 may be necessary where on-site processing of quarried stone is also planned. This could involve mechanical sawing, planning, and turning on a lathe or hand working to match architectural design requirements or stone splitting.

169. For multi-mineral development proposals that could involve the working of some aggregates and other minerals along with natural building stone, the relevant requirements of policies MW01 and MA02 will also need careful examination.

170. Policy MW02 supports national policy in facilitating mineral development proposals that will make a contribution towards meeting demand for natural building stone, whilst taking into consideration the need to protect designated sites[80]. A robust justification for allowing future natural building stone working in Gloucestershire must be shown. This is as a result of the widespread coverage and importance of the county's protected designated sites and clear geographical relationship between these sites and areas of natural building stone resource.

171. All proposals for natural building working will need to be accompanied by a sufficiently detailed Building Stone Assessment (BSA). This must set out what the forecast demand is for the natural building stone types under consideration, backed by robust and credible evidence. The Strategic Stone Study may prove a useful resource to use[81]. Demonstrating clear links between the natural building stone types under consideration and the maintenance of particular heritage assets and / or local vernacular architecture may also be extremely advantageous. The BSA will need to provide a comprehensive analysis of current supplies and an explanation as to why these are likely to be insufficient and / or inappropriate to meet the forecast demand. An appreciation of the environmental and economic attributes of alternative supplies will be vital, particularly when attempting to consider their comparative disadvantage to the proposed minerals development.

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[79] The position regarding the manufacturing of 'reconstituted' or 'artificial' stone is founded on the advice contained in the DCLG / BGS Mineral Planning Fact Sheet – Building and Roofing Stone, obtainable at: - https://www.bgs.ac.uk/mineralsuk/planning/mineralPlanningFactsheets.html.
The manufacturing of building materials is categorised as a B2 (General Industrial) land use.

[80] National Planning Policy Framework (NPPF (2012), section 13, paragraph 144, bullet point 8

[81] The Historic England / DCLG / BGS Strategic Stone Study Online is accessible at: - http://mapapps.bgs.ac.uk/buildingStone/BuildingStone.html

172. 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. 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[82].

173. Favourable consideration may also be given to evidence that shows greenhouse gas emissions from transport will not increase as a result of using local natural building stones rather than replying upon imports from a greater distance[83]. Although the suitability of the local road network to support such proposals must be factored into this analysis. The relevant criteria of policy DM03 will be applicable.

174. Natural building stone working positively contributes to the economic well-being and cultural heritage of the county's rural local communities. It does so directly through local employment opportunities, and indirectly by contributing to the localities attractiveness as an area for tourism, recreation and other businesses. Support for new or sustained local skilled labour, particularly traditional quarrying-related skills will 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[84]. 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[85]. 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

[82] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 144, bullet point 8

[83] Greenhouse gas emissions from transport include Total greenhouse gas emissions from transport, including carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O), are analysed in this indicator. Emissions are split into road transport, railways, domestic navigation, domestic aviation, international aviation and maritime transport.

[84] Traditional quarrying-related skills such as stone cutting and stone masonry may be applicable.

[85] National Planning Policy Framework (NPPF) 2019, paragraph 182

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.

Clay for civil engineering purposes

Reasoned justification

175. Clay minerals can be used for civil engineering purposes including for flood defence barriers, noise attenuation bunds, construction fill, landfill lining and capping and the lining for canals, ponds and other water management-related features.

176. Gloucestershire has extensive and fairly widespread deposits of clay found within the Forest of Dean, along the Severn Vale and in parts of the Cotswolds. Clays used in civil engineering have more recently been sourced from within the Severn Vale to assist in landfill operations. It has sometimes been worked alongside other minerals such as sand and gravel. The working of clay in the county has often taken place as a temporary borrow pit to support a nearby development project.

177. The quantity of clay used in civil engineering is currently not significant and there is no evidence to suggest this is likely to change over the plan period. No notable shortfalls have been recorded in local supplies to indicate they are near exhaustion. Nevertheless, it is plausible that the scale, intensity and location of new or upgraded civil engineering projects could have an influence on availability, at least at the local scale, to stimulate interest in new proposals. In certain circumstances, it may also be preferable for minerals to be worked and then supplied within close proximity to a development site to avoid putting strain on the highway network for the importation of comparable minerals from further afield.

178. For landfill operations which use clay for the engineering of cells and for cap and cover, the Gloucestershire Waste Core Strategy (WCS) indicates that whilst local landfill capacity is presently sufficient to meet the county's needs through to the end of the 2020s; this situation should be carefully monitored[86]. Provision has been made within WCS core policy WCS 8 *(Landfill)* to consider the acceptability of new or expanded landfill developments[87]. This could generate an increase in demand for civil engineering clays. In addition, there are a number of planned local infrastructure-related projects that may also create local demand[88]. As our understanding of how best to adapt to and prepare for climate change impacts evolves, there is every possibility the need for these types of projects will increase.

[86] Gloucestershire Waste Core Strategy, paragraph 4.133

[87] Gloucestershire Waste Core Strategy (WCS) WCS Policy 8 – Landfill.

