



Gloucestershire
COUNTY COUNCIL

Minerals Local Plan for Gloucestershire

2018 – 2032

Publication Plan

Cabinet Version | 31st January 2018

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Section 1 | Introduction

The importance of minerals

1. Minerals underpin our way of life. They provide the construction materials upon which we all rely for the homes we live in, the places we work and the infrastructure that allows us to move around, keep us healthy, ensures our safety and supports natural environment. Minerals are integral to our social and economic well being by supporting energy generation, manufacturing, healthcare production and agriculture. An adequate and steady supply of minerals is of national importance and critical to the nation's growth and prosperity.
2. However, minerals are a finite resource that can only be worked where they are found. It is vital therefore we only use what is needed, that maximum benefits are achieved and other vital services and facilities such as the natural environment and the amenity of communities are not unduly compromised. In doing so, the long-term availability of mineral resources for future generations will be secured.

Minerals planning in Gloucestershire

3. Gloucestershire County Council (GCC) is the Mineral Planning Authority (MPA) for the entire county. It has a statutory responsibility to plan for future supplies of minerals from within its area and to determine planning applications for new local mineral development.
4. An important tool for the MPA is the production of a minerals local plan. The County Council has previously prepared such a plan – the Gloucestershire Minerals Local Plan 1997-2006 (the 'MLP'), which was adopted in 2003. Since this time, the MLP has provided a comprehensive local policy framework that has underpinned the provision of mineral and help guide decisions on planning applications for mineral developments.

Responding to change

5. Since the adoption of the MLP over a decade ago, many changes in circumstance have taken place. The demand for and the supply pattern of local minerals to and from Gloucestershire has evolved and the level of permitted reserves has depleted. This means new mineral resources need to be investigated to see how best they may contribute to future demand. Furthermore, national planning policies and guidance for minerals has undergone significant reform. Consolidated national policy and practice

guidance has been introduced through the National Planning Policy Framework (NPPF) (2012) and Planning Practice Guidance (PPG) (2014)¹. New concepts and approaches have come into being such as the preparation of Local Aggregate Assessments (LAAs).

A plan for the future

6. This plan when adopted will replace and update all aspects of the Gloucestershire Minerals Local Plan (1997 -2006). It has been prepared in a positive manner, focused on achieving sustainable development. At its core is the management of mineral resources to support: - local and national economic well-being; the safeguarding of Gloucestershire's local communities and those nearby who may be affected by mineral developments; and the protection and enhancement of the natural environment and built assets. Measures that contribute towards advancing the mitigation of the climate change and that seek to help improve our resilience and ability to adapt to its impacts are also imbedded throughout in the plan.
7. The plan provides a clear policy framework for how mineral developments should take place across Gloucestershire. It is a forward thinking plan with a future vision for the county and objectives to achieve this from 2018 through to the end of 2032². It also establishes the steps to deliver the plan's ambitions and outlines measures to assess progression and effectiveness along the way.
8. Robust and extensive evidence gathering and analysis has been central to the plan's preparation, as have been the views expressed by interest groups, organisations, businesses, regulatory bodies and individuals. Extensive public consultation has taken place involving the release of numerous reports and evidence papers to help explain the different options and choices presented by the MPA. The plan's overall strategy, objectives, local policies and allocations have been assessed on numerous occasions. Since autumn 2006, four major consultation events have taken place³. These have allowed public scrutiny of early issues and options for the plan, initial preferred options put forward by the MPA, a review of candidate site options along with a draft policy framework and a comprehensive draft of the plan.

¹ National Planning Policy Framework (NPPF) can be obtained at: - <https://www.gov.uk/guidance/national-planning-policy-framework>. Planning Practice Guidance (PPG) can be obtained at: - <https://www.gov.uk/government/collections/planning-practice-guidance>

² National Planning Policy Framework (NPPF) paragraph 157, bullet point 2 advises that local plans should have a 15-year time horizon. Presently the mineral plan's project timetable (as set out within the up to date Minerals & Waste Development Scheme – MWDS) anticipates the plan's adoption towards the end of 2018 / early 2019. 15-years from the earliest date generates a time period of between 2018 and 2032 inclusive.

³ Issues & Options consultation for a Minerals Core Strategy (MCS) took place in September 2006. This was followed by a Preferred Options consultation in early 2008. The next major consultation commenced several years later in June 2014 and sought to accommodate many of the legislative and national policy changes brought in since early 2008. This included consultation on candidate site options and a suite of draft policies for potential inclusion within a full draft Minerals Plan for Gloucestershire. An addendum to the 2014 consultation was also consulted upon in February 2015. Between September and November 2016 a final early stage consultation took place, which presented a full and comprehensive minerals local plan for public scrutiny. More details on the plan's preparation can be found online at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/minerals-local-plan-for-gloucestershire/>.

9. The plan has also been strategic in its approach by taking into account wider mineral planning issues that have had an influence beyond the administrative area of Gloucestershire and have also influenced matters within the county. It has successfully met with the 'Duty-to-Cooperate' requirements by reflecting the outcome of proactive, ongoing and meaningful engagement with key bodies. These include the six district councils of Gloucestershire; neighbouring and nearby local authorities, and other key organisations likely to have an influence on future mineral developments. The ambitions of GFirst LEP – the Local Enterprise Partnership and the Gloucestershire Nature Partnership (GLNP) have also been considered.
10. Sustainability Appraisal (SA) reports have been prepared to inform each step of the plan's preparation. The SA process has ensured all reasonable alternative options and approaches have been appropriately considered and effectively evaluated. Habitat Regulations Assessment (HRA) work has also made an invaluable contribution to the plan by ensuring sites of environmental significance at an international level have been properly scrutinised and that sufficient provision will be put in place to ensure their continued protection.

Legal status and use of the plan

11. The plan complies with the legal requirements of the Planning & Compulsory Purchase Act 2004, Planning Act 2008 and Localism Act 2011. Its production has also been in accordance with the Town and Country Planning (Local Planning) (England) Regulations 2012.

The plan should be read and interpreted in its entirety with due regard paid to all of the relevant policies and proposals included within it.

12. The plan forms part of the statutory development plan for Gloucestershire in respect of minerals development. Nevertheless, it should also be read in conjunction with other parts of the local development plan, where appropriate to do so. For all waste-related matters, the Gloucestershire Waste Core Strategy (WCS), adopted in 2012 and the remaining saved adopted policies contained within the Gloucestershire Waste Local Plan 2002 – 2012 need to be considered. Although this will change over time, as the suite of existing adopted policies are reviewed⁴. All other development types included housing, commercial, energy, retail, infrastructure and recreational facilities will require

⁴ The Gloucestershire Minerals & Waste Development Scheme (MWDS) sets out a three-year project timetable for the preparation of new minerals and waste development plan policies. The latest version can be obtained at:- <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/minerals-and-waste-development-scheme-mwds/>

a review of the saved or adopted local plans of Gloucestershire's six district, borough and city councils.

Mineral developments covered by the plan

13. Minerals of economic value in Gloucestershire that are presently worked and / or could be in the foreseeable future include: - clay; coal; limestone; sand & gravel; and sandstone. These minerals are mostly found at or near the surface and are concentrated in four main resource areas – the Cotswolds; Forest of Dean; Seven Vale; and the Upper Thames Valley. Coal is present underground, although at relatively shallow depths within the Forest of Dean resource area.
14. The potential for other onshore hydrocarbons, including both oil and gas have been explored in the past within Gloucestershire. However, at present, no proposals including initial exploration have been brought forward. No new licenses, which are a requirement before any meaningful investigation can be considered, have been made available by the Government.

How to use the plan

15. To help users navigate through the plan, it has been divided into a number of sections: -
 - **Section 1** | an introduction to minerals planning within Gloucestershire and discussion concerning the preparation of a new minerals local plan for the county;
 - **Section 2** | a spatial portrait that describes present day Gloucestershire and introduces the minerals likely to be of economic importance over the plan period;
 - **Section 3** | the drivers for change that the minerals plan will seek to reflect and act upon where necessary and appropriate, principally to the advantage of Gloucestershire;
 - **Section 4** | the plan's vision of the future that highlights what success may look like, and the objectives that will explain how, through targeted actions, the vision will be achieved;
 - **Section 5** | the overall strategy for the plan, which details the policy framework and strategic approach being taken to deliver the plan's objectives;
 - **Sections 6,7,8,9** | these sections make up a substantial part of the plan's core policy content. They include the delivery policies for the plan's themes: – reducing the

demand for primary minerals (section 6); safeguarding mineral resources (section 7), making provision for the supply of minerals (section 8); and allocating areas for future aggregate working (section 9);

- **Sections 10 and 11** | complete the plan's core policy and include the full suite of development management policies (section 10). The plan's final theme – restoration, aftercare and facilitating beneficial after-uses (section 11) is also included;
- **Section 12** | explains how the plan will be monitored to ensure it is working effectively and contributing the delivery of the strategy, objectives and spatial vision.



Section 2 | Gloucestershire – a spatial portrait

17. The spatial portrait is an illustration of present day Gloucestershire. It offers a summary of the state, form and geographic distribution of the county's built and natural environments, key assets and communities. It also reviews the nature and health of the local economy, ambitions for growth and summary description of local minerals of known and potential economic significance and their broad distribution throughout the county.

Location

18. Gloucestershire is a non-metropolitan, shire county located in the northernmost part of the South West of England covering an area of just over 1,000 square miles. It borders Wales, the West Midlands and the South East and has a total of eight neighbouring county and unitary authorities – Monmouthshire, Herefordshire, Worcestershire, Warwickshire, Oxfordshire, South Gloucestershire, Swindon and Wiltshire.

Key geographic features

19. Gloucestershire has a strong rural character and is well known for its diverse environments and scenic beauty. The west of the county is dominated by the upland area of the Forest of Dean, consisting of semi-natural and ancient woodland. To the east are the Cotswold hills, which are characterised by an undulating limestone plateau given over mostly to grassland. A central belt running roughly north-to-south contains the Severn Vale, a flat fertile valley floor where the lower reaches of the River Severn evolve into a tidal estuary. The meadows of the Upper Thames Valley (UTV) lie in the far south-east of the county; a largely riverine environment home to the upper reaches of the River Thames.

Governance

20. The local administration comprises of Gloucestershire County Council (GCC) and six local district councils - Cheltenham and Tewkesbury Boroughs, Gloucester City, Forest of Dean, Cotswold and Stroud. Gloucestershire's local authorities also share a common geography with the Gloucestershire Police Constabulary, Police & Crime Commissioner, Gloucestershire Clinical Commissioning Group, the Local Economic Partnership – GFirst LEP and the Gloucestershire Local Nature Partnership (GLNP).

Population

21. At mid-2016 Gloucestershire's population was estimated to be just over 620,000⁵. The proportion of people aged 60 years + in the county is higher than the national average⁶.
22. Notable population growth is projected over the coming years, particularly in and around the county's main built-up areas. By 2032 this could result in an additional 70,000 residents⁷. Recent growth has predominately been fuelled by people choosing to relocate to Gloucestershire from elsewhere in the UK.

Built-up areas and notable local settlements

23. Nearly 60% of the county's residents are centrally located, mostly within the Severn Vale in the main built-up areas of Cheltenham and Gloucester, but also the settlements that make up the Stroud Valleys' towns⁸. These locations provide the key administrative, commercial and employment centres for the county.
24. Other notable local settlements include: - Tewkesbury and Bishop's Cleeve; the historic market towns of the Cotswolds – Cirencester, Tetbury, Moreton-in-Marsh and Stow-on-the-Wold; Cam and Dursley within the Seven Vale; and the three forest towns of Cinderford, Coleford and Lydney. Parts of Gloucestershire are also deeply rural, particularly areas of the Forest of Dean and the Cotswolds, some of which are the least densely populated locations in England⁹.

Economy

25. The economy of Gloucestershire is supported by nearly 30,000 businesses and employs in the region of 290,000 people¹⁰. It is vibrant and diverse with strong numbers of business start-ups and competitive business survival rates¹¹. Economic output from Gloucestershire was close to £15billion a year by the end of 2014¹². Influential sectors present across the county include: manufacturing – strongly linked to aeronautical engineering and medium-to-high technology activities; service industries; public administration & healthcare; and financial, business and professional services.

⁵ Source: ONS Mid-Year (2016) Population Estimates for UK, England and Wales, Scotland and Northern Ireland published in June 2017 - <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwales/scotlandandnorthernireland>

⁶ The proportion of people aged over 60yrs as per the 2016 mid-year estimate for Gloucestershire was 27%. The equivalent for the UK as a whole was 24%

⁷ Source: ONS (2016) 2014 based sub-national population projections by Local Authorities in England: - <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2>

⁸ The Stroud Valleys towns are made up of the individual settlements of Chalford, Minchinhampton, Nailsworth, Stonehouse, Stroud, and Woodchester

⁹ As of the 2011 Census the population density for Cotswold district was 73 people per km². This was the 316th least densely populated authority area out of 326 English district councils.

¹⁰ Source: Strategic Economic Plan for Gloucestershire (2014): - <http://www.gfirstlep.com/gfirst-LEP/Our-Priorities/Our-Vision/>

¹¹ The Gloucestershire LEP area is ranked 2nd in the country for having the highest survival rate for new businesses.

¹² Source: ONS (2016) GVA for LEPs: 1997 and 2014 and NOMIS Labour Market Profile – Gloucestershire (2014) <http://www.ons.gov.uk/economy/grossvalueaddedgva/articles/gvaforlocalenterprisepartnerships/1997to2014> and <https://www.nomisweb.co.uk/reports/lmp/la/1941962903/report.aspx#tabrespop>

26. The rural economy has become increasingly diverse and is no longer dominated by traditional primary industries. Leisure and tourism industries are a growing part of the local economy and are becoming increasingly significant throughout the rural areas such as the Forest of Dean and the Cotswolds. In the recent past both districts have experienced some of the largest increases in terms of visitor numbers and tourism spend in Gloucestershire¹³. Leisure and tourism is also making an invaluable contribution to the economic diversity of the county's main urban areas. In total upwards of 25,000 jobs are linked to the leisure and tourism industries, which collectively have an annual turnover of around £1billion¹⁴.

Transport Infrastructure

27. Gloucestershire contains strategic road links to major regional centres such as Birmingham, Bristol and Swindon. It contains sections of two national motorways – around 30 miles of the M5 between junctions 9 to 13, and close to 10 miles of the M50. Just over 40 miles of the A40 major trunk road runs east-to-west across the county. A small part of the A46 trunk road is also present incorporating the link to the M5 at junction 9. Other main highway routes used by private and commercial traffic including HGVs are generally focused on more strategic connections that often run beyond Gloucestershire into the surrounding counties and other local authority areas. However, these routes also act as the main link between the county's key settlements. A sizeable network of rural roads of varying capacities exists with some local communities subject to accessibility challenges. In total Gloucestershire's highway network covers a distance of over 3,300 miles¹⁵.
28. The county is located at a key point on the UK rail network with a concentration of routes running into and through the central Severn Vale area. It includes the Cross-Country line between Bristol and Birmingham and the inter-regional routes of the North Cotswolds; (Oxford to Worcester); South Cotswolds (Swindon to Gloucester); and Cardiff to Midlands line (via Gloucester and Cheltenham). There are nine stations in Gloucestershire handling nearly 5 million passenger journeys a year¹⁶. A limited rural rail network is also present. There are no active commercial freight depots or terminals present within the county although significant volumes of freight pass through the Gloucestershire rail network.
29. Sharpness Docks at the head of the Severn Estuary is the county's only remaining commercial port. It handles seafaring vessels up to 6,000 tonnes, accepting cargoes

¹³ Source: Visit Britain / Visit England (2016) Great Britain Tourism Survey (GBTS) 2006 – 2015, Local Authority area analysis <https://www.visitbritain.org/destination-specific-research>

¹⁴ Source: The Economic Impact of Gloucestershire's Visitor Economy (2014) commissioned by Cotswold District Council http://www.gfirstlep.com/doc_get.aspx?DocID=346

¹⁵ Gloucestershire's Local Transport Plan (2015-2031) Gloucestershire's Highway Network http://www.gloucestershire.gov.uk/media/2228/11a_-_pd4_-_highways_pd_summary1-66814.pdf

¹⁶ Source: Gloucestershire Local Transport Plan (LTP) 2015-2031 Policy Document PD5: Rail <http://www.gloucestershire.gov.uk/transport/gloucestershires-local-transport-plan-2015-2031/highways/>

such as dry bulks, processed minerals and timber. The docks provide multi-modal onwards transport opportunities including the possibility for rail and a connection to the 15-mile Gloucester-Sharpness Canal, which runs northwards into the centre of Gloucester's historic docks.

30. Gloucestershire airport at Staverton is a small regional airport that handles mostly private and business flights. There is also a privately owned aerodrome near to Cirencester called Cotswold airport, which straddles the county boundary with Wiltshire. RAF Fairford situated within the Upper Thames Valley is a strategic operational Royal Air force station that currently supports the United States Air Force (USAF).

Main designations and natural assets

31. Over half of Gloucestershire falls within one of three Areas of Outstanding Natural Beauty (AONBs) all of which extend beyond the county boundary. The Cotswold AONB is to the east, the Wye Valley AONB lies to the west and the Malvern Hills AONB covers a small part of the county's northern border with Worcestershire. There are a number of designated European Sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), two of which are globally-recognised as they have been afforded Ramsar status. Countywide there are over 120 Sites of Special Scientific Interest (SSSIs) and over 750 local Key Wildlife Sites (KWSs).¹⁷
32. The area between Cheltenham and Gloucester, covering under 7,000 hectares is designated as Green Belt – the second smallest in England.
33. Gloucestershire is geologically diverse and contains outcrops from throughout most of earth's history. There are around 160 Regionally Important Geological & Geomorphological Sites (RIGS), a number of which also have SSSI status¹⁸. Two nationally recognised Geoparks are also present – the Cotswold Hills and the Abberley & Malvern Hills¹⁹.

Historic assets

34. The county has a wealth of historic assets including around 500 scheduled monuments, nearly 13,000 listed buildings²⁰ and close to 31,000 other locally recorded archaeological sites. Gloucester Cathedral and historic docks; the regency architecture of Cheltenham; rural Cotswold market towns and villages; and the industrial heritage of the Forest of Dean and Stroud Valleys exemplify the county's rich, built, historic assets. Gloucestershire is also regarded for its Pre-historic and Roman archaeology that survive as visible monuments and below ground deposits.

¹⁷ <http://gloucestershirenature.org.uk/biodiversity/gloucestershire.php>

¹⁸ http://www.gloucestershire.gov.uk/media/5918/amr_2012-2013-62599.pdf

¹⁹ Information about the Cotswold Hills Geopark can be found at: - <http://www.cotswoldhillsgeopark.net/index.html>. For the Abberley and Malvern Hills Geopark this can be viewed at: <http://geopark.org.uk/pub/>.

²⁰ <https://www.historicengland.org.uk/listing/the-list/results?q=gloucestershire&county=Gloucestershire&hc=1&searchtype=nhlesearch>

Plans for growth

35. The Gloucestershire Strategic Economic Plan (SEP) sets out how the county will develop its economy through to the early 2020s. It also lays down the foundations for medium to long-term growth over the coming decade and beyond. The aim of the SEP is to stimulate key business sectors, open up new and / or to expand employment opportunities along key transport routes; and to create an attractive and competitive environment for inwards investment, continued innovation, and job creation focused on encouraging young people to stay or move into Gloucestershire²¹. Supported measures contained within the SEP target the delivery of at least 5,000 new jobs and over 1,000 new apprentices by 2021²².
36. A number of planned transport infrastructure projects align with the SEP's ambitions. These include the maintenance and improvement of stretches of the M5 and A40 and upgrades to the road network and the public transport infrastructure within the main built-up areas – concentrated on Gloucester City²³.
37. Significant housing and employment growth is also being planned through local plans prepared by the county's district councils. Significant urban development, regeneration and renewal and a number of urban extensions have been identified for the built-up areas of the Severn Vale – mostly in and around Cheltenham and Gloucester City. By the early 2030s an additional 30,000 + new homes will have been built along with commercial developments capable of supporting upwards of 40,000 new jobs²⁴. Further housing and employment growth is envisaged elsewhere throughout the county, mostly as additions to existing local settlements. Overall, planned growth outside of the Gloucestershire's main urban areas could generate a further 30,000 homes²⁵.

²¹ Summary of page 14 of the Gloucestershire Strategic Economic Plan (SEP) 2015-2022 – What will be better as a result of this Plan?

²² Source: Summary of the Gloucestershire Growth Deal (2015) http://www.gfirstlep.com/doc_get.aspx?DocID=269

²³ Key LEP-funded transport infrastructure projects and local delivery priorities are [identified on the LEP website http://www.gfirstlep.com/Our-Priorities/Our-Vision/](http://www.gfirstlep.com/Our-Priorities/Our-Vision/)

²⁴ Source: Adopted Gloucester-Cheltenham-Tewkesbury Joint Core Strategy (GCT-JCS) (December 2017) - <https://jointcorestrategy.org/home>

²⁵ The planned housing figure for 'elsewhere throughout the county' is based on an accumulation of housing provision numbers targeted within the Adopted Stroud Local Plan (2015), Adopted Forest of Dean Core Strategy (2013), emerging Cotswold District Local Plan; and the remainder of the Gloucester-Cheltenham-Tewkesbury Joint Core Strategy outside of Gloucester and Cheltenham and the areas surrounding them that have been identified as urban extensions.

Mineral resources in Gloucestershire

38. The county's mineral resources of economic importance both at present and potentially in the future can be divided into six broad categories: -

- Limestone;
- Sand & gravel;
- Sandstone;
- Clay;
- Coal; and
- Oil & gas²⁶

Limestone

39. There are two main types of limestone deposits present in Gloucestershire: - Carboniferous limestones found within the Forest of Dean and Jurassic limestones, which make up the Cotswold Hills.
40. The county's limestone deposits have economic significance as a crushed rock aggregate. They are also a prominent local source of building stone, a soil improver (agricultural lime) and used to support other specialist industrial processes.
41. Carboniferous limestones are the most productive minerals locally by volume, due to their comparable flexibility of end uses. They are mostly worked as a crushed rock aggregate and used in products requiring high strength materials such as concrete and roadstone.
42. Jurassic limestones, which are much softer but more distinctive and diverse in colour and texture, are well known as a desirable natural building stone and serve both a local market and further afield. They offer more limited opportunities as an aggregate for concrete and some low-grade roadstone production, but can provide a local low quality aggregate such as construction fill and pipe bedding.
43. The overall distribution of Gloucestershire limestones are not confined to the county's administrative boundaries. In particular, Jurassic limestones extend over a very wide area including parts of South Gloucestershire and Wiltshire in the south, Oxfordshire in the east, and Warwickshire and Worcestershire to the north-east. Similar Carboniferous limestones to that of the Forest of Dean can be found in neighbouring and nearby parts of South Wales and immediately to the south-west of the county within South Gloucestershire. Other sub-national resources of economic importance are located in North Somerset and Somerset.

²⁶ See the explanation provided at paragraph 55 concerning the current potential for oil & gas development within Gloucestershire.

Sand & gravel

44. Gloucestershire's sand & gravel resources comprise of unconsolidated superficial or drift materials mostly made up of river terrace and some sub-alluvial deposits. They are composed of varying amounts of limestone, sandstone, quartzite, igneous rock, flint and quartz with occasional silts and clays.
45. River terrace deposits are the principal source of 'sharp' sands and gravels, which dominates local supply. 'Soft' sands are also present but in smaller quantities. The county's sand & gravel are a source of aggregate used in mortars; concrete production and concrete product manufacturing, asphalt, pipe bedding, and as a fill.
46. Notable concentrations of sand & gravel can be found within Upper Thames Valley (UTV) and largely, but not exclusively, across the Cotswold Water Park (CWP). Other sand & gravel deposits are present throughout parts of the Severn Vale, and also the Vale of Moreton and in the Upper Windrush Valley. Deposits of the most economic significance are those found within the UTV and parts of the Severn Vale.
47. Gloucestershire's economic sand & gravel resources also spread beyond the county boundary. Those within the UTV straddle a significant proportion of the county's south-eastern border and extend into Wiltshire and Swindon, and also Oxfordshire. Comparable resources to those of the Severn Vale are found north of the county boundary within neighbouring Worcestershire.