[88] The Gloucestershire Local Flood Risk Management Strategy (LFRMS) (2014) facilitates the prioritisation for funding and delivery of projects to reduce the risk of flooding locally. Over time the present LFRMS and future revisions may support infrastructure projects that require the importation of clay in bunds and flood defence barriers. Similar stimulus may arise from future progress with the ongoing restoration schemes such as the Stroudwater Navigation; Thames & Severn Canal; and Herefordshire & Gloucestershire Canal all of which may require new clay lining.

Policy MW03 | Clay for civil engineering purposes

Mineral development proposals for the working of clay for civil engineering purposes will be permitted, where it can be demonstrated: -

I. there are no suitable, alternative mineral supplies or materials available to meet demand that are viable, environmentally acceptable and will represent a more sustainable solution; and

II. a positive contribution will be made to sustaining or growing local economies and upholding cultural heritage throughout Gloucestershire.

Contributes to the delivery of plan objectives 

Interpretation and implementation

179. National policy states the importance of having sufficient mineral supplies in providing the infrastructure that the country needs[89]. This includes clays for civil engineering purposes. Seeking to ensure that the best use is made of primary minerals where the need for working has been established, that they will ideally be sourced indigenously (locally sourced) and that the operations associated with their working will not generate unacceptable adverse impacts on the environment are specific national policy requirements[90]. Policy MW03 delivers national policy in the context of the working of clay for civil engineering purposes.

180. All mineral development proposals for the working of civil engineering clays will need to be accompanied by a credible and robust justification. Evidence showing why existing permitted supplies will not be sufficient or that alternative materials will not be appropriate for the intended use will be required. The availability, practicality, viability and comparative environmental impact of any potential alternative sources of mineral will also be necessary. The analysis of comparative impacts should take into account wider issues such as any possible positive contribution towards action on climate change. A reduction in the overall freight miles travelled and / or fall in attributable, transport-related greenhouse emissions will be a valid consideration if local sourcing is

[89] National Planning Policy Framework (NPPF) 2012, paragraph 142
[90] National Planning Policy Framework (NPPF) 2012, paragraphs 142 and 143.

being promoted. However, the suitability of the road network must be factored into this analysis. The relevant criteria of policy DM03 will be applicable in this instance.

181. A degree of flexibility may reasonably be applied to proposals to work civil engineering clays under certain circumstances. These may include where valuable mineral resources might be at risk from mineral sterilisation, although the reasonable prospect that prior-working could be achieved as established under policy MS01 will need to be established. A degree of weight may also be attributed to tightly-controlled operations, that take place over a short-timeframe and / or that will solely aid the delivery a specific development project. This could include borrow pits or campaign digs. The acceptability of such proposals will be made on case-by-case basis having balanced any envisaged benefits against possible, unacceptable adverse impacts that cannot realistically be avoided or mitigated.

182. Evidence of how the working of civil engineering clays may impact upon the deliverability of local infrastructure projects could prove materially significant in determining proposals. Particular attention may be given to clear links to the successful implementation of priority infrastructure projects that respond to Gloucestershire's future economic, environmental and / or social challenges and opportunities. These might involve schemes headlined in the National Infrastructure Plan and Construction Pipeline[91] and / or evolve out of the Strategic Economic Plan for Gloucestershire[92] or Local Flood Risk Management Strategy (LFRMS)[93].

183. The environmental acceptability of the working of civil engineering clays will require careful assessment following the clear approach set out in national policy[94]. It states no unacceptable adverse impacts should occur having considered cumulative effect of multiple impacts from individual mineral sites and / or from other sites in a locality. Possible impacts concerning the natural and historic environment and the health and well being of potentially affected local communities will require rigorous scrutiny as will the need to demonstrate any unavoidable noise, dust and particle emissions can be satisfactorily controlled, mitigated or removed at source. The extent to which valued and / or designated landscapes, the connectivity and environmental integrity of the county's multi-functional green infrastructure network, geological conservation interests and soil resources are able to be protected or enhanced, and the ability to prevent unacceptable levels of pollution covering soil, air and water (surface and groundwater) will also need to be taken into account. Relevant matters contained

[91] The National Infrastructure Delivery Plan and Pipeline can be obtained at: - https://www.gov.uk/government/collections/national-infrastructure-plan#national-infrastructure-delivery-plan
[92] The Gloucestershire Strategic Economic Plan (SEP) can be obtained at: - http://www.gfirstlep.com/about-us/our-vision/strategic-economic-plan/
[93] The Gloucestershire Local Flood Risk Management Strategy (LFRMS) can be obtained at: - http://www.gloucestershire.gov.uk/your-community/emergencies-and-your-safety/flooding-and-drainage/
[94] National Planning Policy Framework (NPPF) 2012, paragraph 144

within policies DM01 to DM07 will warrant very careful attention in the decision making process.

184. The working of civil engineering clays may positively contribute to the economic well-being and cultural heritage of the county. This could arise through direct and indirect employment opportunities. New or sustained local skilled labour, particularly quarrying-related skills could support the county's diverse employment base particularly in rural, primary industries. Appropriate provision for local apprenticeships secured either by way of a planning condition or a planning obligation might prove materially significant. However, it will be of equal importance to demonstrate whether negative economic impacts could be generated. An assessment of possible impacts on the future economic performance of other industries that are operating locally and / or which are being promoted through regeneration and growth initiatives should be carried out. This must show the significance of possible impacts and to what extent they can be mitigated or will be outweighed.

Brick clay

Reasoned justification

185. Brick clay is a general term used to describe clay and shale minerals employed in the production of structural brick clay products that include facing and engineering bricks, pavers, tiles for roofing and cladding, and clay pipes used in the sewage system (e.g. those which are vitrified).

186. The working of brick clay minerals to provide for structural brick clay products is relatively small scale within Gloucestershire. There is presently only one active working site alongside a brickworks located in the north Cotswolds near Blockley. The Forest of Dean does also contain an active brickworks, although the working of brick clays no longer takes place in this locality. Clay deposits with the potential to contribute towards brick clay supplies are found in many localities across the county. Historically, the working of brick clays was a diverse and widespread local industry.

187. Gloucestershire is not a significant contributor by volume to the UK's manufacturing of structural brick clay products. However, the local industry is made up of two brickworks that have an important role to play in the security and diversity of supply. High yield products can be sourced locally along with handmade and more bespoke items that exhibit specialist characteristics and properties and less common colours and textures. The diversity in structural brick clay products is acknowledged as an invaluable resource for the continued protection of built historic assets and for supporting new build projects that promote high quality design and enhanced local distinctiveness. Permitted brick reserves and stockpiles of worked minerals, which are accessed locally, are currently judged to be adequate to support the continued manufacturing of structural brick clay products at the local level. Nevertheless, forecast growth in development over the coming years could stimulate a change in circumstance that will need to be carefully monitored.

188. There is a general downward trend in the number of operational brickworks present in the UK over recent decades[95]. This may be attributed to the high level of capital investment needed to start-up and keep a plant running and the increasing dependence on primary minerals that are predicable in both their availability and degree of consistency, particularly where high yield products are concerned. Continuity of supply is of ever increasing importance and whilst traditionally this challenge has been met through the sourcing of primary minerals adjacent or nearby to

[95] An overview of the supply chain for structural brick clay products including a review of the state of the UK industry is set out in the BGS / CLG Minerals Planning Factsheet: *Brick Clay*, which can be obtained at: - https://www.bgs.ac.uk/downloads/start.cfm?id=1350

brickworks, it is now more likely that primary minerals will be transported to brickworks that no longer have access to on-site or nearby reserves. This practice has expanded as a result of increased blending of brick clay minerals to meet the growing demand for more durable products and a larger range of fired colours and textures.

Policy MW04 | Brick clay

Mineral development proposals for working of brick clays as an industrial mineral will be permitted, where it can be demonstrated: -

I. a contribution will be made towards the supply of brick clays necessary to enable production to be maintained at a specified brickworks either located within Gloucestershire or beyond for at least 25 years throughout and at the end of the plan period; and

II. a positive contribution will be made to sustaining or growing local economies and upholding cultural heritage throughout Gloucestershire.

Contributes to the delivery of plan objectives 

Interpretation and implementation

189. Policy MW04 delivers on national policy requirements concerning the future supply of brick clays, it identifies brick clay as an industrial mineral for which steady and adequate supplies should be planned for[96]. In recognition of its importance and the challenges associated with maintaining supplies of manufactured structural brick clay products, provision is made to support actual and proposed investment in plant equal to the maintenance of reserves that will allow at least 25 years worth of future production[97]. In addition, a more strategic view to facilitating supplies is advocated through acknowledging different sources of clay may be required to support manufacturing beyond Gloucestershire to enable appropriate brick blends to be made[98].

[96] National Planning Policy Framework (NPPF) 2012, paragraph 146
[97] National Planning Policy Framework (NPPF) 2012, paragraph 146, bullet point 3
[98] National Planning Policy Framework (NPPF) 2012, paragraph 146, bullet point 4

190. All mineral development proposals for the working of brick clay should provide clear evidence of how they will contribute to the maintenance of supplies for structural brick clay products. As advised in planning practice guidance, this is achievable through attributing proposed working to the requirements of specific brickworks[99]. Supporting evidence should be able to show, that without the proposed working, supplies will be diminished to the extent that the ongoing viability of the manufacturing business or future investment opportunities will be put at risk[100]. A reserve threshold equal to maintaining production at current levels for a period of at least 25-years represents a reasonable starting point for establishing need. Further supporting evidence to demonstrate the value of the proposed working of brick clay in manufacturing blended products could be beneficial. It may be particularly pivotal in the reasoned justification for transported locally-dug minerals out of the county.

191. National policy acknowledges the potential benefit to the economy of mineral working[101]. Consequently, proposals for working brick clay should provide evidence of their potential contribution to economic well-being. Direct and indirect employment opportunities may be attributable to an individual proposal, including support for new or sustained local skilled labour in quarrying and also the manufacturing of structural brick clay products at brickworks. Although only a small contributor to local employment, it supports the vibrancy and diversity of Gloucestershire's rural economy. Provision for local apprenticeships secured either by way of a planning condition or a planning obligation is likely to be a materially significant benefit. However, a balanced assessment of all envisaged economic impacts will be necessary to establish the degree of weight afforded to this matter. Careful consideration must be given to the presence of any potential negative economic impacts from the working of brick clay and the extent to which it could be mitigated or sufficiently outweighed. To achieve this possible impacts on the future economic performance of other industries operating locally or which could be affected, should be assessed.