Sandstone

48. Deposits of Devonian Brownstones and Carboniferous Pennant Sandstone, both of which occur within the Forest of Dean, have historically been used as a local building stone. Some resources are still being worked for this purpose but only in relatively small amounts. Carboniferous Pennant Sandstone has some limited potential as a low grade aggregate although its uses for these purposes in Gloucestershire in recent times have been rare and small scale.
49. Other Gloucestershire sandstone deposits include the Permian Bridgnorth Sandstone and Triassic Bromsgrove Sandstone Formations located in the north of the county near to Bromsberrow. These are largely recognised as building sand and have been used in pipe bedding. They are recorded locally as a source of local sand & gravel aggregate. Only limited working of this resource has taken place in recent decades.

Clay

50. There are extensive and fairly widespread deposits of clay found across a number of areas within Gloucestershire. Noteworthy resources of economic value include the Carboniferous Clays found in the Forest of Dean and the Jurassic Clays known as the Charmouth Mudstone Formation near to Blockley in the Cotswolds. These resources support small local supplies of brick clay.
51. Jurassic Blue Lias Clays found throughout parts of the Severn Vale have also been marketed more recently. Locally they have been used as a lining material for landfill sites, the construction of ponds and lakes and other engineering works.

Coal

52. Three coalfields are found within Gloucestershire – Forest of Dean, Newent and parts of the Oxfordshire-Berkshire Coalfield, which lies on the eastern fringes of the county. The only deposits of proven economic value are those found within the Forest of Dean. These form part of a wider resource known as the Carboniferous South Wales Coal Measures that includes coalfields located in South Wales, Bristol, Somerset and Kent. Coal from the Forest of Dean has been worked over many centuries and has been highly influential in the local area's evolving built and cultural heritage and economic profile.
53. In recent decades, coal working in the Forest of Dean has become increasing low-key and intermittent. It is carried by a small number of independent operators known as Freeminers who are allowed to work coal under ancient custom and law. All workings are at relatively shallow depth and usually through inclined drift mines.
54. More significant, industrial-scale working of coal ceased within the Forest of Dean over 30 years ago. 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, but the last deep mines closed nearly 50 years ago, in the mid 1960s.

Oil & gas

55. Conventional oil and gas resources have previously been explored within Gloucestershire. A number of exploratory boreholes have been drilled. Investigations have also been made as to the potential for gas storage. Drilling activities took place between the early 1960s and early 1980s. Published records show that boreholes were largely concentrated in the east of the county within Cotswold District around Stow-on-the-Wold, Sherborne and Windrush. Two boreholes were also drilled in Tewkesbury Borough at Staverton and west of Coombe Hill. All wells proved to be either dry or

contained minor gas of no commercial consequence. They have been plugged and abandoned²⁷.

56. Unconventional oil and gas resources may also be present within the county. However, geological evidence suggests the potential is low²⁸. The exploitation of coal bed methane (CBM) or abandoned mine methane (AMM) may be possible due to the presence of coal, although local records derived from worked areas within the Forest of Dean Coalfield, point to the absence of any meaningful gas accumulations.
57. Interested parties seeking to explore and exploit any potential oil and gas resources, must first obtain a Petroleum Exploration and Development licence (PEDL) from the UK Government. The Oil & Gas Authority (OGA) administers this process²⁹. Licences are usually made available periodically as blocks of land via competitive offerings and can take several years to conclude. The 14th Onshore Oil and Gas Licensing Round presented the most recent offerings. This process closed following the signing of agreements in September 2016. The OGA has made no decision to undertake a 15th Onshore Oil and Gas Licensing Round at this time, although this may change in the future. Licensing rounds can take a number of years to conclude.
58. The 14th Onshore Oil and Gas Licensing Round included bids for PEDL licences over 4 blocks of land within Gloucestershire. The blocks contained parts of the Forest of Dean near to the border with Monmouthshire and a smaller area around Sharpness Docks in Stroud³⁰.
59. In December 2015, PEDL licences containing the 4 blocks within Gloucestershire were offered to a candidate licensee – South Western Energy Limited. However, none of the licences were pursued leaving the county with no active PEDL licences.
60. As previously mentioned, future onshore oil and gas licensing rounds could commence in the future including over the time horizon of the plan. Although it is uncertain if any blocks of land within the county would form part of an OGA / government offering and be subjected to bids by prospective licensees for exploration and exploitation licences.
61. National policy explains that when planning for onshore oil and gas development, potential constraints on production and processing will need to be addressed within

²⁷ The Oil & Gas Authority (OGA) have created an online interactive map outlining current and historic onshore oil & gas licensing activities that includes Gloucestershire. This can be found at: -

<https://ogauthority.maps.arcgis.com/apps/webappviewer/index.html?id=29c31fa4b00248418e545d222e57ddaa>

²⁸ A review of hydrocarbon potential (including oil & gas) for Gloucestershire is contained within the jointly-published British Geological Survey (BGS) and Office of the Deputy Prime Minister (ODPM) report - Mineral Resource Information in Support of National, Regional and Local Planning: Gloucestershire (including South Gloucestershire) (2006). This can be found at: - <http://www.bgs.ac.uk/downloads/start.cfm?id=2613>

²⁹ The Oil & Gas Authority (OGA) is a government company (as of Oct 2016) which came into being in April 2015. Its key responsibility is to regulate the UK oil and gas industry. The sole shareholder of the OGA is the Secretary of State for Business, Energy and Industrial Strategy (BEIS).

³⁰ The PEDL 14th Onshore Oil and Gas Licensing Round – Candidate Blocks Map (as of August 2015)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/454338/Onshore14thHRAv5.pdf

areas that are licensed for oil and gas exploration or production³¹. Further advice is provided in planning practice guidance, which sets out expectations regarding the setting of local policies over Petroleum Licence Areas³².

62. As Gloucestershire contains no active or candidate licenced areas at this time or for the foreseeable future, there is no requirement to provide a local policy framework to cover proposals for oil and gas development. Nevertheless, decisions on future onshore licensing arrangements made by the OGA and / or national government will be monitored to assess whether they are likely to have an impact on the county. If any part of Gloucestershire is subject to new candidate licences, this could be a circumstance, which will need to be addressed by a partial review of the Minerals Local Plan for Gloucestershire. The preparation of a new local policy to cover proposals for oil and gas development may be the key outcome of the review.
63. In the event of a swiftly concluded new PEDL approval process followed by a planning application for oil and gas development, being submitted in advance of a completed local plan review that may introduce a dedicated local oil and gas policy, consideration, must be given to the relevant policies of the Minerals Local Plan for Gloucestershire. These are likely to include: - Amenity (DM01); Transport (DM03); Water resources (DM05); Biodiversity and geodiversity (DM06); Landscape (DM09); and Restoration, aftercare and facilitating after-uses (MR01). Other minerals local plan policies and those contained with the Gloucestershire Waste Core Strategy (WCS) may also be applicable depending on site and development-specific circumstances. Regard must be given to the development plan as a whole; therefore policies contained within relevant district local plans will in addition, require very careful scrutiny.
64. Key material considerations will include national policy currently contained within the NPPF and other relevant Government policy statements and ministerial statements, and advice set out within Planning Practice Guidance (PPG). Particular attention should also be afforded to national policy on energy and climate change that is in place at the time, and the published conclusions of the Committee on Climate Change (CCC), which is required under the provision of Infrastructure Act (2015) to advise government on impacts relating to the exploitation of onshore petroleum³³.

³¹ National Planning Policy Framework (NPPF) section 13, paragraph 147, bullet point 1.

³² Planning Practice Guidance (PPG), mineral section, planning for hydrocarbons, paragraph: 106 Reference ID: 27-106-20140306.

³³ In March 2016 the Committee on Climate Change published – Onshore Petroleum | The compatibility of UK onshore petroleum with meeting the UK's carbon budgets. The report represents the CCC's first submission to government in line with the Infrastructure Act: -

<https://www.theccc.org.uk/publication/onshore-petroleum-the-compatibility-of-uk-onshore-petroleum-with-meeting-carbon-budgets/>.

In July 2016, the Department for Business, Energy & Industrial Strategy (BEIS) released the Government's response to the CCC report - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/535208/CCC_Response_new_template_FINAL.pdf

Section 3 | Drivers for change

65. Having outlined what has and is already happening across Gloucestershire, it is important to look to the future. This will help to identify possible opportunities to improve the county and establish the means to tackle unresolved or emerging challenges.
66. Before setting out a vision for the county's mineral resources it necessary to establish an appreciation of the factors likely to influence or lead to change in the way we manage them. These influencing factors are described in the plan as '*drivers for change*' and have been set out below.
67. The drivers originate out the key facts established through the spatial portrait and how these might evolve or influence national and sub-national ambitions. However, the drivers have also been shaped to reflect the concerns, expectations and priorities expressed during the plan's consultation by local communities, other interest groups, national regulatory bodies, local businesses and landowners, and the minerals industry.

Driver A | Tackling climate change

68. Action on climate change is a global challenge that many national governments are committed to³⁴. Tackling and responding to climate change is enshrined in UK law and targets have been set alongside the development of wide ranging policy framework³⁵. The planning system has an important role to play in delivering action on climate change alongside maintaining steady and adequate mineral supplies. The challenge for the future management of mineral developments is to ensure a meaningful contribution will be made. This may arise through efforts to minimise greenhouse gas emissions particularly from transporting minerals; supporting the delivery of infrastructure to increase resilience to climate change impacts and integrating features that will help in successfully adapting local environments to forecast changes envisaged over the coming decades linked to climate change.

Driver B | Protecting and enhancing the natural environment

³⁴ The Paris Agreement is an international agreement between countries to tackle climate change through greenhouse gas emissions mitigation, adaptation and finance starting in 2020. It builds upon and seeks to strengthen previously agreed international commitments to responding to the threat of climate change. Full details concerning the Paris Agreement can be obtained at: - http://unfccc.int/paris_agreement/items/9485.php.

³⁵ The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are prepared for. The Act includes a target to significantly reduce UK greenhouse gas emissions by 2050. It also establishes the framework to deliver on these requirements. The Climate Change Act 2008 can be obtained at: - <http://www.legislation.gov.uk/ukpga/2008/27/contents>.

69. The natural environment of Gloucestershire is of a high quality and yields many prized assets and resources that deserve strong protection. Many areas form part of important environmental designations, many of which contain, are nearby, or could be influenced by mineral developments. In ensuring steady and adequate supplies of local minerals for the future, account must be given to those parts of the natural environment that could be at risk harm and wherever possible this should be avoided. Furthermore, where environmental enhancements are a potential benefit, these should be maximised.

Driver C | Safeguarding and promoting the health and well being of local communities

70. The health and well being of Gloucestershire's communities is generally good compared to many other parts of the country, although some inequalities exist. It is important that existing standards are protected particularly where risks to health could arise from mineral working and related activities. Mineral developments can however also offer opportunities to help improve matters through supporting new or expanded health infrastructure and facilitating quality improvements to land that enable increase access to leisure and recreational facilities and encourage healthier lifestyles.

Driver D | Protecting and maintaining historic environments

71. Gloucestershire contains a wealth of irreplaceable historic assets of cultural significance that are an important local tourism resource and a contributor to the county's economic diversity and vibrancy in general. It is important that these assets are recorded and afforded protection. However, minerals are also needed to support the historic environment due to ongoing maintenance requirements that demand a diverse supply of specialist natural building stones.

Driver E | Developing secondary & recycled aggregate supplies

72. Emerging local growth including urban regeneration and renewal of the county's towns and city will generate construction, demolition and excavation wastes. This could be turned into a valuable source of recycled aggregate. However, the right business environment must be nurtured to ensure there is sufficient capacity to make best use of

the resource in a sustainable way. Reducing our reliance on primary aggregates in this manner supports clean growth – a core ambition of the UK's Industrial Strategy³⁶,

73. New permitted infrastructure may generate a local secondary aggregate resource currently missing from within Gloucestershire. This may also help in reducing our reliance on primary aggregates.

Driver F | Safeguarding mineral resources

74. Competing interests for the use of land driven by demand for new housing and commercial opportunities, means Gloucestershire's finite mineral resources and supporting infrastructure are at risk from sterilisation or operational constraint. A balance must be found to effectively safeguard resources and infrastructure for the future and to avoid unnecessarily stifling of other development types that meet today's needs.

Driver G | Supporting local growth

75. Gloucestershire's finite mineral resources are in demand throughout the local economy and further afield to support new housing, commercial opportunities and to deliver much needed new and enhanced infrastructure. The management of steady and adequate mineral supplies is required to help keep the local economy competitive and aid growth, but also to ensure resources are applied efficiently and to maximum benefit, so they will be available for future generations.

Driver H | Maintaining steady and adequate supplies of aggregates

76. Aggregates sourced from within Gloucestershire largely support a local market, although do also contribute to demand further afield. However, existing permitted reserves are limited, which present a challenge to maintaining steady and adequate

³⁶ The UK's Industrial Strategy was published in 2017. It currently amounts to a policy paper that sets out how the UK Government aims to help businesses create better, higher-paying jobs with investment in the skills, industries and infrastructure of the future. It is founded on boosting productivity and earning power across the country. The full strategy can be obtained at:- <https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future>.

supplies into the future. As of 31/12/2016³⁷ and accounting for projected levels of demand in the future, remaining local supplies of crushed rock are only available for the next 16.75 years. For sand & gravel local supplies are deemed sufficient for a further 5.94 years.

Driver I | Reducing the impact of mineral transport

77. Minerals are mostly moved by road throughout Gloucestershire, which puts a strain on an already pressured highway network. Poorly managed operations can have adverse impacts that should be prevented. Whilst alternative transport options are not well developed, lack capacity and / or are poorly located to link resources with markets, opportunities still exist to deliver positive change. These may involve encouraging greater freight efficiency, reducing vehicle numbers and miles travelled and promoting the most appropriate highway routes available.

³⁷ Based on the 6th Local Aggregates Assessment for Gloucestershire (LAA), which was published in November 2017
<http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/local-aggregates-assessment-laa/>

Section 4 | Vision and objectives

Vision

78. The vision provides a *view into the future* – at the start of 2033. It broadly describes what the results of a successfully delivered plan will look like. Its purpose is to help illustrate how responding to the drivers for change will positively effect the local environment, the economy and the fortunes of Gloucestershire’s local communities.
79. The vision is ‘collective’ in that it has taken account of a wide range of views sought from across the county and beyond. These include from individuals, local communities, interest groups, regulatory bodies, businesses, landowners and the minerals industry.

A Vision for Gloucestershire – at the start of 2033...

At the start of 2033, Gloucestershire will be a cleaner, greener, more healthy and safer place in which to live, work and visit. It will be a leading county in managing its mineral resources and a successful contributor towards the achievement of sustainable development.

Local mineral resources will have played a key part in delivering renewal, regeneration and economic growth throughout the county. Specialist minerals will have been important in revitalising and restoring Gloucestershire’s historic built environments; and supporting the delivery of key items of infrastructure, housing and increased employment opportunities.

The working of primary minerals will have remained an essential part of the county’s mineral supply, including meeting local demand and contributing to national need. Nevertheless, wherever possible, positive and tangible steps will have been made to reduce reliance on primary minerals by: - facilitating their optimum, efficient and most appropriate use; promoting the re-use of building and other construction materials; assisting the increased and diversified use of recycled construction & demolition wastes and alternative secondary aggregate, particularly from local sources.

Road haulage will have been the dominant form of moving minerals in, out and around Gloucestershire, although smarter and more respectful supply routes will have been applied. Impacts upon local and strategic roads will have been minimised by providing opportunities to reduce the frequency

and length of haulage journeys.

Where minerals development has taken place, minimising adverse impacts and maximising the possibility of achieving enhancements will have been highly influential considerations with regards to: – amenity; risk to health, well-being and quality of life of communities; local economic vitality including the prosperity of other local businesses; the integrity and quality of the natural and historic environment; aviation safety related to bird strike hazard; and the risk of flooding.

Furthermore, beneficial after-uses arising from the timely restoration of mineral workings, which would have been delivered to a high environmental standard to: - secure net gains in biodiversity; facilitate measures to increase resilience and / or to adapt to the impacts of climate change; improve access to geological assets and help deepen and widen our understanding of geological processes; contribute to the conservation and interpretation of historic assets; expand, and enrich green infrastructure; widen access to leisure and recreational facilities for communities; and contribute to an increase in the effectiveness of flood prevention and / or alleviation and improvements in water quality.

Objectives

80. The plan's vision is to be underpinned by a number of objectives, which seek to explain through targeted actions, how the vision will be achieved.
81. Demonstrating how a meaningful contribution will be made towards the achievement of sustainable development - a primary focus of the national planning system, has strongly influenced the preparation of the plan's objectives. As have the plan's drivers for change, which identify possible opportunities and emerging challenges in a local context.
82. To show how important themes flow through into the plan's objectives, the relevant dimensions of sustainable development (Environmental, Social and Economic) and their respective roles in guiding national policy and influencing decisions on planning proposals have been cross-referenced with each of the objectives³⁸. Relevant, influencing 'drivers for change' have also attributed to each objective: -

³⁸ National Planning Policy Framework (NPPF) Achieving sustainable development, paragraph 7

Objective SR | Maximising the use of secondary and recycled aggregates

PLAN OBJECTIVE

To promote the maximum use of recycled materials and secondary aggregates in preference to primary-land won minerals having regard to the viability and sustainability of transporting, handling and processing of such materials, including the avoidance of adverse impacts on local communities, the environment, and the ability to successfully achieve the restoration of mineral sites

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver B | Protecting and enhancing the natural environment

Driver C | Safeguarding and promoting the health and well-being of local communities

Driver E | Developing secondary & recycled aggregate supplies

Driver G | Supporting local growth

Driver H | Maintaining steady and adequate supplies of aggregates

Objective RM | Effectively managing mineral resources

PLAN OBJECTIVE

To manage the county's remaining mineral resources in a co-ordinated and efficient manner by ensuring other development does not unnecessarily sterilise mineral resources or adversely affect the operation of mineral infrastructure; and that where minerals are worked, they are put to their optimal use and that any waste generated is kept to a minimum.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver F | Safeguarding mineral resources

Driver G | Supporting local growth

Driver H | Maintaining steady and adequate supplies of aggregates

Driver I | Reducing the impact of mineral transport

Objective PS | Making provision for the supply of minerals

PLAN OBJECTIVE

To ensure that a steady and adequate supply of minerals is provided that contributes towards meeting local and national requirements having taken account of local environmental capacity, the availability of viable, workable or alternative resources, accessibility to necessary supporting infrastructure, and market conditions.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver B | Protecting and enhancing the natural environment

Driver C | Safeguarding and promoting the health and well-being of local communities

Driver G | Supporting local growth

Driver H | Maintaining steady and adequate supplies of aggregates

Objective ENV | Protecting the built and natural environment

PLAN OBJECTIVE

To protect, and where opportunity exists, enhance, the quality of landscapes, habitats, heritage and other environmental assets, having full regard to their international, national or local importance and value.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

Social role ...supporting healthy communities.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver B | Protecting and enhancing the natural environment

Driver C | Safeguarding and promoting the health and well-being of local communities

Driver D | Protecting and maintain historic environments

Objective LC | Protecting the amenity of local communities

PLAN OBJECTIVE

To avoid adverse impacts on local communities including residents and businesses wherever possible and in all other circumstances, ensure unacceptable adverse impacts are mitigated effectively throughout the lifetime of development.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

Social role ...supporting healthy communities.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver C | Safeguarding and promoting the health and well-being of local communities

Objective RA | Successfully restoring worked-out mineral sites

PLAN OBJECTIVE

To secure the highest possible quality of mineral reclamation attainable at the earliest practicable opportunity, which will have enabled benefits to be maximised in respect of : – landscape character, biodiversity, geodiversity, agricultural resources, public access and recreation, and heritage assets; contributing to local economic growth; resilience to future flooding; and avoiding increased risk to aviation safety, particularly caused by bird hazard.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

Social role ...supporting healthy communities.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver B | Protecting and enhancing the natural environment

Driver C | Safeguarding and promoting the health and well-being of local communities

Driver D | Protecting and maintain historic environments

Objective MM | Efficient, effective and safe movement of minerals

PLAN OBJECTIVE

To support the efficiency, effective and safe operation of the county's road networks by – encouraging the least amount of road miles for hauling minerals; use of the most suitable routes wherever possible; avoiding adverse impacts on the county's road networks where achievable; and in all other circumstances, ensuring that effective, sound and enforceable measures are put in place to successfully mitigate any unacceptable adverse impacts.

CORE ROLE IN DELIVERING SUSTAINABLE DEVELOPMENT

Economic role – ...contributing to building a strong, responsive and competitive economy, ...ensuring sufficient land is available of the right type to support growth and innovation;

Environmental role – ...minimising waste and pollution, ...using natural resources prudently, ...contributing to protecting our natural, built and historic environment.

Social role – ...supporting healthy communities.

INFLUENCING 'DRIVERS FOR CHANGE'

Driver A | Tackling climate change

Driver B | Protecting and enhancing the natural environment

Driver C | Safeguarding and promoting the health and well-being of local communities

Driver I | Reducing the impact of mineral transport

Section 5 | Strategy

88. The strategy sets out the approaches taken within the plan to facilitate the delivery of its objectives. It offers the broad direction of policy content of the plan and how this will guide future minerals development in Gloucestershire. Broad locations for future minerals development are located on the plan's Key Diagram in Appendix 1.
89. A fundamental element of minerals planning is that development involving working can only happen where resources are found. Primary minerals are a finite resource that once worked or sterilised are no longer available. Furthermore, physical and practical circumstances and wider national preferences exist that further inhibit where mineral developments can take place in a given area and / or in a particular way. These matters, amongst others are reflected in the plan's strategy as drawn from the evidence base used in its preparation and the advice and guidance offered by consultees.

The Strategy

Secondary & recycled aggregate supplies (see section 6)

To support local decision makers in giving weight to the planning merits of increasing the use of recycled and secondary aggregates as an alternative to primary land-won aggregates.

Mineral safeguarding (see section 7)

To avoid the unnecessary sterilisation of minerals resources by : -

- Defining Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs) for economically important minerals in Gloucestershire;
- Setting out a proportionate approach to the protection of mineral resources and supporting infrastructure, without unreasonably burdening and / or overly restricting non-minerals development;
- Supporting local decision makers in determining whether mineral resources or mineral infrastructure represents a justified constraint on non-minerals development, or that satisfactory measures can be put in place to avoid affecting minerals, or that provision for prior-working can be made before non-minerals development takes place.

The future supply of minerals (see section 8) and Areas for future aggregate working (see section 9)

To make provision for the steady and adequate supply of key local minerals (clay, brick clay and aggregates) throughout the plan period and beyond where necessary, which will contribute towards meeting identified needs as advised appropriately through the monitoring of relevant landbanks of permitted reserves;

To provide for the future working of aggregates from within allocated areas located in the Forest of Dean and Cotswold resource areas. Aggregate working outside of allocated areas will only be allowed in certain circumstances;

To make provision for the supply of local natural building stone, which will contribute towards maintaining the historic built environment and promoting local distinctiveness in new build design;

To only allow the working of coal where this would be environmentally acceptable, or where sufficient benefits can be demonstrated to outweigh any potential adverse impacts. Recognise that benefits could include support for the cultural heritage and economic wellbeing of local communities within the Forest of Dean.

Development management (see section 10)

To ensure that the natural (including water) and historic environment, health, well-being and quality of life of local communities, the efficient, effective and safe functions of the highway network, and the economic viability of local businesses, will not suffer unacceptable adverse impacts caused by mineral developments, through: -

- demanding that all proposals set out proportionately detailed and evidenced appraisals of potential adverse impacts, their possible significance and a clear demonstration of how these could be avoided or that effective mitigation measures will be employed;
- giving prominence to the potential of cumulative impacts occurring through either multiple impacts from a single mineral development or a number of mineral developments clustered within one of Gloucestershire's mineral resource areas or another equivalent resource area within a neighbouring local authority area.