[99] Planning Practice Guidance (PPG), Minerals section, paragraph: 088, reference ID: 27-088-20140306
[100] Planning Practice Guidance (PPG) - Minerals (section), paragraph: 089, reference ID: 27-089-20140306
[101] National Planning Policy Framework (NPPF) 2012, paragraph 144

Coal

Reasoned justification

192. There are three coalfields present within Gloucestershire – the Forest of Dean, Newent and Oxfordshire-Berkshire, which lies on the eastern fringes of the county. The Forest of Dean Coalfield is the only one to have been successfully worked to date, to any meaningful extent. The working of coal in the Forest of Dean has taken place over many centuries and has been hugely influential in how the built environment, local economy and social and cultural heritage of the area has evolved over time.

193. Only very localised, low-key, intermittent underground working of coal remains within parts of the Forest of Dean Coalfield. This is carried out by a small number of local free miners with rights to do so under ancient custom and law[102]. Working occurs at relatively shallow depth and usually through inclined drift mines.

194. It is around 30 years since more significant, industrial-scale working of coal ceased within the Forest of Dean. This also exploited shallow coal resources, but mostly using surface-mining techniques, traditionally known as open-cast or open pit working. Deep mining has also featured in the past, although the last deep mines closed nearly 50 years ago in the mid 1960s.

195. Historically coal has been an integral part of the UK's energy supply and although over recent decades it has been in decline, it still meets around 20% of the country's electricity demand[103].

196. A continued decline in the conventional use of coal in UK energy generation is forecast to occur over the coming years. The reason for this is heavily influenced by existing and evolving government policy interventions. There are legally-binding national commitments to decarbonise our energy supplies and a desire to reduce environmental pollution and achieve improvements in air quality.

197. Nevertheless, ensuring the security of energy supplies for both consumers and businesses is also a non-negotiable government objective. This means over the foreseeable future, which represents a period of transition away from carbon-intensive electricity generation, the availability of some coal including from within the UK will be

[102] The Dean Forest Mines Act (1838) provides the legal framework under which modern day Free Mining operators. It confirms the Free Miners' exclusive right to the minerals of the Forest of Dean previously contain in local customs, privileges and laws potentially dating back to the thirteenth century.

[103] Source: Department for Business, Energy & Industrial Strategy (BEIS) (2016) Coal Generation in GB: Pathway to a low-carbon future | consultation https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/577080/With_SIG_Unabated_coal_closure_consultation_FINAL__v6.1_.pdf

relevant. The importance of coal will therefore remain, whilst sufficient stable capacity is built-up in alternative energy sources such as renewables and gas.

198. Furthermore, the forecast of continued falls in the use of coal in UK energy generation is predicated on the limited roll-out of technological advancements, particularly relating to the abatement of carbon emissions to levels that will not prejudice wider decarbonisation commitments. However, where new or refurbished coal-fired power stations can successfully demonstrate the delivery of sufficient Carbon Capture and Storage (CCS) abatement technology alongside a number of other amenity and environmental requirements, such proposals could receive support under the national electricity-generating infrastructure policy[104].

Policy MW05 | Coal

Mineral development proposals for coal working will only be permitted where it can be demonstrated: -

I. they are environmentally acceptable; or

II. national or local benefits to the communities of the Forest of Dean will be provided, which clearly outweigh the likely impacts to justify the grant of planning permission.

Contributes to the delivery of plan objectives 

Interpretation and implementation

199. Minerals development proposals involving the extraction of coal must meet the requirements of policy MW05. All forms of coal developments requiring planning permission employing either surface or underground mining techniques will be considered against policy MW05[105]. However, the criteria for policy MW06 will also need to be assessed where ancillary minerals development form part of a proposal. This could include above ground mine infrastructure that accompanies commercial-scale underground mining. Proposals will need to undergo a thorough and detailed assessment to demonstrate they will be environmentally acceptable.

[104] Department for Energy and Climate Change (DECC) (2011) National Policy Statement (NPS) for Fossil Fuel Electricity Generating Infrastructure (EN-2) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47855/1939-nps-for-fossil-fuel-en2.pdf

[105] The Town and Country Planning (General Permitted Development) (England) Order (2015), Part 17 establishes what types of mineral development involving the extraction coal both on the surface and underground requires planning permission.

200. The environmental acceptability of mineral extraction, including for coal, is directed by national policy. This states no unacceptable adverse impacts should occur having considered the cumulative effect of multiple impacts from individual sites and / or from a number of sites in a locality[106]. Possible impacts concerning the natural and historic environment and the health and well-being of potentially affected local communities will require rigorous scrutiny as will the need to demonstrate any unavoidable noise, dust and particle emissions and blasting vibrations can be satisfactorily controlled, mitigated or removed at source. The extent to which valued landscapes, the connectivity and environmental integrity of the county's multi-functional green infrastructure network geological conservation interests and soil resources are able to be protected or enhanced, and the ability to prevent unacceptable levels of pollution covering soil, air and water (surface and groundwater) will also need to be taken into account. Matters contained within policies DM01 through to DM07 will warrant particular attention in the decision making process.