- seeking to avoid, wherever possible, future working of aggregate minerals from within AONB designations or where the setting of such designations might be affected. But where working does occur, an appropriate balance will be achieved that is reflective of the reasonableness of these areas to contribute towards key mineral supplies having given great importance to the protection of landscape quality, scenic beauty, cultural heritage and wildlife conservation.

Mineral restoration (see section 11)

To make certain that the 'temporary nature' of minerals development is upheld and that opportunities to maximise beneficial after uses are realised by: -

- requesting appropriately detailed reclamation site plans that demonstrate how effective, progressive restoration will be achieved to a high environmental standard and in the shortest possible timescale to the effect of ensuring the minimum amount of disturbance occurs; and
- positively encouraging restoration that contributes towards the achievement of sustainable development, which will not limit the range of potential acceptable after-uses and that, will secure long lasting community and environmental benefit particularly in terms of biodiversity, geological conservation interest, resilience to and adaptation to climate change and where appropriate, the reinstatement of the highest possible achievable grade of best and most versatile agricultural land.

Section 6 | Secondary & recycled aggregate supplies

Maximising the use of secondary and recycled aggregates

Reasoned justification

90. Once taken out of the ground, primary minerals cannot be replaced – they are a finite resource. Their working and onwards movements can also be energy intensive and disruptive to the natural environment and neighbouring land uses. It is therefore important to try and achieve maximum benefit from primary minerals and to facilitate alternative options which are more sustainable. A means of achieving this is to support the use of recycled and / or secondary aggregates.
91. The supply of locally-sourced recycled aggregate in Gloucestershire has been well in excess of 100,000 tonnes per annum for a number of years³⁹. It largely arises from regeneration and re-development projects from across the county and includes construction and demolition material, which has been transported to fixed plant, usually located at waste management sites or minerals sites. Demolition wastes crushed on-site using mobile plant and utilised on site is also likely to account for a substantial proportion of local recycled aggregates. However, this supply is not accurately measured. Planned growth, particularly in and around existing built-up areas will undoubtedly provide an opportunity to increase the availability and diversity of recycled aggregate sources.
92. There is currently no production of secondary aggregate in Gloucestershire. However, the emerging development of a new EfW facility at Javelin Park near Gloucester has the potential to generate a local secondary aggregate source through the processing of incinerator bottom ash. Around 45,000 tonnes per annum of incinerator bottom ash aggregate (IBAA) may be made available if the EfW facility operates at its permitted capacity from 2019 onwards. Further development of thermal waste treatment could present opportunities to increase sources of IBAA or other related secondary aggregate materials locally and beyond.
93. The use of recycled and secondary aggregates in the construction industry has grown in the recent past through a combination of technological advancements and policy and tax initiatives⁴⁰. National policy acknowledges the role played by secondary and recycled aggregates. It seeks to ensure it is taken into account, before considering

³⁹ This figure is considered to be a notable underestimation of the amount of material likely to be used for this purpose. It is derived from limited confidential surveying of local waste management operators that handle inert construction and demolition wastes on their sites with the potential for creating recycled aggregate products.

⁴⁰ The Aggregate Levy is a tax aimed at cutting demand for (primary) aggregates, encouraging the use of alternatives materials where possible, and addressing environmental costs.

extraction of primary minerals, when making provision for the overall supply of aggregates⁴¹.

Policy SR01 | Maximising the use of secondary and recycled aggregates

Non-mineral developments should use secondary and recycled aggregates in preference to primary aggregates wherever reasonable and practicable to do so.

Major non-mineral developments should maximise the use of secondary and recycled aggregates including building products made from these materials, and demonstrated this through supporting evidence.

Contributes to the delivery of plan objectives – SR, RM

Interpretation and implementation

94. The aim of policy SR01 is to increase awareness of and to encourage greater uptake of recycled and secondary aggregates within new development. In turn this may help stimulate local markets in favour of alternatives to primary land-won aggregates. A stimulated local market may also generate a more attractive investment environment that could further enhance alternative aggregate supplies over time through more efficient and effective infrastructure and product innovation.
95. All non-minerals development should use as much secondary and recycled aggregates as possible within reasonable construction and design quality constraints, environment limits and where potential impacts on local communities are not made worse.
96. Specific efforts should be made with major non-minerals development proposals to maximise the use of secondary and recycled aggregates and this must be shown through supporting evidence. A focus on major development offers an opportunity to achieve meaningful change by way of economies of scale. It also enables an effective means of monitoring policy SR01.
97. The definition of major development is set out in planning regulations and this should equally apply to major non-minerals development⁴². It involves 10 dwellings or more, or a site for housing of over 0.5 hectares; and for all other development types, any building that creates floor space of 1,000m² or more, or will be carried out on a site of 1 hectare or more.

⁴¹ National Planning Policy Framework (NPPF) section 13, paragraph 143, bullet point 2

⁴² Town & Country Planning (Development Management Procedure) (England) Order 2015 <http://www.legislation.gov.uk/ukxi/2015/595/article/2/made>

98. Collaboration between the MPA and local planning authorities will be essential to achieve desirable increases in the demand and subsequent use of secondary and recycled aggregates. Local planning authorities will largely be responsible for determining accordance with policy SR01, but may seek advice from the MPA from time-to-time to ensure the realistic deliverability of proposals through confirmation of proposed sources and uses of secondary and recycled aggregates⁴³.
99. For major non-minerals development proposals, consideration will need to be given to the arrangements put in place to assess and monitor materials used in the construction phase of the development. This should include scoping the potential use of secondary and recycled aggregates to determine what is realistic, and practicably achievable. Availability, viability and technical suitability are all valid matters that should be reviewed. This scoping exercise could be secured through a pre-commencement condition.
100. The adopted Gloucestershire Waste Minimisation in Development Projects Supplementary Planning Document (WM-SPD) contains a target of 10% (by value) for major development to be constructed from materials derived from recycled and sustainable sources⁴⁴. The use of secondary and recycled aggregate as advocated by policy SR01 could make an invaluable contribution to the achievement of this target. It is important to note that major non-minerals development proposals that fall short of this target should offer a robust justification.
101. The content of the WM-SPD may be subject to a review over the time horizon of the plan. As such any new target(s) put forward covering recycled and / or sustainable materials in construction, will need to be taken into account.
102. In the majority of instances, evidence needed to support policy SR1 will relate to other local development plan policy requirements for major non-minerals development in Gloucestershire. The use of recycled aggregate is also actively encouraged under both waste reduction and sustainable construction policies⁴⁵. For example, Adopted Waste Core Strategy Policy WCS 2 (Waste Reduction) requires the submission of a Waste Minimisation Statement (WMS) that includes a requirement to monitor and measure waste generated during construction, and to show how its re-use on / or off-site will be

⁴³ Data is presently collected by Gloucestershire County Council (GCC) in its capacity as the Minerals and Waste Planning Authority (M&WPA) to support both policy development and annual monitoring requirements covering the number and capacity of local waste management sites capable of generating recycled aggregate from construction & demolition waste sources and local facilities generating and marketing secondary aggregate.

⁴⁴ Adopted Gloucestershire Waste Minimisation in Development Projects Supplementary Planning Document (SPD)
<http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/waste-minimisation-in-development-projects-spd/>

⁴⁵ Key adopted local development plan policies that specifically cover sustainable construction and commitments to recycled materials in construction include: - Gloucestershire Waste Core Strategy Policy WCS 2 (Waste Reduction), Stroud District Local Plan Delivery Policy ES1 (Sustainable Construction & Design), Forest of Dean District Core Strategy Policy CSP.1 (Design and environmental protection) and Gloucester, Cheltenham and Tewkesbury Joint Core Strategy Policy SD3 (Sustainable Design and Construction).

encouraged⁴⁶. Adopted Gloucester-Cheltenham-Tewkesbury Joint Core Strategy policy SD3 (Sustainable Design and Construction) also contains an expectation that development will incorporate the principles of waste minimisation and re-use. The policy's supporting text goes on to explain that higher standards for sustainable construction than those required through the building control framework will be encouraged. This could be achieved by meeting or exceeding the Building Research Establishment Environmental Assessment Method (BREEAM) technical standards. These include demonstrating material efficiency through evidence of the procurement of materials with high levels of recycled content⁴⁷.

103. To avoid unnecessary duplication and excessive and overly burdensome information it would be wholly appropriate for matters relating to policy SR01 to be incorporated with other evidential requirements for major non-minerals development. For example an expanded WMS or an addendum to a submission report tasked with demonstrating how sustainable construction and design standards are to be met.
104. Infrastructure matters related to the supply of secondary and recycled aggregates are dealt with through other local development plan policies covering the county. The policies contained within the adopted Gloucestershire Waste Core Strategy (WCS) are more likely to be of key importance. New, expanded or maintained recycled aggregate sources will largely be influenced by the successful implementation of Core Policy WCS 4, which is concerned with inert waste recycling & recovery, and Core Policy WCS 11 that deals with the safeguarding of sites for waste management⁴⁸.

⁴⁶ The tasks requesting evidence of the re-use of waste material, which may include construction & demolition waste as a recycled aggregate are contained within stage 1 (project planning) and stage 2 (construction activities) of the checklist for preparing a waste minimisation statement <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/waste-minimisation-in-development-projects-spd/>

⁴⁷ The Building Research Establishment Environmental Assessment Method (BREEAM) Technical Standard UK: - New Construction includes within it a requirement for information demonstrating optimum material efficiency and responsible procurement (Materials - Mat 03 and 06). Procurement practices, which show how higher levels of reused or recycled content in construction materials will be employed are specifically referenced.

⁴⁸ Adopted Gloucestershire Waste Core Strategy (WCS) (November 2012) <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/gloucestershire-waste-core-strategy/>

Section 7 | Mineral safeguarding

Mineral Safeguarding Areas (MSAs)

Reasoned justification

105. 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.
106. 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.
107. Mineral safeguarding is the means available to avoid the needless sterilisation of primary mineral resources by non-minerals development. 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 consider mitigation where appropriate⁴⁹.
108. The presence of MSAs should ensure that mineral resources are afforded appropriate consideration alongside all other relevant planning issues in determining non-minerals development. Furthermore, there is no presumption that mineral resources identified within a MSA will be worked.
109. It may be that the 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-minerals development may be greater than the need to retain access and enable the working of the mineral resources.

Mineral resources to be safeguarded in Gloucestershire

110. 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.
111. The British Geological Survey (BGS) Mineral Resource Map for Gloucestershire (*including South Gloucestershire*) has been used as the primary source for defining

⁴⁹ National Planning Policy Framework (NPPF) section 13, paragraph 143, bullet point 3 and Planning Practice Guidance (PPG), Minerals section, paragraph 003, bullet point 3, reference ID: 27-003-20140306.

local MSAs⁵⁰. 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.

112. The Coal Authority has also produced a plan of surface coal resource areas for safeguarding purposes⁵¹. For the county, it identifies the Newent and Forest of Dean Coalfields, which are included in local MSAs.
113. 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-Marsh⁵².
114. Potential oil and gas resources are not included within the county's MSAs as planning practice guidance advises it is unnecessary to do so⁵³.
115. 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.

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

⁵⁰ BGS Onshore Mineral Resource Maps can be obtained at: - <https://www.bgs.ac.uk/mineralsuk/planning/resource.html>

⁵¹ 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>.

⁵² 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.

⁵³ Planning Practice Guidance (PPG), Minerals section, paragraph: 108, reference ID: 27-108-20140306.

116. 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 authorities⁵⁴. This approach will help avoid non-minerals development in one administrative area needlessly sterilising mineral resources in another.
117. 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 Authority⁵⁵.
118. The full extent of Gloucestershire's MSAs is set out on in the plan's policies map⁵⁶.

Policy MS01 | Non-mineral developments within MSAs

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

- I. it is exempt as set out in the list contained in table 2; or**
- II. needless sterilisation of mineral resources will not occur; or**
- III. the mineral concerned is not economically valuable; or**
- IV. it is appropriate and practicable to extract the mineral prior to development taking place; or**
- V. the overriding need for the development outweighs the desirability to safeguarded mineral resources.**

Contributes to the delivery of plan objective – RM

Interpretation and implementation

⁵⁴ 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 & 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 & gravel resources.

⁵⁵ 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>

⁵⁶ 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/>

119. 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.
120. 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 areas⁵⁷.
121. MCAs cover the full extent of Gloucestershire's MSAs and have been included on the plan's Policies Map.
122. 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.
123. 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.
124. 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.
125. 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 safeguarding assessment will be required

⁵⁷ 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.

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; and
- 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.

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

126. For all non-mineral development proposals that need to be assessed against clauses 2 to 4 of policy MS01, a Mineral Assessment should be prepared.
127. A Mineral Resource Assessment will need to consider the site-specific nature of the mineral resources present along with an analysis of the relationship between these resources and the proposed non-minerals development. In addition to assessing the extent to which non-minerals development may overlay mineral resources, attention should be given to accessibility issues affecting the potential to exploit unworked and

currently worked resources. The risk of unreasonably curtailing / constraining permitted mineral working activities should also be investigated.

128. In terms of matters regarding economic value, a Mineral Resource Assessment 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 a Minerals Assessment.
129. Where there is potential for prior extraction, Mineral Resource Assessments 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.
130. 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 may 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.
131. 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, which is in force at the time.
132. Overriding need for non-mineral development, which is contained under clause 4 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 may include a Mineral Resource Assessment.

Safeguarding minerals infrastructure

Reasoned justification

133. Efficient and effective mineral infrastructure is vital to ensuring mineral supplies from Gloucestershire are steady and adequate. This may include transport facilities that move minerals in and out of the county and added value processing plant.
134. 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.
135. 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.
136. 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 requirements⁵⁸.

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**
- III. a suitable replacement mineral infrastructure site has been identified and permitted; or**
- IV. the overriding need for the development outweighs the desirability to**

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

safeguard mineral infrastructure.

Contributes to the delivery of plan objectives – SR, RM

Interpretation and implementation

137. 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 map⁵⁹. 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 reported within the next available annual monitoring report of the MPA and the plan's policies map revised
138. 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.
139. 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.
140. 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 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.

⁵⁹ 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/>

141. 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.
142. 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.

Section 8 | the future supply of minerals

143. 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.
144. Local mineral supplies specific to Gloucestershire and covered by the plan include: - primary land-won aggregates – crushed rock and sand & 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.
145. 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 increasing efficient and effective mineral working and the movement of minerals from place to place.

Crushed rock and sand & gravel aggregates

Influencing factors on future aggregate provision

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

146. A Local Aggregate Assessment (LAA) is an assessment of trends in supply and demand for aggregates from within a mineral planning authority's area⁶⁰. 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 recycled & secondary aggregate sources.
147. 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 2016⁶¹.

⁶⁰ Planning Practice Guidance (PPG), Planning for aggregates Section, paragraph: 067 Reference ID: 27-067-20140306.

⁶¹ 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/>

148. 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 & gravel.
149. 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

150. 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 break down was then undertaken to 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.
151. 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 & gravel⁶². For Gloucestershire the recommendation of the AWP, which supported the then emerging South West Regional Spatial Strategy (SW-RSS)⁶³, 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 & gravel^{64 65}.
152. 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 planned for⁶⁶. 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.

⁶² 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

⁶³ The South West Regional Spatial (SW-RSS) was designed to provide a regional level planning frameworks 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 2000's 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 parliament in April 2013.

⁶⁴ 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

⁶⁵ 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.

⁶⁶ National Planning Policy Framework (NPPF) section 13, paragraph 145, bullet point 4

The monitoring of aggregate landbanks

153. 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.
154. 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.
155. 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 & gravel the figure is at least 7 years⁶⁷.
156. 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 investment⁶⁸.
157. 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 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 rate⁶⁹, 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

⁶⁷ National Planning Policy Framework (NPPF) section 13, paragraph 145, bullet point 6

⁶⁸ Planning Practice Guidance (PPG) minerals section, paragraph: 081 Reference ID: 27-081-20140306

⁶⁹ These matters are all noted as reasonable justifications to adopt a degree of flexibility when applying landbank indicators within National Planning Policy Framework (NPPF) 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.

at risk. This can unduly expose local supply chains to the commercial fortunes of just a few operators.

158. 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 & gravel⁷⁰.

Making provision for crushed rock

Supporting explanation

159. 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 made⁷¹.
160. 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.
161. 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 potential to experience different aggregate supply challenges regarding the quality and local capacity of available aggregates.
162. 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 designations⁷². 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.

⁷⁰ Based on the 6th LAA for Gloucestershire

⁷¹ For a full breakdown of the calculations informing future provision covered by the plan see Appendix 3

⁷² National Planning Policy Framework (NPPF), section 13, paragraph 144, bullet point 2

163. 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.
164. 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.
165. 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 31/01/2016 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.
166. 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).

Making provision for sand & gravel

Supporting explanation

167. In line with the 6th version LAA, the plan aims to support steady and adequate supplies of sand & 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.
168. Remaining permitted reserves of sand & 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 12.656 million tonnes. This is equivalent to a little over 17 years of additional working.
169. 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 & 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 & gravel, calculated using the rolling 10 years' sales data presented in the 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 – PS

Limestone and sandstone for natural building stone

Reasoned justification

170. 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 locally, regionally and nationally⁷³. 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 stone⁷⁴.
171. 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.
172. 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 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 Gloucestershire's 'working' landscapes, rural settlements and cultural heritage. A careful balance must be maintained to ensure good relations are enduring.
173. Natural building stone production in Gloucestershire has historically been low in comparison to aggregate working⁷⁵. 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 year⁷⁶. There is considerable variability in the colour, texture; quality and availability of the county's 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.

⁷³ 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.

⁷⁴ 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.

⁷⁵ 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.

⁷⁶ 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.

174. 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 viability⁷⁷, 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 after-uses) can be satisfactorily met.**

Contributes to the delivery of plan objectives – RM, PS, ENV and RA

Interpretation and implementation

⁷⁷ 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.

175. 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' stone⁷⁸. 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.
176. 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.
177. 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 sites⁷⁹. 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.
178. 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 use⁸⁰. 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.
179. 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.

⁷⁸ 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.

⁷⁹ National Planning Policy Framework (NPPF), section 13, paragraph 144, bullet point 8

⁸⁰ The Historic England / DCLG / BGS Strategic Stone Study Online is accessible at: - <http://mapapps.bgs.ac.uk/buildingStone/BuildingStone.html>

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 workings, which are likely to operate over a protracted timescale, experience low rates of working and / or periods of intermittency⁸¹.

180. Favourable consideration may also be given to evidence that shows lower transport-related CO₂ emissions would be achieved as a result of using local natural building stones rather than relying upon the importation of more distant sources. 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.
181. Natural building stone working may positively contribute to the economic well-being and cultural heritage of the county's rural local communities. This may arise through the direct and indirect employment opportunities being offered. Support for new or sustained local skilled labour, particularly traditional quarrying-related skills may be a noteworthy benefit. Appropriate provision for local apprenticeships secured either by way of a planning condition or a planning obligation could be materially significant⁸². However, it is equally important to demonstrate how any potential negative economic impacts will be sufficiently outweighed. An assessment of possible impacts on the future economic performance of other industries that are operating locally and / or which are being promoted through regeneration and growth initiatives may represent justified and credible evidence.

⁸¹ National Planning Policy Framework (NPPF), section 13, paragraph 144, bullet point 8

⁸² Traditional quarrying-related skills such as stone cutting and stone masonry may be applicable.

Clay for civil engineering purposes

Reasoned justification

182. 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.
183. 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 & gravel. The working of clay in the county has often taken place as a temporary borrow pit to support a nearby development project.
184. 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.
185. 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 monitored⁸³. Provision has been made within WCS core policy WCS 8 (*Landfill*) to consider the acceptability of new or expanded landfill developments⁸⁴. 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 demand⁸⁵. 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.

⁸³ Gloucestershire Waste Core Strategy, paragraph 4.133

⁸⁴ Gloucestershire Waste Core Strategy (WCS) WCS Policy 8 – Landfill.

⁸⁵ 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 – RM and PS

Interpretation and implementation

186. National policy states the importance of having sufficient mineral supplies in providing the infrastructure that the country needs⁸⁶. 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 requirements⁸⁷. Policy MW03 delivers national policy in the context of the working of clay for civil engineering purposes.
187. All minerals 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 actions on climate change. A reduction in the overall freight miles travelled and / or fall in attributable, transport-related CO₂ emissions will be a valid consideration if local sourcing is 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.
188. A degree of flexibility may reasonably be applied to proposals to work civil engineering clays under certain circumstances. These may include where valuable mineral

⁸⁶ National Planning Policy Framework (NPPF), paragraph 142

⁸⁷ National Planning Policy Framework (NPPF), paragraphs 142 and 143.

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.

189. 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 Pipeline⁸⁸ and / or evolve out of the Strategic Economic Plan for Gloucestershire⁸⁹ or Local Flood Risk Management Strategy (LFRMS)⁹⁰.
190. The environmental acceptability of the working of civil engineering clays will require careful assessment following the clear approach set out in national policy⁹¹. 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, 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 within policies DM01 to DM07 will warrant very careful attention in the decision making process.
191. 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 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.

⁸⁸ The National Infrastructure Delivery Plan and Pipeline can be obtained at: - <https://www.gov.uk/government/collections/national-infrastructure-plan#national-infrastructure-delivery-plan>

⁸⁹ The Gloucestershire Strategic Economic Plan (SEP) can be obtained at: - <http://www.gfirstlep.com/about-us/our-vision/strategic-economic-plan/>

⁹⁰ 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/>

⁹¹ National Planning Policy Framework (NPPF), paragraph 144

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

192. 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).
193. 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.
194. 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.
195. There is a general downward trend in the number of operational brickworks present in the UK over recent decades⁹². 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 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

⁹² 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>

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 – RM and PS

Interpretation and implementation

196. 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 for⁹³. 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 production⁹⁴. 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 made⁹⁵.

197. 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 brickworks⁹⁶. 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 risk⁹⁷. A reserve threshold equal to

⁹³ National Planning Policy Framework (NPPF), paragraph 146

⁹⁴ National Planning Policy Framework (NPPF), paragraph 146, bullet point 3

⁹⁵ National Planning Policy Framework (NPPF), paragraph 146, bullet point 4

⁹⁶ Planning Practice Guidance (PPG), Minerals section, paragraph: 088, reference ID: 27-088-20140306

⁹⁷ Planning Practice Guidance (PPG) - Minerals (section), paragraph: 089, reference ID: 27-089-20140306

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.

198. National policy acknowledges the potential benefit to the economy of mineral working⁹⁸. 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.

⁹⁸ National Planning Policy Framework (NPPF), paragraph 144

Coal

Reasoned justification

199. 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 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.
200. 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 law⁹⁹. Working occurs at relatively shallow depth and usually through inclined drift mines.
201. 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.
202. 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 demand¹⁰⁰.
203. 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.
204. 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 relevant. The importance of coal will therefore remain, whilst sufficient stable capacity is built-up in alternative energy sources such as renewables and gas.

⁹⁹ 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.

¹⁰⁰ Source: Department for Business, Energy and Industrial Strategy (BEIS) (2016) Coal Generation in Great Britain: The pathway to a low-carbon future | consultation document

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/577080/With_SIG_Unabated_coal_closure_consultation_FINAL_v6.1_.pdf

205. 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 won't 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 policy¹⁰¹.

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 – PS, ENV and LC

Interpretation and implementation

206. 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 MW05¹⁰². 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.

207. 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 locality¹⁰³. Possible impacts concerning the natural and historic environment and the health and well-being of potentially affected local communities will

¹⁰¹ 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

¹⁰² 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.

¹⁰³ National Planning Policy Framework (NPPF), Paragraph 144.

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, 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.

208. For all surface coal mining proposals, particular attention must be given to the environmental duty set out under the Coal Industry Act 1994¹⁰⁴. 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.
209. 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 issues¹⁰⁵. 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 mining¹⁰⁶. 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 localities that have and are allowed to be mined (i.e. gales)¹⁰⁷. This extends over an area of the Forest of Dean known as the Hundred of St. Briavels¹⁰⁸.
210. 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

¹⁰⁴ The environmental duty is contained within Section 53 of the Coal Industry Act (1994) - <http://www.legislation.gov.uk/ukpga/1994/21/section/53>

¹⁰⁵ Planning Practice Guidance (PPG), Minerals section, Paragraph: 148, Reference ID: 27-148-20140306

¹⁰⁶ 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>

¹⁰⁷ 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.