201. For all surface coal mining proposals, particular attention must be given to the environmental duty set out under the Coal Industry Act 1994[107]. This duty requires proposers and those determining proposals to have regard to the desirability of the preservation of natural beauty, the conservation of ecological and geological assets and the protection of built assets including those of historic and archaeological interest, having taken into account any reasonably practicable measures put forward to mitigate adverse effects of the development. Pertinent criteria set out in policies DM06, DM07, DM08 and DM09 and MR01 will be applied.

202. In line with Planning Practice Guidance, environmental acceptability for mineral development proposals involving underground coal mining must also incorporate an analysis of a number of additional issues[108]. These are concerned with subsidence; hazards related to old mine workings; the management of underground water; prevention of gas emissions; and the handling and management of colliery spoil including its disposal. The Coal Authority holds information to assist applicants regarding areas that have previously been worked and / or that may have the potential for future coal mining[109]. Exclusive to the Forest of Dean Coalfield, a local official, known as the Deputy Gaveller also maintains an official register of free miners and the

[106] National Planning Policy Framework (NPPF) 2012, Paragraph 144.
[107] The environmental duty is contained within Section 53 of the Coal Industry Act (1994) - http://www.legislation.gov.uk/ukpga/1994/21/section/53
[108] Planning Practice Guidance (PPG), Minerals section, Paragraph: 148, Reference ID: 27-148-20140306
[109] Information on coal mining records, data, deeds and documents held by the Coal Authority can be obtained at - https://www.gov.uk/guidance/coal-mining-records-data-deeds-and-documents

localities that have and are allowed to be mined (i.e. gales)[110]. This extends over an area of the Forest of Dean known as the Hundred of St. Briavels[111].

203. Determining the environmental acceptability of all future coal extraction proposals covering the Forest of Dean Coalfield should involve, as a minimum, the careful consideration of : - the possible relationship to the Wye Valley AONB or its setting (including an assessment to determine the relevance and significance of any potential impacts); the potential effects on local and national environmental designations contained within, adjacent to, or within the sphere of influence of the proposal; and the possibility of individual or in combination effects on nearby international nature conservation designations, such as the Wye Valley Woodlands Special Areas for Conservation (SAC), Wye Valley & Forest of Dean Bat Sites SAC, River Wye SAC; and Severn Estuary Special Protection Area (SPA) and Ramsar site. Relevant requirements of policies DM06 and DM09 will need to be met.

204. Where it is not possible to demonstrate the full environmental acceptability of coal extraction proposals, including through the use of appropriate planning conditions and / or planning obligations, consideration will be given to other possible benefits that may outweigh any remaining unsatisfactorily resolved adverse impacts. The nature and significance of possible benefits will be judged on a case-by-case basis.

205. From a national perspective, benefits could include enhanced energy security. To demonstrate this, an examination of the contribution being made to the availability and reliability of indigenous UK fuel supplies for energy generation and the possible indirect impact on reducing the nation's reliance on imports will prove necessary. Another national benefit for consideration is the contribution made towards reducing carbon emissions linked to energy generation. Demonstrated through evidence, weight could be given to the prospect of lower transport-related greenhouse emissions resulting from the movement of indigenous coal rather than replying upon imports sourced from overseas.

206. Relevant to the Forest of Dean Coalfield, are the possible benefits associated with small-scale proposals such as freemining for coal. This practice has strong historic links to the local community and economy and supports the conservation of the area's cultural heritage / identity and local economic diversity.

[110] The Deputy Gaveller maintains the official register of free miners and is responsible for the administration and collection of mineral royalties from the worked gales. A gale is within the Hundred of St Briavels and may cover coal, stone, iron ore & ochre.
[111] The Hundred of St. Briavels consists of the statutory Forest of Dean and each parish touching the Forest boundary. The spatial extent of the Hundred of St. Briavels can be obtained via Forest Commission Open Data at – https://data.gov.uk/dataset/52680621-a948-4ab3-b34b-411093843e6f/national-forest-estate-hundred-of-st-briavals

207. For coal extraction proposals that seek to promote potential economic benefits relevant supporting evidence must be provided. The number of jobs created or safeguarded (directly and indirectly) will need to be considered as well as a robust and fair analysis of any potential attributable negative impacts on the future economic performance of other industries present in the locality and / or which are being promoted through regeneration and growth initiatives. The provision of local apprenticeships securable through planning conditions or a planning obligation could prove to be a valid local and / or community benefit of material significance.

Ancillary minerals development

Reasoned Justification

208. 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.

209. Ancillary minerals development can often go ahead without the need for planning permission. Many mineral processing activities benefit from permitted development rights[112]. However, where this is not the case, proposals must be carefully assessed to ensure they will be acceptable and needed to support mineral working operations.