¹⁰⁸ 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 – <http://data-forestry.opendata.arcgis.com/datasets/national-forest-estate-the-hundred-of-st-briavels>

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.

211. 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.
212. 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 robust evidence, weight could be given to the prospect of lower transport-related CO₂ emissions resulting from the movement of indigenous coal rather than that sourced from overseas.
213. 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.
214. 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

215. 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. Where this takes place within an existing mineral site it is termed ancillary minerals development.
216. Ancillary minerals development can often go ahead without the need for planning permission. Many mineral processing activities benefit from permitted development rights¹⁰⁹. 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.
217. These types of development offer an opportunity to make best use of minerals, a principle set out in national policy¹¹⁰. 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.

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 resulting importation of minerals from elsewhere will represent an environmentally acceptable and sustainable option; and**

¹⁰⁹ 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/ukxi/2015/596/pdfs/ukxi_20150596_en.pdf .

¹¹⁰ National Planning Policy Framework (NPPF) section 13, paragraph 142

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 after-uses) can be satisfactorily met; and

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

Contributes to the delivery of plan objectives – RM and RA

Interpretation and implementation

218. Policy MW07 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.
219. 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 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.
220. Proposals that incorporate the importation of minerals from elsewhere must be shown to be environmentally acceptable and accord with the principles of sustainable development.
221. 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 locality¹¹¹. 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

¹¹¹ National Planning Policy Framework (NPPF), Paragraph 144.

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.

222. A comparative analysis will be required where existing, permitted alternative arrangements are potentially available nearby. Evidence as to why it is not practicable and / or viable to use alternative facilities will be necessary. The ability to achieve certain product specifications and / or to facilitate the creation of desirable blended products could be a reasonable justification, although this will need to be demonstrated through supporting evidence. In addition, information concerning the efficient movement of minerals could also prove to be significant. A justification will be necessary to show how allowing ancillary development rather than using alternative facilities will make a positive contribution to reducing transport-related impacts and / or greenhouse gas emissions by way minimising freight miles travelled or the use of more appropriate freight routes. The plans for site restoration and the impact on its timely delivery at the proposal site and alternative facilities should also be factored into the analysis.
223. 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.

Section 9 | Areas for future aggregate working

224. 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

225. 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.

226. Policy MA01 presents allocations with the potential for aggregate working in Gloucestershire. It incorporates a total of 7 allocations – two for the working of sand & 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.

227. 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.

228. 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 – RM and PS

Interpretation and implementation

229. 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.

230. 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.
231. 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.
232. 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.
233. 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

234. In line with national policy and planning practice guidance different types of allocation have been employed under policy MA01.
235. 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.

236. 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 duration of the plan period.

Future aggregate working outside of allocations

Reasoned justification

237. Allocating land is the preferred means of making provision of aggregates within national policy¹¹². 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 circumstances¹¹³.
238. In Gloucestershire, proposals for the working of aggregates outside of allocations may still come forward and could prove to be acceptable in planning terms. This could include the prior-working of aggregate bearing land to avoid needless sterilisation by other development, (see policy MS01); or relatively small-scale residual working related to an existing permitted site
239. Furthermore, allowing for aggregate working outside of allocations provides a degree of flexibility to respond to changing circumstances, which is supported by national policy¹¹⁴. 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.

¹¹² National Planning Policy Framework (NPPF) section 13, paragraph 145, bullet points 3

¹¹³ Planning Practice Guidance (PPG) – minerals section, paragraph: 008, reference ID: 27-008-20140306

¹¹⁴ National Planning Policy Framework (NPPF) – paragraph 14, bullet point 2

Policy MA02 | Aggregate working outside of allocations

Mineral development proposals for aggregate working outside of allocations will be permitted only where it can be demonstrated: -

- I. the plan's allocations as set out in policy MA01 are not able to contribute towards maintain minimum landbank levels in accordance with policy MW01; and / or**
- II. constraints on the availability of existing permitted reserves and / or productive capacity are likely to limit output or restrict the range of available products over the plan period; and / or**
- III. they represent the residual working of an area of aggregate mineral resource that is permitted or planned to be worked and would otherwise be impractical to exploit in any other way; and / or**
- IV. they will facilitate enhancements to previously approved plans for mineral restoration and the achievement of beneficial after-uses that will outweigh the desirability to restrict working from outside of allocated areas; and / or**
- V. they will facilitate the working of aggregate minerals prior to non-minerals development taking place in accordance with policy MS01.**

Contributes to the delivery of plan objectives – RM and PS, RA

Interpretation and implementation

240. 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.
241. 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.

242. 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.
243. 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.
244. Aggregate working outside of allocations, which represents residual working, will need careful consideration. Proposals will be assessed with regards to their size, scale and timeframe compared to the characteristics of the existing aggregate working site it relates to. Ensuring that mineral working will not be excessively extended will be a critical factor. Furthermore, previously approved mineral site restoration must not be unduly inhibited. Although, where revised mineral restoration is submitted, this must be acceptable in principle and offer demonstrable benefits with regard to future land use opportunities.
245. 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).

Detailed development requirements

246. Detailed development requirements for all of the plan's allocations are set out Appendix 4 of the plan.
247. 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 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.
248. 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.

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249. 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.
250. To assist in the consideration of location-specific issues a standard tablet has been applied. This sets out three items – the general theme on interest; detail of the specific issue and what will be requirement; and a link to the relevant policy and objective(s) set out in the plan.
251. The information that comprises the location-specific issues was correct at the time of plan preparation. However, circumstances can change and unforeseen environmental and other complications and / or opportunities may present themselves 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 taken into account.

Section 10 | Development Management

Defining minerals development

252. Minerals development consists of a range of processes and activities that vary depending upon the mineral resources being worked and the type of products being supplied. However, commonly it is used to describe the working of minerals, which involves up to four phases –
- Exploration to prove the existence, extent and economic viability;
 - Preparation of land to make minerals accessible;
 - The removal of minerals from the ground and processing to support the creation of a saleable product; and
 - The restoration of the sites once the working of minerals has ended and the maintenance of the site known as aftercare, for a period of time afterwards.
253. In addition, the installation and operation of ancillary buildings and ‘added value’ plant for the purpose of manufacturing saleable mineral products and other supportive infrastructure (e.g. haul roads, on-site renewable energy generation etc...), which are demonstrably linked to the functions of mineral working fall under the same development type.
254. All other development activities subject to the planning system are not considered to be minerals development and therefore not subject to determination by the Minerals Planning Authority (MPA). In Gloucestershire, the City, Borough and District Councils in their capacity as Local Planning Authorities (LPAs) or the County Council in its capacity as the Waste Planning Authority (WPA) may be an appropriate, alternative local decision maker.
255. Policies contained in Minerals Local Plan for Gloucestershire would only be relevant with non-minerals development in specific circumstances. This may include where a risk of mineral sterilisation or hindrance to mineral operations is present (see policy MS01); or through the safeguarding of mineral infrastructure (see policy MS03).

Permitted development rights

256. The Town & Country Planning (General Permitted Development) Order (GPDO) 2015 sets out a number of ‘permitted development rights’ that enable certain operations and

activities to take place without the need for planning permission¹¹⁵. For mineral developments, this covers the installation, expansion, alteration and repair of plant and machinery and other structures of a certain size and scale; tipping of mineral site wastes; and short-term, time-restricted drilling of boreholes, seismic surveying and related excavations.

257. During the determination of mineral development proposals, decision makers may consider it necessary for permitted development rights for future activities to be removed. This is achieved through the use of planning conditions. It normally considered where uncontrolled permitted development could risk unbalancing carefully assessed impacts and / or prejudice the effectiveness of approved mitigation measures.
258. The GPDO 2015 also allows MPAs to remove permitted development rights outside of the consideration of a planning application. This is known as an Article 4 Direction. In parts of Gloucestershire, where uncontrolled permitted development could risk causing harm to sensitive locations such as the Cotswolds, Wye Valley and Malvern Hills AONB designations or Sites of Special Scientific Interest (SSSIs), the use of Article 4 Directions may be appropriate. The introduction of Article 4 Directions over the time horizon of the plan will be kept under review by the MPA. Particular attention in this instance will be given to the changing nature over time of minerals development within and / or close to sensitive locations.

Preparing applications for mineral development

259. Before any decision is taken to submit a planning application for minerals development, prospective applicants will need to review the Gloucestershire County Council's Local Validation Checklist¹¹⁶. This sets out the range of information needed in order to effectively assess planning proposals. The checklist includes both compulsory 'national' standard requirements applicable to all applications and 'local' requirements that relate to particular circumstances covered by relevant local development plan policies that are in force across the county.
260. A vital part of the decision making process is the consideration of possible impacts arising from minerals development. As a result, applicants should complete necessary impact assessments, provide an analysis of their findings, and then report upon potential means of avoiding impacts or deliverable mitigation measures. All relevant information should be provided alongside the submission of a planning application. Failure to do so may dramatically increase the risk of a proposal being refused planning permission.

¹¹⁵ 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/ukxi/2015/596/pdfs/ukxi_20150596_en.pdf.

¹¹⁶ The most recent version of the Gloucestershire County Council Local Validation Checklist can be obtained online at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-applications/make-a-planning-application/>

261. To support prospective applicants, Gloucestershire County Council operates a Pre-application Planning Advice Service¹¹⁷. This seeks to offer advice on a range of matters such as the different types of document that may be needed to support any subsequent planning application; the scale and nature of any technical advice that might be needed from specialists; and to outline potential planning matters and issues that could arise with an emerging proposal. The advice provided arises from council officers and is given in good faith and to the best of ability and experience, without prejudice to the formal consideration by the MPA of any future planning application. The service operates under a standard charging regime, which is kept under review and revised from time to time¹¹⁸.
262. Where significant effects upon a local area are anticipated, it is expected that prospective applicants will carry out early engage with local communities prior to submitting a planning application. This approach is supported by the Gloucestershire Statement of Community Involvement (Glos-SCI), which offers specific advice on how to undertake pre-application engagement. It also sets out how the findings of these exercises will be taken into account should a planning application be forthcoming¹¹⁹.

Environmental Impact Assessment (EIA) requirements

263. Planning applications must be screened as part of the Environmental Impact Assessment (EIA) process to determine whether or not they require an Environmental Statement. This is required by UK law. The screening and subsequent scoping processes help to identify whether a proposal is likely to have significant environmental effects, and if so, an Environmental Statement (ES) must accompany any submitted planning application¹²⁰.
264. Proposals falling within Schedule 1 of the EIA Regulations must be accompanied by an ES. Proposals under Schedule 2 may require an ES depending on individual circumstances usually relating to the type, scale and location of the development. An ES should identify the likelihood of significant impacts occurring. It should also show how these impacts can be avoided, mitigated and compensated for, and consider alternative ways the development might be carried out. It should be noted that minerals working can often fall under Schedule 2 and sometimes Schedule 1 for larger scale development.

Development management – considering applications for minerals development

¹¹⁷ Details of the Gloucestershire County Council Pre-application Planning Advice Service can be obtained online at:-

<http://www.gloucestershire.gov.uk/planning-and-environment/planning-applications/make-a-planning-application/>

¹¹⁸ Fees for advice sought through Gloucestershire County Council Pre-application Advice Service came into force on 1st January 2016. They are reviewable via relevant GCC guidance that can currently be obtained at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-applications/make-a-planning-application/>

¹¹⁹ The 1st Review Gloucestershire Statement of Community Involvement (SCI) (Adopted 2013) can be obtained online at: -

<http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/statement-of-community-involvement-sci/>

¹²⁰ Planning Practice Guidance (PPG) Environmental Impact Assessment section, paragraphs 01 to 058 explain the requirements as set out in Town & Country Planning (Environmental Impact Assessment) Regulations 2017.

265. A key function of a local MPA is to determine planning applications for future minerals development. This function is known as Development Management.
266. Mineral developments within the county requiring planning permission must be determined in accordance with the policies contained within the adopted Minerals Local Plan for Gloucestershire unless material considerations indicate otherwise. This is a core convention of the English planning system enshrined in planning law¹²¹.
267. Consequently, the effective delivery of development management will be fundamental to realising the ambitions of the plan, particularly in ensuring new proposals are contributing to the achievement of sustainable development – national government's ambition for planning¹²². The objectives that sit behind the Minerals Local Plan for Gloucestershire, which themselves are a local interpretation of measures to deliver sustainable development should be afforded attention. To ensure this occurs all development management policies contain links to the requisite objectives of the plan.
268. The consideration of the plan's development management policies must be undertaken in conjunction with a review of other relevant thematic mineral policies contained elsewhere in the plan (see sections 6,7,8,9 and 11). This is to ensure proper account has been given to all local policy matters affecting a particular proposal.
269. The remainder of this section provides a full and comprehensive suite of development management policies relevant to future mineral development proposals within Gloucestershire. It incorporates full policy details and local guidance to assist prospective applicants in their initial appraisal, preparation, design and subsequent submission of planning applications. The supporting text for each policy covers both a reasoned justification for its inclusion in the plan and important information relating to implementation and interpretation.
270. The order in which the policies have been presented is designed to aid those using the plan. It is reflective of how often the matters contained within the policies have been assessed within planning application for minerals developments over the recent past. The ordering of policies is not representative of their relative importance within the plan.

¹²¹ Established under Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section (70(2) of the Town and Country Planning Act 1990

¹²² National Planning Policy Framework (NPPF) paragraphs 6-10 set out the terms under which the delivery of the planning system can demonstrably achieve sustainable development. The focus is on ensuring the integrated delivery of its three dimensions – economic, social and environment through three consequential roles to be performed by the planning system.

Amenity

Reasoned justification

271. Minerals can only be worked where they occur. This means those living and working nearby to mineral development sites and others who access recreational and leisure facilities in the same locality could be subject to amenity impacts.
272. Amenity impacts can be numerous and differ in frequency, significance and complexity on a case-by-case basis related to the types of activities taking place and the relationship to nearby land uses. Nevertheless, for minerals development there are usual risks that arise such as: - noise; air pollution from fumes and / or dust; vibration; and visual intrusion, which can incorporate light pollution and loss of privacy. The way in which minerals are worked, how they are stored and moved around the site, whether ancillary processing takes place to create saleable products; and the phase of development (e.g. site preparation, working of minerals, implementing restoration etc.) are likely to be influential factors.
273. It is important that a balance is struck between enabling the need for minerals to be met through their working and processing and ensuring that those who might be affected are afforded protection. The extent to which a good standard of amenity is achievable for all users and occupants of land and buildings now and in the future is a measure of success in this regard and is a core land-use planning principle set out in national policy¹²³.

Policy DM01 | Amenity

Mineral development proposals will be permitted only where it can be demonstrated that potential adverse impacts affecting the amenity of local communities within Gloucestershire and those of neighbouring administrative areas will be avoided, strictly controlled or mitigated so as to ensure any unacceptable impacts will not arise in respect of noise, vibration, air pollution and visual intrusion.

Contributes to the delivery of plan objective – LC

¹²³ National Planning Policy Framework (NPPF), paragraph 17, bullet point 4

Interpretation and implementation

274. The term ‘local communities’ as applied to policy DM01 includes all local residents, workers and visitors of a particular area. A local community could have a small membership and display similar characteristics and values, which is often the case with hamlets or small villages. Alternatively, it could include a large and diverse number of parties with complex relationships that also exhibit varying interests. Local residents; business owners, employees and their customers; visitors and / or other users of the area could all be part a single community, brought together by their association to a location and potential sensitivity to minerals development.
275. Policy DM01 applies a broad understanding of ‘amenity’. It deals with all items that could contribute towards people’s quality of life, which is an influential factor in health and well-being. Accessibility to services is a key feature of amenity from a land-use planning perspective. It may include the sustained functioning of the local natural and built environment, accessibility to green infrastructure; and the ability to nurture a vibrant, growing and stable economy capable of supporting the financial needs and future wealth ambitions of local communities.
276. Mineral development proposals must be accompanied by thorough investigations concerning amenity impacts. These investigations must be clear in their presentation of outcomes and be able to be scrutinised. They must highlight the potential for adverse amenity impacts to occur and their possible significance. Furthermore, details of any proposed mitigation measures and what commitments and resources will be afforded to them to ensure implementation and routine monitoring must be provided. All monitoring programmes will be carefully scrutinised before any development is allowed to take place.
277. Health Impact Assessments (HIAs) provide information to help decision-makers consider how a proposal might impact, directly or indirectly, on people’s health. Mineral development proposals may benefit from the carrying out of an HIA, as public health status and needs are critical matters that should be taken account in the decision making process, as required by national policy¹²⁴. A successfully completed HIA should present sufficient evidence to determine whether potential significant health-related effects will arise from on-site mineral working and other associated activities such as restoration, the transportation of minerals and any importation , and where relevant, facilitated after-uses following restoration. HIA information may contribute to the reasoned justifications for why certain actions, such as mitigation measures will be necessary. An important feature of a HIA is that it offers a way of ensuring all sections of an affected community will be afforded sufficient scrutiny including those that already experiencing disadvantage and / or present vulnerable health characteristics.

¹²⁴ National Planning Policy Framework (NPPF), paragraph 171

278. At the early preparation stage for minerals development proposals, a HIA screening exercise should to be carried out. This must establish whether preparing a HIA will represent the most efficient and effective way of presenting supporting evidence on health matters and for determining the level of detail necessary. A HIA can be undertaken as a stand-alone assessment or integrated into a wider Environmental Statement, although in all instances it should be closely aligned with other technical investigations such as those covering environmental and transport impacts. In the event that a HIA is to be prepared, the screening exercise should provide a sound basis for understanding the size, nature and of the local communities likely to be affected and identify in the broadest of terms, what potential impacts on health may occur – both positive and / or negative and their significant.
279. Early engagement with the County Council's as an advisor on local public health matters across Gloucestershire is strongly encouraged. This will ensure that the most appropriate and up-to-date evidence is being used and to help establish the most effective approach for preparing an HIA. Good practice guidance is also available on HIA in respect of undergoing a screening and / or scoping exercise and for formal HIA preparations¹²⁵.
280. Mineral development proposals likely have a lasting and / or significant impact upon a local community should include details of whether there is local appetite for setting up a community consultation group to discuss ongoing amenity matters. These groups can present opportunities to achieve workable, agreeable solutions where disputes arise or concerns remain at the commencement stage and during the lifetime of a development. It will be expected that the operator of a minerals development will be the lead co-ordinator and will ensure all reasonable steps have been taken to instigate and sustain a community consultation group. Representation will need to be sought from a number of key parties including the local community and its various interests, the County Council and other regulators. The establishment of a community consultation / liaison group secured either by way of planning condition or a planning obligation will have material weight in the decision making process. .
281. Detailed matters have been provided below under a suite of discrete headings covering the different types of amenity impact commonly experienced with minerals development proposals in Gloucestershire that are applicable to policy DM01: -

Noise

¹²⁵ Town & Country Planning Association (TCPA) (2015) *Public Health in Planning Good Practice Guide* which can be obtained at: - <https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=4cdc0f42-790a-4b6f-bfcb-2f710e251494> and DoH (2010) *Health Impact Assessment of Government Policy: A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process* which can be obtained at: - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

282. Throughout the life of a minerals development, different activities may generate noise impacts¹²⁶. These may include the initial preparing of the land for mineral working, the working of the minerals itself, moving materials around the site, mineral processing, and off-site transportation. The usual siting of minerals development in quieter, rural areas also means there is a heightened risk that tranquillity and the enjoyment of the countryside could be diminished.
283. Mineral development proposals should, in line with planning practice guidance, undertake a noise impact assessment that identifies all sources of noise¹²⁷. For each noise emission identified, the assessment should take into account the characteristics, the proposed operating locations, procedures, schedules and the duration of the work for the life of the mineral operation, and the likely impacts on the surrounding locality. The impact of each noise emission should be considered against the existing acoustic environment and its noise sensitivity. Suitable control, the use of mitigation measures and the monitoring of noise levels will need to be identified. Noise levels may be controllable through the careful siting of plant, maintenance areas and haul roads in relation to nearby properties. Baffle mounds may also be an acceptable mitigation solution and suitable vehicle reversing alarms should be installed. Planning conditions will be sought to secure the effective implementation of mitigation measures and monitoring of noise levels.
284. In line with national policy, noise levels should be kept to a minimum practicable level consistent with good environmental standards that will not give rise to significant adverse impacts on the health of communities and their quality of life¹²⁸. It is acknowledged that the acceptability of noise levels will relate to the working methods at a particular site and that different levels will be acceptable at different times of the day. The sensitivity of the features that may be affected will be a contributing factor. The need to establish noise limits at noise sensitive locations is a standard approach under national policy that will need to be employed¹²⁹. Early engagement with Environmental Health Officers from the relevant District Council regarding this matter should be undertaken as the ability to deliver effective monitoring may prove to be a pivotal issue in the decision making process.
285. As recognised in national policy some noisy short-term activities, such as soil-stripping and road construction may be unavoidable in order to facilitate mineral extraction¹³⁰. However, wherever possible, these activities should only take place between suitable hours and during very limited periods within the year.

Air pollution – fumes, odour and dust

¹²⁶ National Planning Policy Framework (NPPF), paragraph 123, bullet point 3

¹²⁷ Planning Practice Guidance (PPG) mineral section, paragraph: 019, reference ID: 27-019-20140306

¹²⁸ National Planning Policy Framework (NPPF), paragraph 123, bullet point 1

¹²⁹ National Planning Policy Framework (NPPF), paragraph 144, bullet point 4

¹³⁰ National Planning Policy Framework (NPPF), paragraph 143, bullet point 6

286. Mineral developments can impact upon local air quality. This may occur through the release of particulates from emissions and dust, and on some instances, through unpleasant odours. Air pollution can arise from on-site mineral working activities, but may also be caused by vehicles using unsurfaced roads, from wind blowing across stockpiles and quarry waste storage, and the exposure of unconsolidated, bare ground. An air quality impact assessment founded on the advice contained in planning practice guidance should be provided alongside mineral development proposals¹³¹. Assessments must take into account existing air quality levels prior to development and establish whether any new sources of air pollution are likely to arise and what their influence on existing air quality could be. The impact on air quality from changes to local traffic linked to minerals development both near to the site and / or further afield along defined freight routes will need to be included. Account should also be given to the scale, duration, hours of operation, type of activities being proposed; whether they are likely to be temporary or continuous and the existence of other operations in the same locality. .
287. In the consideration of any potential dust-related emissions, commitments to meet appropriate mitigation standards will be required and any resulting actions must be taken throughout the lifespan of operations. Technical advice on how dust emissions should be handled is provided within planning practice guidance¹³².
288. Air quality across Gloucestershire is largely considered to be within acceptable levels, although some localised air quality issues exist principally linked to vehicle emissions. Exceeding acceptable levels of nitrogen dioxide and air particles has led to Air Quality Management Areas (AQMAs) being declared at sites across the county¹³³. The effect on local AQMAs by minerals development, including from associated vehicular movements could prove to be a significant air quality impact issue. This will need careful consideration within air quality impact assessments. An approach supported by planning practice guidance¹³⁴.
289. Mineral developments must not compromise efforts to positively contribute towards the achievement of national air quality objectives and targets concerning the protection of human health¹³⁵.

Vibration

290. Vibration linked to blasting operations is largely a concern of Gloucestershire's hard rock mineral sites, where crushed rock aggregate is produced. The effects associated

¹³¹ Planning Practice Guidance (PPG) air quality section, paragraph: 007, reference ID: 32-007-20140306

¹³² Planning Practice Guidance (PPG) assessing environmental impacts from mineral extraction section, paragraph: 023, reference ID: 27-019-20140306

¹³³ DEFRA publishes data on declared Air Quality Monitoring Areas (AQMAs) across the country, including across Gloucestershire - <http://uk-air.defra.gov.uk/aqma/>

¹³⁴ Planning Practice Guidance (PPG) air quality section, paragraph: 002 Reference ID: 32-002-20140306

¹³⁵ Details covering the UK's Air Quality Limits are reviewable via the DEFRA website at:- <http://uk-air.defra.gov.uk/air-pollution/uk-eu-limits>

with blasting can include ground vibration, air overpressure and projected rock particles. The scale of impacts is dependent on the type and quantity of explosives, degree of confinement, the distance to the nearby development, underlying geology and surrounding topography and atmospheric conditions.

291. Where the risk of vibration impacts is present, avoidance of these impacts should be seen as the preferred solution. Under circumstances where blasting might be required, avoidance could be achieved by using alternative working techniques¹³⁶. However, if it is practicably unavoidable to carry out blasts, all operations must be carefully designed so that the number of events and the quantity of explosives is kept to a minimum. Specific limits controls and ongoing monitoring may be necessary. This will be enforced through the use of planning conditions to ensure the protection of surrounding areas, particularly nearby land uses sensitive to vibration.

Visual Intrusion – visual impacts, light pollution and privacy

Visual impact

292. The scale and significance of visual impacts is normally defined through an assessment of publicly accessible viewpoints. Of critical importance is the identification of nearby receptors (e.g. residential properties, places of work, visitor attractions etc.) and the degree of adversity that might present itself. Visual impact will be reviewed against relevant components of a minerals development such as the evolving nature of the site landform; the approach to screening, including management of any retained features; site layout; access arrangements; height and design of any built structures and machinery; and the planned programme of restoration. The likely effectiveness of any proposed mitigation will be of the upmost significance. Mineral development proposals should be accompanied by an appropriately detailed visual impact assessment concerning the relevant matters identified above. This should ideally form part an integrated assessment including wider landscape impacts that is often described as a Landscape & Visual Impact Assessment (LVIA)¹³⁷.

Light pollution

293. Mineral developments can generate light pollution where operations take place in the morning at or around sunrise, into the late afternoon and evening and in certain circumstances at night. Light pollution may involve skyglow (upward light pollution), lateral glare or light spill (where lighting illuminates areas beyond where it is supposed to).

¹³⁶ 'Ripping' is an established alternative to blasting. It is a means of achieving the mechanical breakage of rock. A common method includes the use of a bulldozer fitted with a tooth at the rear. Where secondary fragmentation is deemed necessary, alternatives to blasting could involve the use of a steel drop ball or pneumatic / hydraulic impact breakers. Minerals development proposals may be required to demonstrate why these types of alternative options are not possible as part of their justification for the need to carry out blasting.

¹³⁷ Planning Practice Guidance (PPG) minerals extraction section, paragraph: 059, reference ID: 27-059-20140306

294. Unacceptable levels of light pollution can adversely affect the quality of life and well-being of local communities and the enjoyment of the natural environment including intrinsically dark landscapes. There may also be potential impacts to biodiversity such as feeding bats. As a result light impacts from artificial lighting must be well designed and effectively controlled so as not to breach acceptable levels. Attention should be given to the positioning, height, alignment, intensity and proposed periods of use. Planning practice guidance considers the effective assessment of light pollution and relevant factors for review through the planning system¹³⁸.
295. The Cotswold AONB contains several designated Dark Sky Discovery Sites that are located within Oxfordshire, but very close to the county boundary¹³⁹. Any nearby minerals development proposals that risk generating light pollution should take account of the special characteristics of these designations.

Privacy

296. The siting of mineral developments in relation to neighbouring properties could result in the loss of privacy, usually through overlooking. Loss of privacy will normally be measured against the amount of private space afforded to residential properties likely to be adversely affected. The disruption caused to the enjoyment of habitable rooms within the main dwelling house and any immediate garden space will represent the starting point for defining private space that may be impacted¹⁴⁰. Nevertheless, assessments of this nature must be carried out on a case-by-case basis. The entire curtilage of a dwelling house may not always be a reasonable and proportionate definition of private space for determining whether a loss of privacy will occur.

¹³⁸ Planning Practice Guidance (PPG) light pollution section, paragraph: 001, reference ID: 31-001-20140306

¹³⁹ East of Moreton-in-Marsh at Long Compton and the Rollright Stones site close to Chipping Norton have been designated as Dark Sky Discovery Sites. More information on these sites can be obtained at: - <http://www.darkskydiscovery.org.uk/dark-sky-discovery-sites/map.html#nominate>

¹⁴⁰ A habitable room is normally defined as being a bedroom; living room; kitchen; dining room; study / home office; and / or a child's play-space. It is not usual to apply the same definition to a hallway; stairwell; passageway; or utility room.

Cumulative Impact

Reasoned justification

297. The cumulative effect from mineral developments can give rise to challenging adverse impacts, which may prove to be unacceptable. Cumulative adverse impacts can result from multiple activities taking place on a single site and / or as a result of a combination of activities across several mineral development sites. It may also arise from intensified development generally across a locality, which can extend beyond the administrative area of Gloucestershire.

Policy DM02 | Cumulative impact

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

- I. unacceptable cumulative adverse impacts will not be generated from within the mineral site for which the proposal is located and / or from a number of minerals and non-mineral developments in the locality; or**
- II. the benefits of development will clearly outweigh unacceptable cumulative adverse impacts to justify the grant of planning permission.**

Contributes to the delivery of plan objectives – LC, ENV and MM

Interpretation and implementation

298. National policy identifies the potential for harm from the cumulative effects of minerals development. It is expected that all potential cumulative effects are appropriately assessed to ensure any unacceptable adverse impacts on natural and historic environments and human health will not transpire¹⁴¹. It also states that new development must not create severe cumulative adverse impacts on the transport network¹⁴².

299. Mineral development proposals will be expected to identify potential cumulative impacts and to show how these will be avoided or sufficiently mitigated to prevent unacceptable adverse impacts from arising. In respect of cumulative impacts related to intensified development across a locality, the parameters for this will need to be agreed on a case-by-case basis depending upon prevailing environmental conditions and geography, the

¹⁴¹ National Planning Policy Framework (NPPF) section 13, paragraph 143, bullet point 6.

¹⁴² National Planning Policy Framework (NPPF) section 4, paragraph 32, bullet point 3.

scale of development proposed and the nature of the individual matter of concern subject to a cumulative impact assessment.

300. It may be justified to impose planning conditions to limit activities by way of operating hours or levels of production on monthly or annual basis in order to make proposals acceptable in planning terms. Other specific policy requirements contained within the plan may also have a role in avoiding or minimising cumulative impacts. An example of this is policy MR01 (Restoration, aftercare and facilitating beneficial after-uses), where phased working and progressive restoration techniques are preferred. Under these circumstances the principle that underpins policy DM02 should be adhered to.
301. Where it is not possible to demonstrate that cumulative adverse impacts can be effectively mitigated to an acceptable level, consideration could be given to the possible benefits from mineral development proposals and whether these outweigh any anticipated harm. An assessment of identified benefits will be required and this will be rigorous scrutinised. Benefits may amount to wider environmental improvements, a meaningful contribution towards sustaining or growing the local economy, or avoiding the unnecessary sterilisation of valuable mineral resources. However, the nature and significance of any benefits put forward will only be judged on a case-by-case basis.

Transport

Reasoned justification

302. Mineral developments are heavily reliant on Gloucestershire's highway networks and those of surrounding areas. They allow for the hauling of minerals to markets or for further processing and provide the means by which staff and customers can gain access. The county's mineral supplies are predominately local in nature and follow well established routes that are strongly aligned with the existing road infrastructure. This presents very limited opportunities for more sustainable modes of transport such as rail, ports or other inland waterways to attract the necessary interest and accompanying investment to act as a viable alternative. Nevertheless, Gloucestershire still contains numerous rail links, navigable waterways and canals that under the right circumstances could be used as an alternative to the movement of minerals by road.
303. It is vitally important Gloucestershire's roads function in as an efficient and effective manner as possible. The management of all traffic generated locally and further afield is vitally important to this fundamental aim. For new mineral development proposals, the generation of new or additional vehicle movements must not result in unacceptable adverse impacts on the county's highway networks and also those of surrounding areas.
304. Avoiding the creation or exacerbation of transport impacts through new development will always be the preferred approach and wherever possible efforts should be made to minimise the amount of road miles travelled. Not only will this reduce the potential for adverse impacts to occur, but it will also contribute towards wider national transport policy ambitions – such as reducing the need for travel by significant road users¹⁴³ and helping to curb greenhouse gas emissions from freight¹⁴⁴.
305. Mineral developments can also affect other transport-related infrastructure such as the public rights of network and open access land¹⁴⁵. Wherever reasonable and practicable, these facilities should be retained and their safe use, function and enjoyment preserved.

¹⁴³ National Planning Policy Framework (NPPF) section 4, paragraph 34

¹⁴⁴ Government Freight Policy – <https://www.gov.uk/government/policies/freight>

¹⁴⁵ Open access land is provided for through the Countryside and Rights of Way (CROW) Act 2000. It allows the right of access by foot for open air recreation. However, it is subject to a number of exclusions set out in the legislation. In Gloucestershire, a significant amount of the Public Forest Estate within the Forest of Dean has been designated as open access land without exclusions or restrictions.

Policy DM03 | Transport

Alternatives to road transport

Mineral development proposals will be permitted that use more sustainable, alternative modes of non-road transport.

Highway Network

Mineral development proposals will only be permitted where public safety is not adversely affected and it can be demonstrated: -

- I. unacceptable impacts on the capacity and function of the strategic and local highway networks will be avoided; and / or**
- II. mitigated to ensure unavoidable adverse impacts on the capacity and function of the strategic and local highway networks will not be severe.**

Public Rights of Way (ProW) Network

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

- I. public rights of way routes and / or open access land will be retained and their safe use maintained, and unacceptable adverse impacts will be avoided or satisfactory mitigated; and / or**
- II. the temporary or permanent diversion of public rights of way routes and / or the temporary restriction or permanent exclusion of access to open access land is justified and that such changes will not affect public safety and cause unacceptable impacts on the integrity and enjoyment of the wider public rights of way network and / or open access land in the locality; and / or**
- III. the formal closure of public right of way routes represents a very exceptional circumstance where replacement routes are no longer required and that unacceptable impacts on the wider public rights of way network will be avoided.**

Mineral development proposals affecting National Trails will be permitted only where unacceptable adverse impacts are avoided or satisfactory mitigated.

Linked to the delivery of plan objectives – MM

Interpretation and implementation

Transport Network

306. Avoiding adverse impacts on Gloucestershire's local and strategic highway networks and those of surrounding areas is the preferred solution with new mineral developments. Minimising the amount of vehicular movements linked to a proposal site could be a means of accomplishing this, which is also supported by national policy¹⁴⁶. Ideally using existing transport infrastructure that supports non-road modes of transport such as rail and inland waterways within and beyond the county, and port facilities for more strategic journeys, should occur wherever possible. However, where additional infrastructure is needed to enable the use of non-road modes of transport, this will also need to be acceptable in planning terms.
307. Non-road haulage of minerals is limited within the county due to the reasons discussed both in the spatial portrait and reasoned justification for the policy. Nevertheless, at the local level preference should still be given to on-site processing rather than exporting raw material to other facilities, using conveyor belts and pipelines, or constructing internal haul roads. Although careful consideration must be given to other planning matters such as avoiding unacceptable amenity impacts.
308. For new mineral development proposals that use the local and / or strategic highway network, the potential for adverse impacts arising must be carefully scrutinised. National policy provides a clear threshold in this respect, focused on ensuring severe impacts on the highway network is prevented¹⁴⁷. Particular issues likely to be scrutinised include: - network capacity; maintenance, safety of road users, debris on the highway and related amenity impacts such as noise, dust, vehicular vibration, and air and water pollution. These impacts may be of significance to a variety of sensitive receptors located along mineral haulage routes and not just those local communities that are close by to the proposal site.
309. Attention should also be given to other related policies set out in the plan such as policies DM01 and DM05 concerned with amenity and water quality impacts respectively. Policy DM02 may also require consideration where cumulative impacts are likely to be present.
310. In addition, opportunities to reduce impacts on the highway networks resulting from staff / and or site visitors should be investigated, particularly where this may contribute to the delivery of other cycling and walking initiatives.

¹⁴⁶ National Planning Policy Framework (NPPF) section 4, paragraph 35

¹⁴⁷ National Planning Policy Framework (NPPF) section 4, paragraph 32, bullet point 3

Highways-related requirements with minerals development proposals

311. The Local Highway Authority (LHA) and / or Highways England (HighE)¹⁴⁸ – who are responsible for stretches of the strategic road network (SRN) within Gloucestershire, should be contacted by prospective applicants, where highway networks could be affected. This will help to establish as early as possible whether a Transport Assessment (TA) or Transport Statement (TS) is needed and what will be required as part of any subsequent highway assessment¹⁴⁹.
312. In the event potentially unacceptable adverse impacts are identified, information as to how these will be made acceptable will be critical. Mitigation measures to this effect might include specific infrastructure improvements or financial contributions towards work to the highway network. Physical schemes may incorporate junction improvements and management, road widening along stretches of the highway, increasing visibility around site access and / or the construction of new accesses or junctions.
313. Proposals that will affect existing permitted freight movements and / or will generate additional movements on the county's roads and those of surrounding areas, should include commitments that will be enforced by the use of planning conditions or planning obligations, to use freight routes that align with the Gloucestershire Freight Gateway and other local freight guidance produced for surrounding areas¹⁵⁰.
314. Route management plans that formally designate freight routes for mineral developments may also be sought, particularly where more sensitive sections of the highway could be exposed to minerals-related traffic such as HGVs or ELVs (Extra Long Vehicles). Critical to any new designated route will be the ability to maintain highway safety, and avoid environmental damage and / or loss of amenity for local communities. Sensitive receptors both within and outside of the county should be safeguarded to prevent unacceptable harm from occurring.
315. Small and ordinarily unsuitable local roads should also be avoided wherever practicable. The acceptability of local roads to accommodate minerals-related traffic will be judged on a case-by-case basis.

¹⁴⁸ As of April 2015 the Highways Agency (HA) was replaced by Highway England (HighE) under provisions set out in the Infrastructure Act 2015. HighE is described as an 'arm-length government company' with responsibility for the managing the Strategic Highway Network (SRN) covering England, which was previously managed by the HA. <https://www.gov.uk/government/news/highways-england-to-take-over-motorways-and-major-a-roads>

¹⁴⁹ Planning Practice Guidance (PPG) transport assessments and statements section, paragraph: 013, reference ID: 42-013-20140306 offers advice to LPAs as to the sort of criteria that should apply in determining the need for a TA or TS.

¹⁵⁰ The Gloucestershire Freight Gateway System can be assessed at: - <http://www.gloucestershire.gov.uk/freight-gateway> . Other local freight guidance that may be relevant includes: - the Wiltshire (and Swindon) Freight Route Network Map; West of England Freight Network Management Plans (covering Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire); the freight routing information contained within the emerging Marches Local Enterprise Partnership Freight Strategy, which covers Herefordshire, Shropshire, Telford & Wrekin; Oxfordshire Lorry Route Map; Worcestershire Advisory Lorry Route Map; and Warwickshire Advisory Lorry Route Map (2nd Edition).

PRoW network

316. In the case of the public rights of way network and open access land, minerals developments should avoid adverse impacts from occurring. Retaining accessibility and usability should be seen as the priority. However, for health & safety and security reasons proportionate restrictions or diversions of a temporary or permanent nature may be necessary.
317. Mineral development proposals affecting the public rights of way network and open access land will need to establish the anticipated scale of any envisaged impacts. All associated details (e.g. diversions) will need to be fully detailed and justified. Local advice should be obtained as early as possible from the LHA in respect of this matter. Where opportunities to enhance the network exist, which could involve the creation of additional links, this may be viewed as a relevant factor in determining the acceptability of proposals¹⁵¹.
318. The presence of National Trails (NTs) should be seen as a potentially significant constraint upon new minerals development. They must not be removed or subject to unacceptable adverse impacts, which could include affects upon their integrity and / or the ability to successfully deliver the management standards set for national trails¹⁵². Advice from Natural England, LHA and the relevant local trail partnership will be sought in respect of this matter

¹⁵¹ National Planning Policy Framework (NPPF) section 8, paragraph 75

¹⁵² There are a number of national standards for National Trails, which cover a range of factors, from path condition to the social and economic benefits of a trail. Details can be found within 'New Deal – The Management of National Trails in England from April 2013' This document can be viewed at: - <http://publications.naturalengland.org.uk/publication/6238141?category=211280>

Flood risk

Reasoned justification

319. The threat of flooding is present across many parts of Gloucestershire. Significant flooding events in the recent past have highlighted the need to be better prepared and for greater resilience¹⁵³. Over the coming decades the risk of flooding is set to rise. This is due to ever increasing demands upon land from a growing population and the impacts of climate change. Gloucestershire is expected to see greater fluctuations in weather patterns with wetter winters, periods of prolonged drought and more severe, extreme wet weather events at other times of the year¹⁵⁴.
320. Mineral developments have the potential to contribute both positively and negatively to the risk of flooding. While the working of sand and gravel is recognised as being water-compatible, extracting other local mineral resources will require careful consideration of their relationship with areas of heightened flood risk. It is vitally important that the development of mineral sites in all locations does not undermine Gloucestershire's resilience to the effects of flooding now and in the future.

Policy DM04 | Flood risk

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

- I. they will be resilient to the impacts of flooding;**
- II. there will be no increase in the risk of flooding from all sources now and in the future; and**
- III. wherever possible, flood risk betterment initiatives will be delivered.**

The application of a sequential test that will favour the location of development within Flood Zone 1 is fundamental to assessing the acceptability of mineral developments and will be required as part of the supporting evidence for proposals.

Proposals located within Flood Zone 2

Mineral development proposals will be permitted in Flood Zone 2, where it can be shown no reasonable alternative locations within Flood Zone 1 are available.

Proposals located within Flood Zone 3a

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matters/environment-strategies/

Mineral development proposals will only be permitted in Flood Zone 3a, where they are classified as ‘less vulnerable’ or ‘water compatible’ and it can be demonstrated that no reasonable alternative locations are available within both Flood Zones 1 and 2.

Proposals located within Flood Zone 3b (the functional floodplain)

Mineral development proposals will only be permitted in Flood Zone 3b, where it can be demonstrated: -

- I. they are classified as ‘water compatible’; and**
- II. there will be no net loss of floodplain storage, no impediment to water flows, and no increase in flood risk elsewhere; or**
- III. wider sustainability benefits to the community exist that outweighs the risk of flooding as determined through an exception test.**

Proposals exceeding 1 ha within Flood Zone 1 and all other proposals within Flood Zones 2, 3a or 3b

Mineral development proposals must be accompanied by a Flood Risk Assessment (FRA) that will show how the risk of flooding on-site and elsewhere from all sources will not increase and, where possible could be reduced. The FRA must identify and assess: -

- current and future sources of flooding, appropriately taking into account the impacts of climate change;**
- set out how flood risk on-site and elsewhere will be effectively managed for the lifetime of the proposal including during site restoration and aftercare; and**
- identify measures to prevent increased flood risk including through the use of sustainable drainage systems and compensatory works if any loss of flood storage capacity is expected to occur.**

Contributes to the delivery of plan objectives – LC and ENV

Interpretation and implementation

321. National policy advocates the location of development including for minerals, away from areas at the highest risk of flooding wherever it is possible to do so. This will contribute to the avoidance of the increased risk of flooding for both people and property¹⁵⁵.
322. Applying a sequential test provides the mechanism for steering development towards areas of the lowest probability of flooding. Minerals development proposals that are not contained within the plan's allocations, including those for ancillary and / or supporting infrastructure (e.g. processing plant) must undergo a sequential test before deciding upon a preferred location.
323. Minerals can only be worked where they occur and their development could prove crucially important in delivering other national policy objectives such as ensuring steady and adequate supplies of minerals are maintained. Therefore, geological constraints may be a major influence in assessing the outcome of sequential tests.
324. An exception test may also be applicable, but only in certain circumstances where particular development proposals cannot meet the sequential test requirements¹⁵⁶. An exception test affords the opportunity to retain the effective management of flood risk in more vulnerable flood risk areas, whilst allowing some types development to take place.
325. The Gloucestershire Strategic Flood Risk Assessment (Glos-SFRA) provides detailed guidance on the application of the sequential test across the county¹⁵⁷. It is an important local technical planning document, which is fundamental to the implementation of policy DM4.
326. Surface Water Management Plans (SWMPs) have been prepared for parts of Gloucestershire¹⁵⁸. These provide enhanced flood-related information including the risk of surface water flooding. The Environment Agency has also prepared and updated Flood Map for Surface Water (uFMfSW) and several strategic-scale Catchment Flood Management Plans (CFMPs), which cover Gloucestershire and bordering local authority flood areas¹⁵⁹. This information should be considered alongside the Glos-SFRA when assessing the flood risk of individual proposals.
327. Mineral development proposals must be able to demonstrate how an increase in flood risk at their immediate location, elsewhere and in the future – taking into account the

¹⁵⁵ Footnote: - National Planning Policy Framework (NPPF), section 10, paragraph 100

¹⁵⁶ Specific details about the types of development and applicable levels of flood risk for considering an exception test are set out in Department for Environment, Food & Rural Affairs and Environment Agency, Guidance on Flood risk Assessment: the sequential test for applicants – <https://www.gov.uk/guidance/flood-risk-assessment-the-sequential-test-for-applicants#the-exception-test>.

¹⁵⁷ The Gloucestershire Strategic Flood Risk Assessment (Glos-SFRA) Level 1 (*specifically for minerals & waste*) can be obtained at: - <http://www.gloucestershire.gov.uk/planning-and-environment/flood-risk-management/flood-planning-information/>

¹⁵⁸ 6 Surface Water Management Plans (SWMPs) have been completed and published by GCC in its capacity as the Lead Local Flood Risk Authority (LLFRA). The areas include: - Cheltenham, Tewkesbury, Bishops Cleeve, Southam & Woodmancote, Gloucester, and Churchdown & Innsworth. Gloucestershire's SWMPs can be obtained at: - <http://www.gloucestershire.gov.uk/roads-parking-and-rights-of-way/plans-policies-procedures-manuals/surface-water-management-plans/>

¹⁵⁹ The updated Flood Map for Surface Water (uFMfSW) (2013) can be obtained at: - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297432/LIT_8988_Obf634.pdf. The River Severn CFMP, Severn Tidal Tributaries CFMP and Thames CFMP can be obtained at: - <https://www.gov.uk/government/collections/catchment-flood-management-plans>

impacts of climate change, will not occur. All elements of minerals development must adhere to these requirements, including all built structures, the working of minerals themselves and also the carrying out of restoration and aftercare¹⁶⁰.

328. The nature of mineral working including restoration has the potential to influence flood risk way beyond site boundaries. It can have an impact on local hydrological processes through affecting infiltration rates that cause or contribute towards changes in surface runoff – a major influence on the time taken and the volume of water that travels from the land to rivers, streams and other water bodies. As a result the impact on nearby road, recreational routes and other areas that are vulnerable to increased surface runoff, combined with the known flood conditions of surrounding areas should be assessed and any additional off-site risks identified. Heightened flood risks should be avoided wherever possible, although suitable mitigation measures may be acceptable.
329. Flood risk mitigation may include the installation of sustainable drainage systems and or the provision of, or contribution towards the delivery of other flood prevention and management infrastructure. In all instances plans for the adoption, ongoing maintenance and management of mitigation measures will need to be submitted, which could involve having to make arrangements for legally-binding agreements with key interested parties. In determining the right package of flood risk mitigation, a strategic view should also be taken alongside a carefully considered analysis of the flood risk circumstances of the site and within the surrounding locality. Adopting a Catchment Based approach to the consideration of mitigation offers the best way of achieving this.
330. Mineral development proposals can make a contribution to reducing the risk of flooding in an area. This can occur through well-planned and executed sequential working and site restoration that will contribute towards climate change resilience by way of additional flood storage and attenuation. Subject to site constraints, environmental limitations and taking account of other local policy objectives, opportunities to achieve net increases in flood storage capacity should be taken up wherever reasonable and practicable to do so¹⁶¹. Incorporating flood risk betterment is a positive action and will be viewed favourably in the overall planning balance for mineral development proposals.
331. The MPA will look to the advice of the Environment Agency and the Lead Local Flood Risk Authority when assessing the significance of flood risk with mineral development proposals¹⁶². National guidance has been produced setting out standard consultation

¹⁶⁰ SuDS are an acronym of Sustainable Urban Drainage Systems. However, development of flood strategy and policy over the recent years has expanded the practice of apply a SuDS approach. As a result the reference to 'urban' has been largely dropped from general use.