210. These types of development offer an opportunity to make best use of minerals, a principle set out in national policy[113]. However, there is a risk they may bring an undesirable sense of permanency. Furthermore, both individually and / or collectively ancillary minerals development can generate an industrial feel and character, which would otherwise be incongruous with the undeveloped rural localities that accommodate most of Gloucestershire's mineral sites. As a consequence, in more sensitive locations such as AONB designations the MPA may seek to remove permitted development rights meaning many forms of ancillary minerals development will require planning permission.

[112] Part 17 of the Town & Country Planning (General Permitted Development) Order 2015 covers matters relating to mining and mineral exploration. The entire order can be viewed on-line at: - http://www.legislation.gov.uk/uksi/2015/596/pdfs/uksi_20150596_en.pdf .
[113] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 142

Policy MW06 | Ancillary minerals development

Ancillary minerals development within mineral sites will be permitted, where it can be demonstrated: -

I. the best use of minerals worked from within the boundary of the site in which they are located will be facilitated; and / or

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

III. all operations will be for a temporary period of time restricted to the life of the mineral site in which they are located and the removal of all built structures will occur at the earliest opportunity once mineral working has ceased; and

IV. the requirements of policy MR01 (Restoration, aftercare and facilitating beneficial after-uses) can be satisfactorily met; and

V. a positive contribution will be made to sustaining or growing the local economy and / or upholding cultural heritage throughout Gloucestershire.

Contributes to the delivery of plan objectives 

Interpretation and implementation

211. Policy MW06 will ensure ancillary minerals development will only take place where necessary to support the county's mineral working sites. The aim is to make sure that the evolving network of ancillary minerals developments will occur in a sustainable manner and that the removal of individual facilities will occur once the principal activity of mineral working has ceased.

212. 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 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.

213. 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.

214. Demonstrating environmental acceptability should be founded on the requirements set out in national policy. This states no unacceptable adverse impacts should occur having considered the cumulative effect of multiple impacts from individual sites and / or from a number of sites in a locality[114]. Possible impacts concerning the natural and historic environment and the health and well-being of potentially affected local communities will require rigorous scrutiny as will the need to demonstrate any unavoidable noise, dust and particle emissions can be satisfactorily controlled, mitigated or removed at source. The extent to which valued landscapes, geological conservation interests and soil resources are able to be protected or enhanced, and the ability to prevent unacceptable levels of pollution covering soil, air and water (surface and groundwater) will also be needed. Matters contained within policies DM01 through to DM07 will warrant particular attention in the decision making process.

215. 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 of minimising freight miles travelled or the use of more appropriate freight routes. The plans for site restoration and the impact on its timely delivery at the proposal site should also be factored into the analysis.

[114] National Planning Policy Framework (NPPF) 2012, Paragraph 144.

216. The impact of ancillary minerals development on the local economy is another issue that will need to be assessed. The number of jobs created or safeguarded (directly and indirectly) will require consideration as will any potential attributable negative impacts on the future economic performance of other industries present in the locality and / or which are being promoted through regeneration and growth initiatives. The provision of local apprenticeships securable through planning conditions or a planning obligation may prove to be a benefit of material significance.

09
AREAS FOR FUTURE AGGREGATE WORKING

Section 9 | Areas for future aggregate working

217. This section of the plan provides the policy framework for showing how additional provision for primary aggregates may be made. It is chiefly concerned with identifying areas or sites with the potential for future aggregate working known as allocations. However, it also considers the circumstances under which future aggregate provision could reasonably be supported from outside of allocated areas or sites.

Allocations for future aggregate working

Reasoned justification

218. National policy recommends the use of different types of allocations for making provision for aggregates. Preferred Areas and Areas of Search have been employed within the plan to reflect the different local circumstances that have influenced decisions to allocate land. The plan's allocations are based on the future requirements set out in section 8 and are aimed at supporting the steady and adequate supply of primary aggregates throughout and at the end of plan period at 2032.

219. Policy MA01 presents allocations with the potential for aggregate working in Gloucestershire. It incorporates a total of seven allocations – two for the working of sand and gravel and five for crushed rock limestone. Collectively, these allocations represent the most realistic and achievable solution for ensuring sufficient additional provision will be available throughout the duration of the plan.

Tables 3a – 3d | Summary of resource area requirements, potential yields of MLP Allocations and the % contribution of each MLP allocation to the relevant resource area requirement

Table 3a | For the Forest of Dean (FoD) Limestone resource area:

MLP Allocations	Resource area requirement (at 2016) ~ (after landbank deductions)	Potential yield	% Contribution to the resource area requirement
Allocation 01	10.426mt (FoD)	Between 10 and 17mt	96% - 100% +
Allocation 02		Between 3 and 4 mt	29% - 38%

Allocation 03		7.4mt	71%
Total for allocations 01,02,03	10.426mt (FoD)	Between 20.4mt and 28.4mt	100% +

Table 3b | For the Cotswolds (C'wolds) Limestone resource area

MLP Allocations	Resource area requirement (at 2016)~ (after landbank deductions)	Potential yield	% Contribution to the resource area requirement
Allocation 04	3.016mt (C'wolds)	Up to 9mt	100% +
Allocation 05		Up to 10mt	100% +
Total for allocations 04 and 05	3.016mt (C'wolds)	Up to 19mt	100 % +