¹⁶¹ In certain mineral resources locations in Gloucestershire, very careful consideration will need to be taken for those proposals that may offer flood storage enhancement restoration opportunities (e.g. through facilitating 'wet' restoration). These could equally result in negatively impacting aviation safety by encouraging species of birds known to exacerbate the risk of bird-strike (see MLP policy DM11).

¹⁶² The Lead Local Flood Risk Authority (LLFRA) for Gloucestershire is Gloucestershire County Council

practice in respect of this matter¹⁶³. However, this does not preclude further advice from these bodies being sought on an individual basis.

332. National guidance on how best to assess flood risk with planning proposals has also been produced¹⁶⁴. This includes the requirements for carrying out a FRA. Thresholds for FRA submissions are specified within national policy¹⁶⁵ and a detailed checklist of minimum FRA content has been included within planning practice guidance¹⁶⁶.

¹⁶³ Department for Environment, Food & Rural Affairs and Environment Agency, Guidance: Flood risk assessment: local planning authorities (updated Feb 2017) – <https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities>

¹⁶⁴ Department for Environment, Food & Rural Affairs and Environment Agency, Guidance: Flood risk assessment: local planning authorities (updated Feb 2017) – <https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities>

¹⁶⁵ National Planning Policy Framework (NPPF) section 10, paragraph 103, footnote 20.

¹⁶⁶ Planning Practice Guidance (PPG) flood risk and coastal change section, paragraph: 030, reference ID: 7-030-20140306 and paragraph: 031, reference ID: 7-031-20140306.

Water resources

Reasoned justification

333. Gloucestershire's water resources are widespread and inter-connected. They cover over 5,000km of surface watercourses and a number of sizeable groundwater aquifers.
334. Several principal rivers run through the county – the Severn, Wye, Avon and Thames. There is also an extensive network of smaller watercourses. Gloucestershire is sited within two nationally recognised river basin areas – the Severn and the Thames¹⁶⁷. Natural habitats and wildlife areas, including some of national and international importance, are also hugely reliant upon the quality and reliable quantity of Gloucestershire's watercourses.
335. Large areas of Gloucestershire sit above designated Principal and Secondary Aquifers that contribute to drinking water supplies¹⁶⁸. These areas are predominately, but not exclusively found in the south-west of the county, and also contain a number of designated Groundwater Source Protection Zones (SPZs) that highlight sources of public drinking water. The key focus of SPZs is to reduce contamination risk from surrounding activities¹⁶⁹.
336. In addition, several statutorily and non-statutory Drinking Water Safeguarding Zones (DW-SZs) also exist within the county. The EA and water companies target these zones when combating contamination risks and seeking to avoid costly additional treatment and water management infrastructure¹⁷⁰.
337. Mineral developments have the potential to impact on the management of water resources. Mineral working and / or the removal and storage of overburden and soils, and de-watering operations could influence groundwater recharge and depletion rates as well as the dynamic of surface water flows. Significant volumes of water may be required in the washing of minerals and other processing activities. The use of industrial machinery and vehicles could also heighten water pollution risks affecting both surface and groundwater resources.

¹⁶⁷ England & Wales River Basin Map (Oct 2015) which has been published by EA can be obtained at : - <https://www.gov.uk/government/publications/river-basin-district-map>

¹⁶⁸ As of April 2010 aquifer designations in the England was re-classified into Principal and Secondary, with further sub-divisions of the Secondary type. This change was to ensure greater consistency with the Water Framework Directive. Designation is determined by virtue of the importance of the aquifer as a resource for drinking water supplies, supporting surface water flows and wetland ecosystems.

¹⁶⁹ Detailed groundwater mapping information (Aquifers and Source Protection Zones) for England, including Gloucestershire, can be obtained from the Environment Agency's 'What's In Your Backyard' web-resource at : - <http://apps.environment-agency.gov.uk/wiyby/117020.aspx>

¹⁷⁰ Detailed information on zoning for drinking water safeguarding can be obtained from the Environment Agency's web-resource at : - http://maps.environment-agency.gov.uk/wiyby/wiybyController?topic=drinkingwater&layerGroups=default&lang=_e&ep=map&scale=5&x=531500&y=181500#x=531500&y=181500&lg=2,3,&scale=5

Policy DM05 | Water resources

Mineral development proposals will be permitted where it can be demonstrated: -

- I. there will be no deterioration in water quality;**
- II. they will not prejudice the quantity of water contained within water bodies;**
- III. due regard has been given to the actions and objectives of the Severn and / or Thames River Basin Management Plan (RBMP) in striving to protect and improve the quality of water bodies;**
- IV. the physical integrity of watercourses will be preserved; and**
- V. wherever possible, measures to achieve the efficient use of water will be delivered.**

Linked to the delivery of plan objectives – LC and ENV

Interpretation and implementation

338. The Water Framework Directive (WFD) sets the overarching policy for protecting and improving the water quality and ecological health of all water bodies – rivers, lakes, canals, estuaries and coastal and ground waters throughout the UK. It requires there to be at least no deterioration in the status of all water bodies and presently sets a target to achieve at least ‘Good Status’ for all by 2015¹⁷¹.
339. Reflective of WFD requirements, national policy advises on the need to prevent mineral development proposals from having unacceptable adverse impacts on the quantity and flow of surface and ground water and the migration of contamination¹⁷². More generally it also seeks to prevent all types of development from causing or contributing to unacceptable levels of water pollution¹⁷³.
340. Mineral development proposals should be supported by a hydrological and hydrogeological assessment that provides an analysis of risk to water resources and how any possible adverse impacts will be avoided or mitigated. In line with planning

¹⁷¹ The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 – <http://www.legislation.gov.uk/ukxi/2003/3242/contents/made>

¹⁷² National Planning Policy Framework (NPPF), section 13, paragraph 143, bullet point 6

¹⁷³ National Planning Policy Framework (NPPF), section 11, paragraph 109, bullet point 4

practice guidance, the assessment should identify the water bodies that represent potential planning concern – those directly affected through proposed modifications or as a consequence of indirect activities¹⁷⁴. The assessment must also consider the nature of potential adverse impacts upon identified water bodies and the options for reducing impacts to acceptable levels including an analysis of the delivery of effective and deliverable mitigation measures. The objective must be to demonstrate at least, how the current status of identified water bodies will not suffer any deterioration.

341. In preparing a hydrological and hydrogeological assessment particular attention should be paid, where relevant to the Severn River and / or Thames River Basin Management Plans¹⁷⁵. These plans implement the WFD at the sub-national level by way of a catchment-based approach to water management, which will ensure a holistic view is taken over hydrological influences affecting a larger-than-local area. A catchment-based approach to water management is encouraged through planning practice guidance¹⁷⁶. The Severn River and Thames River Basin Management Plans identify key technical information concerning the hydrological characteristics of Gloucestershire and surrounding areas and set out actions to be taken to ensure there is no deterioration in the quality of water bodies from their current status. The plans also consider the means of delivering improved water quality status. Consequently, Mineral development proposals should incorporate measures wherever possible, that will contribute to the improvements outlined within the relevant River Basin Management Plan.
342. Mineral development proposals involving dewatering activities should be supported by detailed technical evidence as part of a wider hydrological and hydrogeological assessment. The approach put forward must accord with advice published on this matter by the Environment Agency¹⁷⁷. Furthermore, for locations, which contain significant archaeological deposits, potential risks associated with dewatering will need to be careful scrutinised. Where minerals development proposals are located near to watercourses, it will always be preferable for their physical integrity to be preserved. The provision of ‘stand-off’ strips or areas between the banks of the watercourse affected and mineral working may be an effective means of achieving this, which may also present a number of complementary activities. Through the appropriate treatment of stand-off areas, visual and / or landscape impacts of mineral developments could be reduced (see policies DM01 and DM09). Stand-off areas may also be used to positively contribute to the management of flood risk (see policy DM04) and / or facilitate tangible biodiversity enhancements (see policy DM06) that in turn may aid the delivery of ecological improvements to the status of water bodies.

¹⁷⁴ Planning Practice Guidance (PPG), water supply, wastewater and water quality section, paragraph: 016, reference ID: 34-016-20140306.

¹⁷⁵ The Severn River District and Thames River District River Basin Management Plans (current versions published in February 2016) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

¹⁷⁶ Planning Practice Guidance (PPG), water supply, wastewater and water quality section, paragraph: 002, reference ID: 34-002-20140306

¹⁷⁷ Hydrogeological Impact Appraisal for Dewatering Abstractions (2007) can be obtained at: - <https://www.gov.uk/government/publications/hydrogeological-impact-appraisal-for-dewatering-abstractions>

343. Early engagement with the County Council as the Mineral Planning Authority, the Environment Agency, the Lower Severn Internal Drainage Board¹⁷⁸ and relevant local water and sewerage companies is strongly encouraged. This can help to establish if water resources are likely to be a significant planning concern with minerals development proposals and, if so, to clarify the scale and recommended content of a supporting hydrological and hydrogeological assessment. The Environment Agency has also provided a number of sources of information to assist in the initial determination of water resources risks. These include flood and coastal risk management plans and strategies, abstraction management, groundwater vulnerability maps and the location of source protection zones¹⁷⁹.
344. To facilitate the effective management of resource water and support climate change resilience, minerals development proposals should adopt measures to improve the efficiency use of water following best practice methods. Rain water harvesting, the recycling of water and the provision of storage facilities are common approaches that could be employed. In the case of water storage, replenishment of reservoirs during the wetter winter months or periods of more intense rainfall may contribute to the supply of water needed for mineral washing and dust suppression systems during drier summer periods or when drought conditions prevail.

¹⁷⁸ The Lower Severn Internal Drainage Board (LSIDB) is responsible for over approximately 21,000 ha of land (including parts of Gloucestershire) alongside the Rivers Severn, River Frome in the Stroud Valley. They are charged with responsibilities for the management and maintenance of flood defence and drainage systems, mostly in sensitive low lying areas. Their activities include the improvement and maintenance of rivers, drainage channels and pumping stations. More details concerning the LSIDB can be found at: - <http://www.lowersevernidb.org.uk/>

¹⁷⁹ The Environment Agency has published a wealth of information related to water resource issues that can be obtained online. For matters relating to flood and coastal change this can be obtained at: - <https://www.gov.uk/topic/environmental-management/flooding-coastal-change>. For water abstraction this can be obtained at: - <https://www.gov.uk/guidance/water-management-abstract-or-impound-water#water-abstraction>. For groundwater vulnerability mapping this can be obtained at: - <https://www.gov.uk/government/publications/updated-groundwater-vulnerability-maps-improvements-to-methodology-and-data>. For Source Protection Zone information this can be obtained at: - <http://apps.environment-agency.gov.uk/wiyby/37833.aspx>.

Biodiversity and Geodiversity

Reasoned justification

345. Gloucestershire is renowned for its rich and diverse natural environment made up of individual species, habitats, ecosystems, geological landforms and features. A number of assets are of international and / or national significance and afforded special protection enshrined in UK law.
346. A total of 11 internationally important sites, currently known as ‘European Sites’, which have been designated as either Special Areas for Conservation (SACs) or Special Protection Areas (SPAs) fall within the county and / or lie within it’s sphere of influence (e.g. no more than 15km away). Two of these sites are also designated as Ramsar sites – wetlands of international importance that from a UK Government viewpoint are treated in the same manner as SACs and SPAs¹⁸⁰.
347. Internationally important nature conservation designations affecting Gloucestershire are subject to specific legal requirements, from a planning perspective, that go beyond the consideration of individual development proposals. All emerging plans and strategies must be confident that their proposed actions, if adopted, will not have a likely significant effect upon any European Site and if necessary be able to demonstrate that they will not adversely affect the integrity of such sites.
348. Gloucestershire’s national nature conservation designations include about 100 Sites of Scientific Interest (SSSIs), notified for their biological and / or geological interest, and four National Nature Reserves (NNRs) – important habitats that contain valuable species and geology and have research potential. SSSIs are protected by the Wildlife and Countryside Act 1981 (as amended) as are numerous plants, birds and other species that are resident to Gloucestershire. Some species which are particularly threatened or declining are afforded additional ‘European Protected Species’ status under the Conservation of Habitats and Species Regulations 2017.
349. The county accommodates well over 800 Key Wildlife Sites (KWS), which support a diverse range of habitats and valuable linkages that allow wildlife to move across Gloucestershire. There are also around 200 Regionally Important Geological Sites (RIGS), which are the most important places for geological and geomorphological conservation outside of SSSI designations.
350. Beyond the regime for designated sites and areas of nature conservation interest, the Gloucestershire Nature Map also provides a vehicle for identifying and planning

¹⁸⁰ As set out within National Planning Policy Framework (NPPF) section 11, paragraph 118, bullet point 6 and DEFRA Circular 01/2005

enhancements to the county's wider ecological network¹⁸¹. The Nature Map network produced by the Gloucestershire Nature Partnership includes main river systems but mainly consists of locally defined landscape units called Strategic Nature Areas (SNAs). These are useful for targeting nature conservation actions but are not formal designations. The SNAs have been arranged into six county priority landscape groupings, which have assisted in the identification and formation of several Gloucestershire Nature Improvement Areas (NIAs). Local NIAs contain active partnerships that are restoring nature through joint co-ordinated action.

351. All parts of the county that fall outside of a nature conservation designation or a wider area identified through the Gloucestershire Nature Map, may still contain biodiversity value worthy of conserving or enhancing. The provisions of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on all public authorities to consider the purposes of conserving biodiversity whilst carrying out their functions and so is relevant to the Minerals Local Plan. This duty is in addition to complying with legislative requirements related to biodiversity but also to conserving priority habitats and species on the English List (Section 41, NERC Act).
352. Future development proposals, including those related to minerals, pose a potential threat to the habitats, wildlife, wider ecosystems and geological features and occurrences, which collectively make up Gloucestershire's natural environment. The fundamental action of removing materials and reshaping landforms will physically eradicate and / or irreversibly alter the conditions for biodiversity and geodiversity. Operational impacts such as light, noise, dust, air and water pollution may also have similar significant impacts particularly where more sensitive and less resilient habitats, species and geological features are present.
353. However, mineral developments also present tangible opportunities to secure enhancements to Gloucestershire natural environment. Although this is possible throughout a development site's life cycle it is particularly relevant to the latter stages where consideration is given to the final or sequential restoration of mineral sites. Policy MR01 covering mineral site restoration predominantly addresses this matter.

Policy DM06 | Biodiversity and geodiversity

Biodiversity and geodiversity outside of designated areas

Mineral development proposals that demonstrate the conservation of biodiversity and/or geodiversity, in addition to providing net gains where

¹⁸¹ Gloucestershire Nature Map forms part of wider nature conservation online resource known as 'Gloucestershire's Natural Environment'. It can viewed online at: - <http://www.gloucestershirenature.org.uk/index.php>

possible, will normally be permitted. Potential adverse impacts on natural environment assets must be avoided or satisfactorily mitigated in line with Gloucestershire Local Nature Partnership objectives. In exceptional circumstances, where an impact cannot be avoided or mitigated, then compensatory measures including the use of biodiversity and / or geodiversity offsets will be considered as a means to provide an overall net gain.

Designated sites and protected species

Mineral development proposals which, alone or in combination with other plans and projects, are likely to have a significant effect on any Internationally Important Site designated as a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site will only be permitted, where they have been subject to an Appropriate Assessment, which has determined that either:-

- I. there will be no adverse affect upon the integrity of such designated sites; or
- II. where adverse effects on integrity have been concluded, has satisfactorily addressed the subsequent stages in the Habitats Regulations Assessment (HRA) process as set out in table 3, which present imperative reasons of overriding public interest.

Mineral development proposals will only be permitted within designated Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and in localities that could have an impact upon such designations, where it can be demonstrated: -

- I. there will be no conflict with the conservation, management and enhancement of a designation;
- II. that any potentially harmful aspects of mineral development can be satisfactorily mitigated; and
- III. there would be no wider indirect and/or cumulative impact on the national network of SSSIs; or where the benefits of mineral development clearly outweigh the potential adverse impacts upon the key features of any designation.

Mineral development proposals on local sites that include Local Nature Reserves (LNR), Gloucestershire Key Wildlife Sites (KWS) and Regionally

Important Geological Sites (RIGS) and in localities that could have an impact upon such designations will be permitted where it can be demonstrated: -

- I. adverse impacts can be avoided and /or satisfactorily mitigated; or**
- II. where the benefits of minerals development clearly outweigh the potential adverse impacts upon the key features of any designation.**

Mineral development proposals that could adversely affect legally protected species will only be permitted where it can be demonstrated that suitable safeguarding measures will be provided.

Contributes to the delivery of plan objectives – LC and ENV

Interpretation and implementation

354. National policy requires balanced judgements to be made concerning the relationship between new development and the natural environment. The overarching aim is to conserve and enhance biodiversity and to prevent harm to geological conservation interests¹⁸².

355. To meet the requirements of policy DM06 mineral development proposals must be supported by robust evidence regarding biodiversity and where relevant, geodiversity impacts. Assessments must be prepared having regard to the nature conservation hierarchy present across the county and within its sphere of influence. Key matters that need to be addressed, include: -

- an understanding of the status, condition and potential vulnerability of any designated sites and undesignated areas of noteworthy biodiversity value that may be affected;
- the identification of any possible adverse impacts and their likely significance based on the sensitivity, relative abundance, integrity, habitat and / or species viability, and importance of biodiversity interests; and
- an appreciation of the potential overall risk of harm having carefully considered the potential of habitat and / or species loss, the proportion that these losses constitute international / national and / or local resources, and whether losses would be permanent or could be made temporary through the realistic and reasonable prospect that habitat and / or species regeneration may be achieved.

¹⁸² National Planning Policy Framework (NPPF), paragraph 117, bullet point 4 and paragraph 118;

356. In addition, biodiversity and geodiversity assessments must evaluate how mineral development proposals are able to avoid and / or mitigate possible adverse impacts deemed likely to generate harm to biodiversity in general, and / or, which would affect the defining features of designated sites¹⁸³. Where relevant, evidence to support any proposed application of compensation measures must show how these would only be pursued as a last resort in response to residual harm that cannot or may not be entirely mitigated¹⁸⁴. Biodiversity offsetting should ideally be locally-orientated, aligned with the aims and objectives of the overarching Gloucestershire Local Nature Partnership, and meet the aspiration of achieving an overall net gain in biodiversity. Evidence of partnership working in preparing biodiversity offsetting schemes, with local conservation groups and national and / or more strategic-scale organisations pursuing interest that will positively impact on Gloucestershire, landowners and local authorities may be given weight in the decision making process..
357. Internationally important sites of nature conservation within the county or that lie within its sphere of influence must be appropriately assessed to determine whether they are likely to be affected by mineral development proposals. This may culminate in a requirement to complete a Habitats Regulations Assessment (HRA). The key preparations stages are detailed below in table 3.

Table 3: - The key stages in the analysis of mineral development proposals in order to successfully complete a Habitats Regulations Assessment (HRA)

HRA or Internationally Important Sites Impact Assessment Process	
Key Stages for a Development Project	
Stage One	
Screening	<ul style="list-style-type: none"> • Identify European (International) Sites in and around the development site that might be affected by the proposals directly or indirectly • Examine qualifying features & conservation objectives • Identify potential effects on European (International) Sites from development. • Take account of the potential 'in-combination' effects of other plans and projects

¹⁸³ National Planning Policy Framework (NPPF), paragraph 118, bullet point 1 and 2;

¹⁸⁴ National Planning Policy Framework (NPPF), paragraph 118, bullet point 1;

	<p>ACTION ↓</p> <ul style="list-style-type: none"> • If there are no likely significant effects on a European (International) Sites then this is recorded and progression to Stage Two is <u>not</u> required. • If significant effects are judged likely or some uncertainty exists – the precautionary principle applies and progression to Stage Two is required unless the development is dropped or modified so that significant effects would not be likely to occur.
Stage Two	
<p>Appropriate Assessment (AA)</p>	<ul style="list-style-type: none"> • Collate information on European (International) Sites and evaluate impacts in the light of conservation objectives. • Consider how the development ‘in-combination’ with other plans and projects will interact when implemented. • Consider how adverse effects on integrity (AEol) of the European (International) Sites could be avoided by changes to the development including any alternatives and mitigation measures such as details about timescales and mechanisms. <p>ACTION ↓</p> <ul style="list-style-type: none"> • Report outcomes of AA giving consideration to alternatives and the development of mitigation measures. • If the AA conclusion is that the development <u>will not</u> have AEol of European (International) Sites then consider if any monitoring is needed before completing the HRA. • If the AA conclusion is that the development <u>will</u> have AEol of European (International) Sites then refuse the development or proceed to Stage Three.
Stage Three	
<p>Derogation</p>	<ul style="list-style-type: none"> • Despite the conclusion of AEol a derogation in certain special circumstances can allow the development to be consented but this requires 3 tests to be met: - <ul style="list-style-type: none"> ○ Test 1: There must be no feasible alternatives; ○ Test 2: There are ‘imperative reasons of overriding public interest’ (IROPI);

- | | |
|--|--|
| | <ul style="list-style-type: none"> ○ Test 3: All necessary compensatory measures can be secured to ensure that the overall coherence of the network of European (International) Sites as a whole will be protected. |
|--|--|

358. As highlighted in national policy, irreplaceable habitats including ancient woodland and aged or veteran tress found outside of ancient woodland, which clearly cannot be replaced should not be subject to loss or deterioration in condition wherever possible. Mitigation will only be acceptable where it will result in a reduction in residual adverse impacts to such an extent, that the benefits of the development will outweigh any occurrence of loss¹⁸⁵. Standing advice prepared by Natural England and the Forestry Commission on development with ancient woodland and veteran trees should be reviewed at earliest opportunity, ideally during the initial preparations stage¹⁸⁶.
359. Mineral development proposals can contribute to the achievement of net gains in biodiversity and deliver enhanced protection for habitats and species and / or the expansion and conservation of geological interests. This can be achieved either through the implementation of mitigation measures or site restoration. In line with national policy, weight may be given to proposed actions that will bring about local and landscape-scale preservation and restoration and / or the re-creation of priority habitats, ecological networks and the protection and recovery of priority species¹⁸⁷.
360. Particular weight may be given to opportunities aligned with the aims and objectives of the Gloucestershire Local Nature Partnership, which support the Gloucestershire Nature Map and its component Strategic Nature Areas (SNAs) and Nature Improvement Areas (NIAs)¹⁸⁸. Technical evidence to support site restoration strategies and their planned implementation, as required under policy MR01, could be applicable in this instance.

¹⁸⁵ National Planning Policy Framework (NPPF), paragraph 118, bullet point 5.

¹⁸⁶ National Guidance on Ancient woodland and veteran trees: protecting them from development can be obtained at: - <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

¹⁸⁷ National Planning Policy Framework (NPPF), paragraph 117, bullet points 1 and 3

¹⁸⁸ Local information concerning the initiatives supported by the Gloucestershire Local Nature Partnership (G-LNP) can be obtained at: - <http://gloucestershirenature.org.uk/index.php>

Soil resources

Reasoned justification

361. Soil is a finite multi-functional, natural resource that underpins our well-being and prosperity. It provides many essential services such as food and timber production, is an aid in water management – flooding and water quality, and is an important element in supporting thriving and sustainable ecosystems, promoting biodiversity and helping to deliver green infrastructure. As a store of carbon it also has a pivotal role to play in tackling climate change¹⁸⁹.
362. Gloucestershire is predominately a rural county and makes a regionally significant contribution to the UK's agricultural economy¹⁹⁰. It is known to contain valuable soil resources of the highest quality grades (i.e. grades 1, 2, 3a) based upon the national Agricultural Land Classification (ALC) system. This is a rating mechanism that considers the range of crops that can be grown, the level and consistency of their yields and the cost of obtaining them. The highest grade soil resources are collectively known as Best and Most Versatile Agricultural Land (BMVAL) and should be afforded protection to serve current needs and those of future generations.
363. Mineral developments can pose a risk to the quality and quantity of all soil resources including those which are classified as BMVAL. The physical removal of soils (i.e. stripping) is necessary to allow access to underlying minerals, but this can severely degrade the resource if not properly handled, appropriately stored and then restored after working has ceased. Heavy machinery associated with all aspects of mineral development can also be a cause of damaging effects such as compaction.
364. Contamination and degradation risks through the use of machinery and related transport activities may also arise with minerals development. This can spread to surrounding soils, even if they have not been physically disturbed. It is important therefore soil management issues are properly taken into account with minerals development proposals including actions to avoid and mitigate possible adverse impacts, but also to secure the long-term viability of soil resources through mineral restoration and aftercare.

¹⁸⁹ The strategic significance of soils is set out within Safeguarding our Soils: A Strategy for England prepared by DEFRA (2009) and which can be obtained at: - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69261/pb13297-soil-strategy-090910.pdf

¹⁹⁰ According to the DEFRA data release (Dec 2017): - *The structure of the agricultural industry in England and the UK at June (updated to 2016)* Gloucestershire made up 11% of the South West's total farmed area and supported about 10% of the region's agricultural workforce. The DEFRA data release can be obtained at: - <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>

Policy DM07 | Soil resources

Mineral development proposals will be permitted where they have been informed by and are sympathetic to the protection of soil resources by demonstrating that: -

- I. unacceptable adverse impacts on the quality of soil including as a result of disturbance and / or from contamination will be avoided and / or satisfactorily mitigated; or**
- II. the benefits of minerals development clearly outweigh any potential adverse impacts on the quality of soil; and**
- III. where Best and Most Versatile Agricultural Land (BMVAL) is present, it will be avoided, or where this is not possible, it will be restored to the highest possible quality grade and any other potential adverse impacts will be kept to a minimum; and**
- IV. opportunities for soil quality restoration and / or enhancement will be facilitated.**

Contributes to the delivery of plan objectives – LC and ENV

Interpretation and implementation

365. Policy DM07 will ensure soil resources are appropriately taken into account with mineral development proposals. As required in national policy, valuable soils that contribute to the natural environment should be protected and where possible enhanced¹⁹¹.
366. Establishing the value of underlying soils or those within the sphere of influence of mineral development should be integral part of supporting evidence for planning proposals. A wealth of strategic-scale information is publicly available and this may assist any initial, preliminary review. Natural England has published regional ALC Maps including for the South West¹⁹². There is also the Land Information System (LandIS), which contains information on soils throughout the UK including soils – a national thematic soil type dataset^{193,194}.

¹⁹¹ National Planning Policy Framework (NPPF), paragraph 109, bullet point 1

¹⁹² Natural England through its 'Access to Evidence' web resource has published sub-national scale (1:250 000) agricultural land classification (ALC) maps including for the South West of England. This shows the coverage of different grades of agricultural land from 1-5 - <http://publications.naturalengland.org.uk/publication/144017?category=5954148537204736>.

¹⁹³ Land Information System (LandIS) is presently hosted by Cranfield University and can be obtained at: - <http://www.landis.org.uk/index.cfm>

367. The requirement to prepare a site-specific Soil Survey and ALC report and the level of detail that will be needed will be made on a case-by-case basis. The matter should therefore be investigated at the early stages of preparing a proposal. The requirement to prepare a site-specific report will be founded upon the size and scale of the minerals development being proposed and an analysis of any initial review of existing information to establish the value of soil resources that might be affected, including the presence, relevance, accuracy and reliability of previous local-level soil studies. Natural England maintains an archive of more detailed ALC surveys for selected locations. This can be reviewed via the Multi-Agency Geographic Information for the Countryside web resource¹⁹⁵. All site-specific reports that are prepared must be in accordance with national published guidelines in place at the time¹⁹⁶.
368. Where soil resources of value are identified, particularly those classified as BMVAL, careful consideration must be given to the extent to which they can be protected with avoiding their disturbance being favoured option. This approach accords with national policy, which seeks development to be directed towards poorer quality of land ahead of that of a higher quality¹⁹⁷. However, in determining whether it is reasonable and justified to safeguard soil resources, consideration will be given to the wider minerals planning context. This is concerned with the need for the working of minerals and the fact that these resources can only be worked where they occur, and the possibility that suitable mitigation could be used to sufficiently minimise the extent of and / or reduce the severity of adverse impacts. The assessment of the relevant criteria for mineral supply policies MW01 to MW05, MR01 and MA02 (which is specifically concerned with aggregate working outside of allocations) may be relevant in this instance.
369. The requirement for mineral developments to be subject to restoration and aftercare presents an opportunity for the long-term protection and enhancement of soil resources. In line with national policy, it is expected that proposals explore the future agricultural viability of restored land, irrespective of intended after uses being considered at that time¹⁹⁸. This could be materially significant if potential adverse impacts on soil resources resulting from site preparation and mineral working phases could be reversed and / or soil quality improvements can be facilitated that would outweigh the scale and significance of any adverse impacts. Ideally a holistic approach to post-mineral working matters incorporating soil resources should be taken linked to the wider ambitions of achieving high quality, sustainable and desirable mineral restoration as set out under policy MR01.

¹⁹⁴ Information on Soils for England and Wales can be obtained at: - <http://ukso.org/SoilsOfEngWales/englandAndWales.html>

¹⁹⁵ The Multi-Agency Geographic Information for the Countryside (MAGIC) can be obtained at: - <http://magic.defra.gov.uk/home.htm>

¹⁹⁶ Presently this is contained within Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988).

¹⁹⁷ National Planning Policy Framework (NPPF), paragraph 112

¹⁹⁸ National Planning Policy Framework (NPPF), paragraph 143, bullet point 7

370. For soil resources that are likely to be subject to physical disturbance and / or could be put at risk of contamination, great care must still be taken to ensure the integrity of existing soil quality is maintained as much as is practicability possible. If soil degradation is unavoidable this must be kept to a minimum. Contamination giving rise to unacceptable adverse impacts on soil resources must always be prevented. Robust evidence on the movement of soils will be required to accompany mineral development proposals. This should be prepared in accordance with national good practice guidance and preferably set out in a dedicated and detailed Soil Handling Strategy¹⁹⁹.

¹⁹⁹ Presently this is contained within the 'Good Practice Guide for Handling Soils' and Guidance for Successful Reclamation of Mineral and Waste sites.' published by the Department for Environment, Food and Rural Affairs (DEFRA).

Historic environment

Reasoned justification

371. Gloucestershire contains heritage assets of international, national and local significance. The county has over 500 scheduled monuments, nearly 15,000 listed buildings and structures of various grades, several hundred conservation areas, and over 30,000 other notable archaeological sites documented on the Gloucestershire Historic Environment Record (G-HER)²⁰⁰.
372. The historic environment makes an invaluable contribution towards defining ‘*Gloucestershire*’ and establishing the individuality and / or connectedness of local places within it. Heritage assets and their setting, along with archaeological remains are important, irreplaceable features that help in our understanding of the past, and to make better sense and enjoyment of the present.
373. The working of minerals can be an intensive activity with major implications for the historic environment. Its extractive nature often over a large land-take can leave few options to avoid impacts, particularly when considering the quality and quantity of resource as a whole. Key risks associated with working may include the direct loss of assets or their partial damage, indirect damage through wider hydrological impacts and / or degradation of quality caused by vehicular and machinery emissions or other disruptive activities.
374. National policy is clear that heritage assets should be conserved, but in a manner that is appropriate to their significance²⁰¹. It also provides a definition of ‘*significance*’ from a heritage perspective – a measure of value attributed to assets based upon their archaeological, architectural, artistic and / or historic interest both in physical form and also by way of their setting²⁰². Practice guidance offers further details on delivering conservation through a flexible approach to facilitating the maintenance of assets and their effective management in the presence of change²⁰³.
375. Legislation specifically concerning the protection of designated heritage assets is also in place. Of relevance to Gloucestershire and the plan, are the legal protections afforded to listed buildings and conservation areas and scheduled monuments²⁰⁴.

²⁰⁰ Gloucestershire’s Historic Environment Record (G-HER) can be viewed online at: - <http://www.gloucestershire.gov.uk/planning-and-environment/archaeology/request-archaeological-data-from-gloucestershires-historic-environment-record-her/>

²⁰¹ National Planning Policy Framework (NPPF) section 12, paragraph 126.

²⁰² National Planning Policy Framework(NPPF) Annex 2: Glossary, definition of ‘*significance*’ (for heritage policy)

²⁰³ Planning Practice Guidance (PPG) conserving and enhancing the historic environment section, paragraph: 003, reference ID: 18a-003-20140306

²⁰⁴ The Planning (Listed Buildings and Conservation Areas) Act 1990 and Ancient Monuments & Archaeological Areas Act 1979.

Policy DM08 | Historic environment

Mineral development proposals will be permitted where they conserve, and where appropriate, enhance the significance of any affected heritage asset.

The Gloucestershire Historic Environment Record should be used to inform the consideration of future development including potential conservation and enhancement measures.

Where relevant, archaeological excavation and / or historic building recording will be required, followed by analysis and publication of the results.

Scheduled Monuments and other non-designated assets of archaeological interest of equivalent importance

Scheduled monuments and other non-designated archaeological assets of equivalent importance will be expected to be preserved in situ.

Where there are no alternative options which reduce or eliminate any adverse impact, or where scheduled monuments and other non-designated archaeological assets of equivalent importance cannot be preserved in situ, and harm is therefore unavoidable, then measures to mitigate and minimise the impact will be considered.

Contributes to the delivery of plan objectives – ENV and LC

Interpretation and implementation

376. In practice, designated and non-designated heritage assets require balanced judgements to be made regarding the potential scale of loss or harm caused by development including for minerals, measured against their significance. For this reason, it is vitally important that, adequate and proportionate information is available to fully understand the significance of potentially affected heritage assets (including undesignated assets).
377. However, in recognition that certain archaeological assets may not be identifiable or fully appreciated early on in the decision making process, it may be reasonable for a phased approach to be adopted for assessing significance and determining the subsequent treatment of assets, which involves initial desk-based assessment and / or field evaluations. A clear national framework for assessing the significance of heritage assets is provided by national policy, which sets out specific requirements of

prospective applicants and expectations for determining planning authorities²⁰⁵. There is a necessity for the G-HER to be consulted and technical expertise should also be employed, where necessary.

378. In terms of implementing balanced judgements, the established approach is that the more important the heritage asset, the greater the weight that should be afforded to its conservation through protecting it and / or its setting from harm or loss. Heritage assets of the highest significance should only be subject to substantial harm or loss as a result of development under wholly exceptional circumstances. National policy identifies the designation types that fall into the category of highest significance²⁰⁶. It also states that for grade II listed buildings, parks or gardens substantial harm or loss caused by development must be exceptional.
379. From a minerals planning perspective, the ability to maintain steady and adequate supplies of an important mineral is a material consideration that may substantial degree of harm caused to the significance of an affected heritage asset. It should however be noted that it is expected that to avoid harm, alternative options should first be considered.
380. Where minerals development proposals are deemed likely to cause less than substantial harm to the significance of heritage assets and / or their setting, consideration will be given to the degree of harm weighted against the demonstrable public benefits of the development.
381. Proposals for minerals development, which could affect heritage assets, must be accompanied by proportionately detailed assessments of heritage impact, to include, where relevant, anticipated changes to local hydrology. In addition to establishing the significance of each affected heritage asset, analysing potential harm and setting out any reasoned justification for reluctantly allowing harm or loss to occur, thoroughly evidenced means and measures of how mitigating harm and the avoidance of loss should also be provided. Where heritage assets of archaeological interest may be affected, sufficient provision should also be made for their effective preservation in situ or the investigation, excavation and the recording of any finds. The preservation in situ of archaeological assets will normally be the preferred solution. Although decisions will be taken on a case-by-case basis and largely be determined by practicality and the scale of importance (e.g. national or otherwise) of the heritage asset.
382. The degree of weight afforded to the content and conclusions drawn by submitted assessments of heritage impact will be determined by their accordance with the most

²⁰⁵ National Planning Policy Framework (NPPF) section 12, paragraphs 128,129, 130.

²⁰⁶ National Planning Policy Framework (NPPF) section 12, paragraph 132.

up-to-date good practice advice endorsed by Historic England (HE) and / or the Department for Culture, Media and Sport (DCMS)²⁰⁷.

383. The MPA will routinely seek local technical advice from the County Council through its archaeological service, and dependant upon the heritage assets affected, may also pursue specialist advice from District Councils, where listed building and conservation areas could be affected.

²⁰⁷ Historic England has published a suite of Good Practice Advice (GPA) documents for Planning and the Historic Environment. These presently cover: - local planning, managing significance in decision-taking, the setting of heritage assets and enabling development (not yet published). GPA documents are accessible on-line at: - <http://historicengland.org.uk/>

Landscape

Reasoned justification

384. Gloucestershire is renowned for the diverse and scenic beauty of its landscapes. Over 50% of the county falls under one of three nationally designated Areas of Outstanding Natural Beauty (AONBs)²⁰⁸. There are also a number of other non-AONB landscape designations present across the Cotswolds and Forest of Dean and non-designated areas found within the wider countryside that could be considered to be valued landscapes²⁰⁹. The National Character Area (NCA) classification identifies 6 distinctive landscape profiles for Gloucestershire – the Herefordshire Lowlands (NCA100), South Herefordshire & Over Severn (NCA104), Forest of Dean & Lower Wye (NCA105), Severn & Avon Vales (NCA106), Cotswolds (NCA107) and Upper Thames Clay Vales (NCA108)²¹⁰.
385. Detailed landscape characterisation studies have also been prepared at the countywide and local level throughout Gloucestershire²¹¹. They have generated numerous local character areas (LCAs). Collectively these studies contribute to a robust local landscape evidence base described as the Gloucestershire Landscape Character Assessment. The studies provide an invaluable baseline for: - determining the presence of very specific characters, features and qualities; identifying potential risks and sensitivities; and highlighting opportunities for possible enhancement.
386. Mineral developments have the potential to impact on local landscapes – through the re-shaping of landforms, removal of features and vegetation and / or the construction of site buildings and structures. However, the significance of such impacts will largely be determined by the site location; relationship to sensitive receptors²¹²; nature of working and potential mitigation proposed; the phases of development and their longevity; and the type of landscape affected, its qualities, sensitivity and designation status. Potential opportunities to enhance or reinstate landscape features, particularly through mineral site restoration are also a possible benefit.

Policy DM09 | Landscape

²⁰⁸ The three AONB designations present in Gloucestershire include: The Cotswolds, Wye Valley and Malvern Hills

²⁰⁹ There are presently 6 Special Landscape Areas (SLAs) considered within policy 8 of the adopted Cotswold Local Plan (2011). For the Forest of Dean, policy CP9 – *Recreation and amenity land* of the adopted Forest of Dean Core Strategy (2012) includes a clause regarding the protection of the landscapes that make up the statutory Forest.

²¹⁰ National Character Areas (NCAs) are defined by Natural England (NE). They are an assemblage of unifying features relating to landscape, biodiversity, geodiversity, history, culture and economic activity. Full details of each NCA can be found on-line at: - <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles#ncas-in-south-west-england>

²¹¹ The 'Gloucestershire Landscape Character Assessment' represents the main evidence base covering landscape matters for the county. Further details are available at <http://www.gloucestershire.gov.uk/planning-and-environment/ecology-and-landscape/landscape>

²¹² Sensitive receptors from a landscape perspective will be determined on a case-by-case basis. However, they usually include: - any statutorily and nationally designated landscape areas reasonably likely to be affected; locally designated landscape areas reasonably likely to be affected; statutorily and non-statutorily designated historic assets and features included within the Gloucestershire Historic Landscape Characterisation (HLC) study; commercial premises for which the preservation or enhancement of local landscape character may be business critical; and residential properties.

Outside of AONB landscape designations (excluding those areas that form part of the setting of an AONB)

Mineral development proposals will be permitted where it can be demonstrated they have been informed by, are sympathetic to, and wherever practicable, will support the enhancement of the character, features and qualities of the landscape character areas or types of the relevant NCAs and LCAs that form the Gloucestershire Landscape Character Assessment.

Within undesignated valued landscapes or landscape designations other than AONBs unacceptable adverse impacts on the defining character, features and qualities of these areas must be avoided and / or satisfactorily mitigated.

AONB designations and / or other areas that form part of their setting

Mineral development proposals within or that affect the setting of the Cotswolds, Wye Valley or Malvern Hills AONBs will only be permitted where it can be demonstrated: -

- I. they will not prejudice the conservation of the character, features and qualities of the landscapes and scenic beauty of the AONB and that account will have been given to the conservation of wildlife and cultural heritage;**
- II. adverse impacts on the special qualities of the AONB as defined by the AONB Management Plan (specifically concerning the environment, landscape and recreational opportunities) will be avoided and / or satisfactorily mitigated; and**
- III. opportunities will be taken to support the enhancement of the character, features and qualities of the landscapes and scenic beauty of the AONB as promoted through the relevant AONB Management Plan.**

Mineral development proposals within or that affect the setting of the Cotswolds, Wye Valley and Malvern Hills AONBs that are defined as major development will only be permitted under exceptional circumstances. All of the relevant criteria set out above must be satisfied. In addition, proposals must be in the public interest by demonstrating: -

- I. there is an overriding need to work and / or process the mineral, including national considerations;**

II. the local economy will not be subject to unacceptable adverse impacts; and

III. alternative non-AONB sources of mineral supply, which are no more constrained, will not be available on practicality and viability grounds.

Contributes to the delivery of plan objectives – ENV, LC and RA

Interpretation and implementation

387. Policy DM09 seeks to ensure all minerals development proposals are respectful of the intrinsic rural nature of the county. It affords particular attention to the conservation of the special qualities and character that define Gloucestershire's designated landscapes and gives weight to securing possible enhancement opportunities. In line with national policy, valued landscapes both designated and undesignated are afforded proportionate protection²¹³.

388. In meeting the requirements of policy DM09, mineral development proposals must provide evidence that landscape-related issues have been appropriately analysed. This matter should be dealt with in a holistic manner by reflecting upon any legitimate visual amenity impacts that may arise, as established under requirements of policy DM01.A proportionately detailed Landscape and Visual Impact Assessment (LVIA) must accompany a planning application or be incorporated within a supporting Environmental Statement. All LVIAs should be based on established industry standards and follow the most-up-to-date technical guidance for assessing landscape and visual impact²¹⁴. Key to the assessment of landscape impacts is the identification of possible effects and a measure of their scale and significance having fully understood the existing, affected landscapes.

389. Where opportunities to exist to remove or minimise the severity and significance of possible adverse landscape impacts, these should be effectively accommodated within minerals development proposals. They may amount to mitigation measures such as new or extended screening through the planting of vegetation and / or the construction of temporary bunds or the re-profiling of land. Alternatively, or to supplement methods of screening, integration techniques could be employed. These may include the sympathetic use of materials and / or colouring for built structures and the design and positioning of development in part or in its entirety, to better take advantage of natural contours. The acceptability of proposed mitigation will largely depend upon the

²¹³ National Planning Policy Framework (NPPF), paragraph 109, bullet point 1.

²¹⁴ Currently the most up-to-date technical landscape guidance is contained within the 3rd edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3), which was published by the Landscape Institute in April 2013.

subsequent residual impact on the key elements of landscape character that influence local distinctiveness. Important matters that will need to be taken into account involve the extent to which there will be minimal disruption during implementation and whether minimal interventions can be achieved. This may involve the skilful integration with existing vegetation and features, the avoidance of introducing alien species, and the careful assimilation of landforms designed for screening.

390. In addition, management regimes to safeguard and promote the future health and / or the sympathetic and desirable expansion of existing natural features, which contribute to an area's landscape characteristics and qualities (e.g. trees, hedgerows and aquatic vegetation within water features), may be given weight as evidence of possible enhancements. The degree of alignment shown with environmentally-led initiatives that support the aims and objectives of the Gloucestershire Local Nature Partnership may also be afforded increased weight in the decision making process²¹⁵.
391. Mineral development proposals within the Cotswolds, Malvern Hills and Wye Valley AONB designations will be subject to rigorous scrutiny as great weight will be afforded to the conservation of AONB landscapes and their scenic beauty. It is also important that wildlife interests and matters of cultural heritage within AONB designations are assessed as these will also be taken into account²¹⁶. Furthermore, those proposals that are situated outside of AONB boundaries, but form part of their setting should be carefully prepared as they will be subjected to the same demanding analysis. This is to ensure that the purposes of AONBs are securely protected as promoted in Planning Practice Guidance²¹⁷.
392. The special qualities of the AONB designations that fall within Gloucestershire are set out in the respective AONB Management Plans²¹⁸. It will be critical to any supporting landscape evidence that landscape-related impacts resulting from the proposed minerals development can be clearly identified, fully understood and that the ability to show how any potential adverse impacts will be avoided and / or mitigated to the extent the wider efforts to conserve the landscape and scenic beauty of the AONB, will not be unduly compromised.
393. Evidence of possible enhancement to AONB designations through the delivery of mitigation measures and / or site restoration will be carefully examined. Of key importance will be the degree of alignment and compatibility shown with active or proposed schemes and initiatives that seek to contribute to the protected landscape

²¹⁵ Local information concerning the initiatives supported by the Gloucestershire Local Nature Partnership (G-LNP) can be obtained at: - <http://gloucestershirenature.org.uk/index.php>

²¹⁶ National Planning Policy Framework (NPPF), paragraph 115

²¹⁷ Planning Practice Guidance (PPG), Natural Environment Section, Paragraph: 003 Reference ID: 8-003-20140306

²¹⁸ Currently the 'special qualities' of the county's AONB designations can found within: -

The Cotswold AONB Mgmt. Plan (2013-18) obtainable at: - http://www.cotswoldsaonb.org.uk/management_plan/index.html; the Wye Valley AONB Mgmt. Plan (2009-14) obtainable at: - <http://wyevalleyaonb.org.uk/images/uploads/general/AONBManagementPlan09-14.pdf>; and the Malvern Hills AONB Mgmt. Plan (2014- 19) obtainable at: - <http://www.malvernhillsaonb.org.uk/wpcontent/uploads/2015/02/FinalLowResManPlan2014-19.pdf>

purposes or the delivery of designation objectives promoted within the relevant AONB Management Plan²¹⁹.

394. National policy is clear that there is an overriding presumption against major development within AONB designations except in exceptional circumstances and where the public interest can be demonstrated²²⁰. However, major development including for minerals, is not predefined for the purposes of scrutinising its acceptability within AONB designations. This is a matter of planning judgement that must be made on a case-by-case basis²²¹. Nevertheless, in assessing whether a minerals development is major or not, careful consideration will be given by decision makers to a number of factors. These may include the nature and sensitivity of the locality to development in general and the relationship between the proposal and the landscape character, features and qualities that define the scenic beauty, wildlife and cultural heritage of the designation. A decision on the 'major development' status of a proposal will not be based on any initial view that possible adverse impacts after mitigation measures have been taken into account. The extent to which harm could be moderated will only be considered as part of the decision making process.
395. Major developments within AONB designations must undergo an additional level of scrutiny to establish their acceptability. A clear and demonstrable need must be demonstrated for the working and / or processing of the mineral present at the site and / or the processing of any imported minerals. Information provided to meet the requirements of policies MW01, MA02, MW02, MW03 or MW06 may be applicable in this instance.
396. In addition, evidence concerning the potential impact of major development upon the economic well-being of the local economy must be submitted. The scale and significance of possible attributable risks to the future economic performance of other local industries that are either reliant upon the special qualities of the AONB designation or which contribute to the delivery of the objectives of the AONB Management Plan must be provided. Employment opportunities from major development, which support or sustain local skilled labour, particularly traditional quarrying-related skills, may be considered a benefit. Appropriate provision for local apprenticeships secured either by way of a planning condition or a planning obligation could prove to be materially significant.
397. A robust comparative analysis must also be undertaken to show that non-AONB sources of the type of mineral proposed to be worked and / or processed will not be appropriate. Careful consideration will be given to evidence concerning the present and

²¹⁹ Planning Practice Guidance (PPG), Natural Environment section, Paragraph: 004 Reference ID: 8-004-20140306

²²⁰ National Planning Policy Framework (NPPF), paragraph 116

²²¹ As set out in Maurici. J. (July 2014) Legal Opinion in the Matter of the National Planning Policy Framework and in the Matter of the South Downs National Park (Landmark Chambers) it is strongly advised not to simply apply the definition of 'major development' for the purposes of NPPF paragraph 116:- as it is set out in procedural orders, to base it upon the criteria used for EIA development; or to include only development that raise issues of national significance.

forecast future availability of non-AONB mineral supplies and its suitability to meet the same technical specifications. Before any judgement can be made, information must be submitted to establish the size and scale of the pattern of mineral supplies that could be affected; whether productive capacity issues might arise with non-AONB supplies; and a robust explanation of any other possible supply challenges that might emerge from have to rely upon alternative non-AONB sources.