Table 3c | For all Limestone resource areas (countywide)

Total for allocations 01,02,03,04 and 05	Resource requirement countywide = 13.442mt	Potential yield countywide = Between 39.4 and 47.4 mt	% Contribution to requirement countywide = 100 % +

Table 3d | For Sand and gravel (countywide)

MLP Allocations	Resource area requirement (at 2016) (after landbank deductions)	Potential yield	% Contribution to the resource area requirement
Allocation 06	9.456mt	7.8mt	82%
Allocation 07		3 mt	32%
Total for allocations 06 and 07	9.456mt	10.8mt	100% +

~ 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).

220. The allocations are founded upon a rigorous review of evidence and the careful consideration of the conclusions drawn from numerous technical assessments commissioned to support the plan's preparation.

221. A number of the allocations originate from the designated 'Preferred Areas' included within Gloucestershire Minerals Local Plan (1997-2006) and are supported by a substantial evidence base that underwent scrutiny during the former plan's preparation and adoption. Much of this information remains relevant and has been incorporated into the plan.

Policy MA01 | Aggregate working within allocations

The principle of mineral working for aggregates has been accepted within the following allocations: -

- Allocation 01: Land east of Stowe Hill Quarry;
- Allocation 02: Land west of Drybrook Quarry;
- Allocation 03: Depth extension to Stowfield Quarry;
- Allocation 04: Land northwest of Daglingworth Quarry;
- Allocation 05: Land south and west of Naunton Quarry;
- Allocation 06: Land southeast of Down Ampney;
- Allocation 07: Land at Lady Lamb Farm, west of Fairford.

Mineral development proposals for the working of aggregates within allocations will be permitted, subject to satisfying the detailed development requirements set out in the plan for each allocation (see appendix 4) and where it can be demonstrated: -

I. existing permitted reserves are inadequate, or are likely to be so in the near future to maintain minimum landbank levels in accordance with policy MW01; or

II. where minimum landbank levels are being sustained: -

- 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; or

- increases in demand for aggregate are forecast with a reasonable degree of certainty to the extent that minimum landbank levels will

not be able to be maintained throughout or at the end of the plan period.

Contributes to the delivery of plan objectives 

Interpretation and implementation

222. Allocating land for future aggregate working does not guarantee a planning permission will be granted when minerals development proposals are brought forward. All cases will need to be carefully scrutinised and be able to demonstrate that relevant planning matters can be satisfactorily dealt with.

223. Crucial to assessing the acceptability of submitted proposals is the detailed development requirements provided for each of the plan's allocations (see Appendix 4). These identify location-specific issues, which are likely to be significant and that will need to be appropriately dealt with. The acceptability of proposals will be heavily influenced by the review of detailed development requirements. However, meeting the general policy requirements contained elsewhere in the plan will be of equal importance.

224. In addition, consideration will be given to the timely release of aggregates to allow future working from within allocated areas. It is critically important this happens in a manner that supports the provision for steady and adequate supplies of aggregates throughout the duration of the plan. The main policy indicator that is applicable is the maintenance of the relevant aggregate landbank to at least the minimum level as prescribed under policy MW01.

225. Nevertheless, proposals may also be acceptable even where a sufficient landbank is already present at the time a decision is taken. The demonstration that productive capacity constraints are likely to occur and that these would adversely affect the maintenance of steady and adequate supplies of local aggregates, is one such circumstance. Attention in this instance would need to be given to the realistic prospect that the 10-year rolling average of annual aggregate sales would be achieved under prevailing capacity conditions.

226. Another valid circumstance is the impact of any potential increase in demand for local aggregates on the maintenance of minimum landbank levels over the remainder of the plan period. Increased demand may cause a more rapid depletion of landbanks and thus reduce the ability to maintain steady and adequate supplies. Relevant evidence concerning this matter might include an alternative trend in demand as observed using

the 3-year rolling average annual sales set out within the Gloucestershire LAA; recent local housing permissions and / or other growth including significant new infrastructure

Different types of allocations for future aggregate working

227. In line with national policy and planning practice guidance different types of allocation have been employed under policy MA01.

228. Allocations known as Preferred Areas are likely to contain economically viable minerals resources. Planning permission might reasonably be anticipated if a well considered and sufficiently detailed proposal was to be brought forward. It is expected that all Preferred Areas will have a reasonable prospect of coming forward during the plan period. Six allocations contained within the plan are Preferred Areas. In defining these allocations evidence was sought concerning the presence of workable mineral resources, operator interest, the views of the landowner regarding their interest in future working, and the identification of potential planning issues, opportunities and constraints.

229. Areas of Search are a less certain type of allocation, but proposals within them may still prove to be acceptable. There is only one Area of Search allocated in the plan, although it was previously included in the Gloucestershire Minerals Local Plan (1997-2006).There is knowledge of strategic-scale mineral resources present across the allocation and landowner interest. However, deliverability during the plan period remains unknown with respect of operator interest. Nevertheless, the inclusion of the Area of Search offers flexibility by way of providing an alternative option for making provision for steady and adequate supplies of aggregates throughout the plan period.

Future aggregate working outside of allocations

Reasoned justification

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230. Allocating land is the preferred means of making provision of aggregates within national policy[115]. Planning practice guidance also advises that the alternative – policies setting out of assessment conditions (i.e. the criteria-based approach) should only be used in exceptional circumstances[116].

231. 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

[115] National Planning Policy Framework (NPPF) 2012, section 13, paragraph 145, bullet points 3
[116] Planning Practice Guidance (PPG) – minerals section, paragraph: 008, reference ID: 27-008-20140306

other development, (see policy MS01); or working adjacent to / or within close proximity of an existing permitted site that would otherwise be impractical to exploit in any other way and / or could secure enhancements to the restoration of the existing permitted site.

232. Furthermore, allowing for aggregate working outside of allocations provides a degree of flexibility to respond to changing circumstances, which is supported by national policy[117]. Enabling aggregate working in this manner could reduce possible risks to sustaining steady and adequate aggregate supplies over the plan period, particularly where provision from within allocations cannot be satisfactorily secured.

Policy MA02 | Aggregate working outside of allocations

Mineral development proposals for aggregate working outside of allocations will be permitted only where one or more of the following can be demonstrated: -

I. the plan's allocations as set out in policy MA01 are not able to contribute towards maintaining minimum landbank levels in accordance with policy MW01;

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 working of an area 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 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 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

[117] National Planning Policy Framework (NPPF) 2012, paragraph 14, bullet point 2

beneficial after-uses);

VI. 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).

Contributes to the delivery of plan objectives 

Interpretation and implementation

233. Policy MA02 sets out the circumstances whereby aggregate working outside of allocations may prove to be acceptable. Its main focus is on ensuring proposals will be beneficial, either in terms of supporting aggregate provision, the efficient and effective working of resources and / or maximising opportunities to achieve betterment through the restoration of mineral sites.

234. Making provision for steady and adequate supplies of aggregates is a main objective of the plan. However, circumstances may arise where remaining reserves and potential resources contained within the plan's allocations are unable to support the necessary provision requirements throughout the remainder and at the end of the plan period. This may be a reasonable justification to allow aggregate working from outside of allocations.

235. Proposals reliant upon this circumstance will need to show how a contribution will be made to maintaining steady and adequate supplies of aggregates. This may be in respect of demonstrating how the relevant landbank will be sustained at or above the minimum level; or prevented from reducing from where it has already been breached.

236. Alternatively, evidence that shows the 10-year rolling average of annual aggregate sales would not be achievable under prevailing capacity conditions, or that local sources of a particular aggregate product have significantly diminished or are due to shortly, will also be relevant.

237. Aggregate working outside of allocations which represents a borrow pit and 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), 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 existing or planned for aggregate working site it relates to. Evidence of the operational, economic viability, amenity and / or environmental case for allowing non-allocated aggregate working to take place in the manner proposed. The deliverability of previously approved mineral site restoration and aftercare schemes must not be unduly affected. Although, where it is necessary to make any amendments to any existing 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). The prospect of the sterilisation of aggregates by non-minerals development may also act as a reasonable justification to allow mineral working outside of allocations. It should be given some weight when assessing submitted feasibility studies in line with the requirements of policy MS01 (Non-minerals development within MSAs).

238. 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 terms having been appropriately assessed against the relevant development management plan policies from DM01 to DM11 and policy MR01.

Detailed development requirements

239. Detailed development requirements for all of the plan's allocations are set out Appendix 4 of the plan.

240. For each allocation in the plan a profile has been generated. They include a site map that incorporates key geographic information and other relevant minerals planning data

such as the presence of existing permitted mineral workings, other future allocations contained in the plan, and the proposed areas for mineral working contained within other adopted or emerging mineral plans for neighbouring areas. The district and parish that contains each allocation, the aggregate mineral resource type, current predicted yields, and an estimated site area are also provided.

241. Site boundaries have been delineated for all of the allocations. These represent the maximum extent for which a proposal would be considered against policy MA01. Proposals that extend beyond a site boundary will be assessed against policy MA02.

242. As previously stated, allocating land for future aggregate working does not guarantee planning permission for minerals development. However, the allocations do present a broad view on the suitability of aggregate working as measured against a suite of location-specific issues that have already been identified. Sufficient evidence that each issue will be satisfactorily resolved will be necessary alongside the careful consideration of the remaining relevant policies contained within the plan.

243. To assist in the consideration of allocation-specific issues a standard tablet has been applied. This sets out three key items: – the general theme of interest; details of the specific issue / planning challenge and what will be the requirement from an applicant in response; and links to potentially relevant policies contained elsewhere in the plan that should be taken into account.

244. The information that comprises the allocation-specific issues was correct at the time of the plan's preparation. However, circumstances can change over time and unforeseen environmental variables and other complications and / or opportunities may emerge in the future. It will be at the detailed planning application stage that the significance of any additional or changed matters will need to be carefully investigated to determine how they should be factored into the decision making process.