Gloucester – Cheltenham Green Belt

Reasoned justification

398. The Gloucester-Cheltenham Green Belt designation was incorporated into the County of Gloucestershire Development Plan 1st Quinquennial Review published in 1960. Its main aim, which remains valid today, was to preserve the open character of land between the two settlements of Cheltenham and Gloucester and prevent them from merging. The countywide Structure Plan adopted in 1981, extended the designation northwards of Cheltenham to avoid coalescence between Cheltenham and the expanding settlement of Bishop's Cleeve. The adopted Gloucester-Cheltenham-Tewkesbury Joint Core Strategy (GCT-JCS), which was adopted in 2017, sets out the current boundary of the Gloucester-Cheltenham Green Belt²²².
399. Mineral Safeguarding Areas (MSAs) exist across parts of the Gloucester-Cheltenham Green Belt that identify sand & gravel and clay resources²²³. In the past relatively small-scale mineral working has taken place in the Green Belt, which has made a modest contribution to steady and adequate supplies of aggregate minerals and the landbank of permitted reserves²²⁴. Whilst, no plan allocations presently exist within the designation, future mineral developments could arise such as through windfalls linked to the risk of mineral sterilisation or to provide a localised mineral supply for a specific development project or projects.
400. Very careful consideration will need to be given to the acceptableness of mineral development proposals within Gloucester-Cheltenham Green Belt taking into account the overarching aim of the designation.

Policy DM10 | Gloucester–Cheltenham Green Belt

Mineral extraction within the Green Belt

Mineral development proposals for extraction within the Gloucester-Cheltenham Green Belt and will be permitted where it can demonstrated: -

- I. the openness of the designation will be preserved; and**
- II. there will be no conflict with the purposes of including land in the Green Belt.**

²²² The Adopted Gloucester-Cheltenham-Tewkesbury Joint Core Strategy (GCT-JCS) 2017 can be obtained at: - <https://jointcorestrategy.org/home>

²²³ Appendix 1: The Key Diagram sets out the full extent of Gloucestershire's Mineral Safeguarding Areas (MSAs)

²²⁴ The Gloucestershire Annual Monitoring Report (AMR) 2004/2005 indicates that 8.40ha of land within the Gloucester-Cheltenham Green Belt was subject to minerals development proposals.

Mineral development proposals for extraction within the Gloucester-Cheltenham Green Belt that will reduce the openness of the designation and will cause conflict with the purposes of including land in the Green Belt, will only be permitted under very special circumstances, where it can be demonstrated that the totality of the harm to the Green Belt and any other harm will be outweighed by other planning considerations

Other minerals developments within the Green Belt

Mineral development proposals other than for extraction will be inappropriate development within the Gloucester-Cheltenham Green Belt and will only be permitted under very special circumstances, where it can be demonstrated the totality of the harm to the Green Belt and any other harm will be outweighed by other planning considerations.

Contributes to the delivery of plan objective – ENV

Interpretation and implementation

401. National policy maintains a longstanding position on the aim and function of Green Belt designations²²⁵. It specifically states they are required to prevent urban sprawl and to keep land permanently open. It also sets out five purposes for the designation : -

- To check the unrestricted sprawl of large built-up areas;
- To prevent neighbouring towns merging into one another;
- To assist in safeguarding the countryside from encroachment;
- To preserve the setting and special character of historic towns; and
- To assist in urban regeneration, by encouraging the recycling of derelict and other urban land²²⁶

402. National policy also makes provision for mineral working to be allowed to take place in principle within the Green Belt where openness is preserved and no conflict will occur with purposes of the designation²²⁷. This is reflective of the temporary nature and low intensity of any built structures such as certain forms of plant that usually accompanies this type of activity.

403. However, all other types of mineral development such as ancillary added value plant e.g. ready mix plant, block-making etc. must demonstrate very special circumstances

²²⁵ National Planning Policy Framework (NPPF) section 9, paragraph 79.

²²⁶ National Planning Policy Framework (NPPF) section 9, paragraph 80.

²²⁷ National Planning Policy Framework (NPPF) section 9, paragraph 90.

exist before they are able to proceed. National policy confirms such proposals will be inappropriate, and by definition harmful to Green Belt designations²²⁸.

404. All mineral development proposals will need to be considered on their individual merits. However, where it is necessary to demonstrate 'very special circumstances', the importance of the mineral to be worked with respect to maintaining steady and adequate supplies from Gloucestershire; the availability of resources from outside of the Green Belt; and / or the size, scale and timescales being considered for development will be critical matters in the decision making process.

²²⁸ National Planning Policy Framework (NPPF) section 9, paragraph 87.

Aerodrome safeguarding and aviation safety

Reasoned justification

405. Gloucestershire contains civil and military aerodromes including Gloucestershire Airport located at Staverton, Cotswold Airport near Cirencester and RAF Fairford found within the Cotswold Water Park. Mineral resources of potential economic interest are located nearby to all facilities.
406. At RAF Fairford, in particular, significant and extensive amounts of sand & gravel are known to exist. Large areas of land surrounding the military aerodrome have already been worked and proposals for this to continue into the future may come forward. These local sand & gravel resources are considered to be of strategic significance, but so are the county's aerodromes.

Policy DM11 | Aerodrome safeguarding and aviation safety

Mineral development proposals will be permitted only where it can be demonstrated that unacceptable adverse impacts on aviation safety can be avoided and / or satisfactorily mitigated.

Contributes to the delivery of plan objectives – LC

Interpretation and implementation

407. Town and Country Planning (safeguarded aerodromes, technical sites and military explosives storage areas) direction 2002 sets out the government approach for dealing with this matter²²⁹. The direction seeks to ensure the operation and development of aerodromes will not be inhibited. It states that buildings, structures, erections or works that could infringe protected surfaces, obscure runway approach lights or have the potential to impair the performance of aerodrome navigation aids, radio aids or telecommunication systems must be avoided. It also advises against artificial lighting that may distract pilots and the prevention of bird hazard resulting from the introduction of and / or increase in birds. This latter issue is of particular relevance to mineral developments that incorporate the restoration of worked out mineral sites.
408. Mineral developments located within 13km of officially safeguarded civil and military aerodromes and / or within any delineated safeguard areas for sites used by the National Air Traffic Control Service (NATS) (known as 'NATS' Technical Sites), will

²²⁹ Circular 01/03: Safeguarding aerodromes, technical sites and military explosives storage areas contains within Annex 1 the full content of Town and Country Planning (Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002. It can be obtained online at: - <https://www.gov.uk/government/publications/safeguarding-aerodromes-technical-sites-and-military-explosives-storage-areas>

need to undergo consultation with the owner or operator of each facility affected. Specifically in the case of military facilities, the Secretary of State for Defence must be consulted. Representations made by these parties will be carefully considered against the provisions of the government's direction.

409. Several certified aviation safeguarding maps have been published that cover parts of Gloucestershire²³⁰. These include safeguarding areas for RAF Brize Norton in Oxfordshire that extend into part of Gloucestershire. Safeguarding consultation areas have also been included on the plan's policies map.
410. All mineral development proposals will need to consider their significance in terms of aerodrome safeguarding and aviation safety. For those proposals that fall within allocated areas contained within the plan, location-specific matters are provided where relevant under the detailed development requirements of section 9 of the plan.
411. For proposals outside of allocated areas, but within aviation-related safeguarding areas, detailed information concerning how the operations of aerodromes and related facilities will not be adversely impacted will be necessary. This must address all phases of minerals development including restoration and aftercare. Where mitigation is considered necessary, its feasibility and practical implementation will be carefully scrutinised during the decision making process.

²³⁰ All aviation safeguarding maps issued to local planning authorities, including MPAs for consultation notification purposes must be certified by either the Civil Aviation Authority (CAA) or the Secretary of State for Defence.

Section 11 | Mineral Restoration

Restoration, aftercare and facilitating beneficial after-uses

Reasoned justification

412. The working of minerals is a temporary land use. Once mineral resources have been exhausted and / or the working of a site has permanently ceased it should be possible to re-use the land that has been affected or return it to its original use through a process of restoration.
413. All mineral workings should be accompanied by a credible and achievable scheme of site restoration that is successfully delivered, irrespective of the site characteristics, environment in which it is located, scale and longevity of site activities. No minerals development can claim to have successfully dealt with adverse impacts that it may generate on natural and built environments and local communities without satisfactorily addressing this matter.
414. Successful restoration is also vital in achieving sustainable development. The manner in which disturbed land is managed will dictate whether a satisfactory return to a previous status is either attainable, desirable or whether opportunities exist to bring about enhancements. This could include improvements to biodiversity and the health of the natural environment; the establishment of new or reinforced measures to increase resilience and / or the ability to successfully adapt to climate change; the strengthening, expansion or upgrading of public facilities accessible to those impacted by mineral working and the wider community; and support for the delivery of important items of infrastructure aimed at improving quality of life, well-being and economic performance.

Policy MR01 | Restoration, aftercare and facilitating beneficial after-uses

Mineral development proposals will be permitted where it can be demonstrated high quality restoration and aftercare will: -

- I. take place at the earliest opportunity and without generating unacceptable adverse impacts;**
- II. be delivered to a high environmental standard; and**
- III. facilitate beneficial after-uses that will contribution to the delivery of sustainable development.**

Contributes to the delivery of plan objective – RA

Interpretation and implementation

415. Mineral restoration is the process of returning land following mineral extraction to an acceptable condition, whether for resumption of the former land use or for a new use. Aftercare is the collective term given to the steps taken to maintain land at a necessary standard to facilitate beneficial after-uses. A statutory period of 5 years exists for requiring the implementation and monitoring of the delivery of aftercare activities²³¹. However, a longer period may be justified to ensure that a minerals development proposal will be acceptable in planning terms.
416. All mineral development proposals should give due consideration to site restoration, aftercare and facilitating the delivery of beneficial after-uses. This includes proposals for minor additions and variations to existing permitted operations, new / or intensified ancillary minerals development, as well as more substantial extensions to existing quarries or brand new mineral workings.
417. National policy encourages the planning for site restoration and aftercare to be undertaken at the earliest opportunity²³². As advised in planning practice guidance, it is also a key element of the application process and should be considered at the pre-application stage²³³.
418. Provision for site restoration and aftercare will be heavily dependant upon the nature of the minerals development under consideration and site-specific circumstances present at the time. For existing permitted workings, evidence will be required as to how previously agreed restoration and aftercare commitments will not be adversely affected. Existing planning conditions related to the cessation of operations, equipment removal and end-dates should not be compromised without justification. Proposals that seek to vary previously permitted restoration and aftercare schemes will be subject to rigorous scrutiny. Information must be presented to show how the environmental condition of previously approved development, will not be degraded. Further enhancement opportunities deemed achievable through a modified restoration and aftercare scheme will need to be carefully assessed and only where positive change is materially significant and delivered to a high quality standard, will this be looked as a benefit. More substantial mineral development proposals or those likely to involve a fundamental change to an existing restoration and aftercare plan, will need to be accompanied by a detailed revised restoration strategy.
419. Planning practice guidance advises on the level of detail expected for the restoration and aftercare of mineral developments. Information requirements will ultimately be determined on a case-by-case basis having taken into account the envisaged duration

²³¹ Part 1, Schedule 5 of the Town & Country Planning Act (1990) sets out the powers for imposing aftercare conditions on minerals planning developments

²³² National Planning Policy Framework (NPPF), section 13, paragraph 143, bullet point 8.

²³³ Planning Practice Guidance (PPG), Minerals Section, paragraph 39, Reference ID: 27-039-20140306.

of proposed operations. However, an overall restoration strategy should be submitted along with evidence of its practicality²³⁴. Matters that will require some consideration include: -

- the identification of the intended after-use and how this will be delivered;
- a good understanding of the existing soil resources including the presence of BMVAL and how these assets might be protected during the working phases and then secured over the long-term (see the requirements for policy DM07);
- the preparation of a hydrological review covering the site and surrounding areas that could be affected (see also the requirements of policies DM04 and DM05); and
- the creation of a landscape strategy, which should form an integral part of a wider Landscape and Visual Impact Assessment (LVIA) initially focused on the consideration of landscape and visual impacts during the working phases of mineral developments (see also the requirements of policies DM01 and DM09).

420. National policy offers a clear steer concerning the assessment of mineral development proposals including any matters arising from mineral restoration and aftercare schemes²³⁵. It states that no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety should occur having also considered cumulative effect of multiple impacts from individual sites and / or from a number of sites in a locality. Any unavoidable noise, dust and particle emissions must also be controlled, mitigated or removed at source. The assessment requirements set out in the plan's development management policies may reasonably be applied under these circumstances.

421. The concepts of phased and progressive or rolling restoration are supported in planning practice guidance²³⁶. They are seen as a possible means of minimising disturbance and adverse impacts associated with the outcomes of working minerals including the exposure of disturbed land and possible additional risks from land instability. If employed appropriately, they could also form part of wider mitigation and enhancement measures aimed at meeting the requirements of a number of other local plan policies. However, the way in which phased and / or progressive restoration is proposed must be supported by evidence to show it will be achieved without generated unacceptable adverse impacts on the amenity of local communities and the environment. High quality and timely restoration and aftercare and the ability to facilitate beneficial after-uses must be the priority.

²³⁴ Planning Practice Guidance (PPG), Minerals Section, paragraph 40, Reference ID: 27-040-20140306.

²³⁵ National Planning Policy Framework (NPPF), paragraph 144.

²³⁶ Planning Practice Guidance (PPG), Minerals Section, paragraphs 40 and 42, Reference IDs: 27-040-20140306 and 27-042-20140306.

422. Mineral development proposals expected to take place over the long term should be subject to a review from time to time of their accompanying restoration and aftercare strategies. This is to make sure they remain up-to-date, relevant, and deliverable. It may also help in responding to changes in circumstance particularly where possible enhancements could be affected. Locally-agreed restoration and aftercare strategy reviews may be considered necessary by the MPA as part of the mitigation measures with individual mineral development proposals. Although they are more likely to be requested in sensitive locations. The use of a Section 106 Legal Agreement may be needed to ensure their effective implementation²³⁷.
423. Contributing to the delivery of sustainable development through facilitating beneficial after uses is a key requirement of policy MR01. All mineral restoration and aftercare plans should adopt a holistic approach and include information as to how beneficial after uses may be supported.
424. In line with national policy, high quality mineral restoration and aftercare should involve support for environmentally-related after uses²³⁸. Facilitating beneficial after-uses that will bring about environmental enhancements ought to be pursued. National policy highlights the potential of the planning system to deliver environmental betterment through land reclamation²³⁹. Reclaimed sites may be able to support biodiversity gains; help to increase resilience to and / or assist in accomplishing effective adaptations to climate change pressures; contribute towards the establishment of coherent ecological networks; and aid in the recovery, expansion or creation of priority habitats. Biodiversity gains through reclamation may also involve the retention of and subsequent management of disturbed land to create and maintain bare ground with nutrient poor soils and / or shallow water. This could prove particularly beneficial for rare and threatened invertebrates²⁴⁰.
425. Restoration and aftercare plans that highlight the natural environment as an intended beneficiary will be carefully considered and should clearly set out the scale and significance of the envisaged positive contribution. In general, measures that will aid the protection of and / or provide for biodiversity enhancements within Gloucestershire will be supported by the MPA. However, in affording weight to any claimed benefits, evidence must be presented to show linkage to the delivery of local and national biodiversity-related targets²⁴¹. The weight afforded to this matter may be enhanced

²³⁷ The Growth and Infrastructure Act (2013) makes provision for reviews to be carried out by MPAs of minerals development proposals. However, the initial review mechanism has restrictions to no earlier than the 1st 15 year period, or in the case of an 'old' permission, 15 years of the date of the initial review. Any earlier timeframe could be taken forward on a case-by-case basis to ensure a proposal is acceptable in planning terms but would require a legal agreement with the operator to achieve this.

²³⁸ National Planning Policy Framework (NPPF), paragraph 143, bullet point 8

²³⁹ National Planning Policy Framework (NPPF), sections 10, 11, paragraphs 99, 109 and 117

²⁴⁰ Guidance on potential support for rare and threatened invertebrates can be obtained at 'Buglife – Habitats Projects': <https://www.buglife.org.uk>

²⁴¹ As at November 2017, national level biodiversity-related targets are contained within Biodiversity 2020: *A strategy for England's wildlife and ecosystem services*, which can be obtained at: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

where contributions to landscape-scale biodiversity improvements are shown to be realistically achievable and there will be clear support for the delivery of initiatives aimed at Gloucestershire's Nature Improvement Areas (NIAs)²⁴². Mineral operators will also be encouraged to participate in Gloucestershire-based projects that form part of the 'Nature After Minerals' (NAM) programme²⁴³. Proposals that will support the protection of existing trees and / or the planting of new trees that will contribute to the creation of woodland habitats will be afforded some weight particularly where actions will align with the planning duty for trees contained in the Town and Country Planning Act 1990²⁴⁴. However, care must be taken to ensure that support for woodland does not compromise the delivery of local biodiversity priorities or the safeguarding of the key characteristics of valued landscapes.

426. In the event wider benefits of ecosystem services have been brought forward with mineral restoration and aftercare plans, demonstrating that the 'most' ecosystem value will be achieved will be given notable weight. DEFRA's introductory and practice guides to valuing ecosystems services could have a bearing on the assessment of individual applications²⁴⁵.
427. Other types of enhancement opportunities may be acceptable through high quality mineral restoration. National policy headlines the potential to create and enhance green infrastructure; enhance geological conservation interests; promote community facilities; improve the built environment and better conserved historic assets; and reduce the causes and impacts of flooding²⁴⁶.
428. Restoration and aftercare plans that point to a wider sphere of enhancements will need to provide sufficient supporting evidence concerning: -
 - the viability and achievability of the proposed enhancements and the scale and significance of any impacts (positive and negative) that could arise from their delivery; and
 - the degree of alignment with other strategies that influence the development and future use of land within Gloucestershire.

[ecosystem-services](#). At the local level the Gloucestershire Local Nature Partnership (G-LNP) Plan provides details of the key local priorities and targets relevant to Gloucestershire. It can be obtained at: - <http://gloucestershirenature.org.uk/actionplan/index.php>.

²⁴² Gloucestershire's Nature Improvement Areas (NIAs) are defined localities where landscape-scale conservation, management and sustainable use of the natural environment is directed through natural-environmental related projects supported by the Gloucestershire Local Nature Partnership (G-LNP). These are aimed at bring about benefits to our 'natural capital' (of ecosystems, ecological networks, biodiversity, land, air and water) leading to improved health and well-being for people plus bringing sustainability to businesses. Further details can be obtained at: - <http://gloucestershirenature.org.uk/actionplan/index.php>.

²⁴³ Nature After Minerals (NAM) is a partnership programme, led by the RSPB and supported by Natural England, the Mineral Products Association and the British Aggregates Association. It looks to promote the strategic opportunities for delivering biodiversity through high quality habitat creation on mineral sites.

²⁴⁴ The preservation and planning of trees duty is contained within Part 8, Chapter 1, clause 197 of the Town & Country Planning Act (1990) - <http://www.legislation.gov.uk/ukpga/1990/8/section/197>

²⁴⁵ Planning Practice Guidance (PPG), Natural Environment Section, paragraph 013 Reference ID: 8-013-20160211.

²⁴⁶ National Planning Policy Framework (NPPF), paragraphs 9, 28, 101, 109, 114 and 143.

429. The delivery aspirations of the following plans, amongst others, could prove relevant: - Gloucestershire's local development plans including neighbourhood plans and their accompanying infrastructure delivery plans²⁴⁷, AONB Management Plans covering the Cotswolds, Malvern Hills and Wye Valley AONB designations²⁴⁸; the Cotswold Water Park Master Plan²⁴⁹, the Gloucestershire Local Flood Risk Management Strategy (LFRMS)²⁵⁰ and supporting implementation plans; the Severn and Thames River Basin Management Plans (RBMPs)²⁵¹; and the county's Strategic Green Infrastructure (GI) Framework²⁵². In the case of enhancement opportunities involving green infrastructure, particular weight may be given to facilitating the achievement of the 'Building with Nature' benchmark standard with new development²⁵³
430. Restoring land to facilitate beneficial after-uses represents effective minerals planning as highlighted in planning practice guidance²⁵⁴. It may involve importing materials for backfilling to achieve advantageous landforms and / or where relevant, to assist in the management of slope or land stability matters. National policy and planning practice guidance recognise the potential for remediating unstable land as a means of enhancing the environment and bringing land back into productive use²⁵⁵. This can sometimes be a legacy of poorly managed or restored mineral workings from the past. In certain locations within Gloucestershire, the importation of materials for restoration purposes will likely prove a defining issue for the deliverability of mineral working. For example; proposals for sand and gravel sites within the Cotswold Water Park (CWP) may require the importation of materials to facilitate restoration back to pre-working or near pre-working ground levels. The alternative option is low-level restoration, which often results in water features being created such as lakes, ponds and wetlands, due to the area's high water table. However, restoration of this kind can create conflict with nearby airfield land-uses (i.e. RAF Fairford) that must meet strict bird-strike safeguarding requirements. New or expanded water bodies within parts of the CWP

²⁴⁷ Local planning (including the assessment of infrastructure requirements) is largely carried out through Gloucestershire's six district authorities: – Cheltenham Borough; Cotswold District; Forest of Dean District; Gloucester City; Stroud District and Tewkesbury Borough. Neighbourhood planning is supported by the relevant district authority, but is instigated by local parish and town councils and where relevant neighbourhood forums.

²⁴⁸ AONB Management plans set out a vision, objectives and policies for the future management of designated areas. They also guide key bodies in the delivery of their responsibilities for these localities. For Gloucestershire, three AONB designations are present, each with their own AONB Mgmt. plan. These can be obtained at: - <http://www.cotswoldsaonb.org.uk/?page=ManagementPlan> (for the Cotswolds); <http://www.malvernhillsaonb.org.uk/managing-the-aonb/management-plan/> (for the Malvern Hills); and <http://wyevalleyaonb.org.uk/index.php/about-us/management-and-guidance/management-plan-2015-2020/> (for the Wye Valley).

²⁴⁹ The Cotswold Water Park (CWP) Master Plan – officially entitled the 'Strategic Review and Implementation Plan for the Cotswold Water Park' was developed by the CWP Joint Committee. It provides a vision and strategic framework for the CWP area for considered use with local delivery plans and strategies. It can be obtained at: - <http://www.waterpark.org/resources-documents/>.

²⁵⁰ The Gloucestershire Local Flood Risk Management Strategy (LFRMS) - sets out how the County Council will aim to manage flood risk in partnership across Gloucestershire. It can be obtained at: - <http://www.gloucestershire.gov.uk/your-community/emergencies-and-your-safety/flooding-and-drainage/gloucestershire-county-councils-local-flood-risk-management-strategy-lfrms/>

²⁵¹ RBMPs set out requirements for the protection and improvement of the quality of the water environment. The collection of RBMPs in operation across England including for the Severn and Thames districts can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>.

²⁵² The Strategic GI Framework has been compiled by Gloucestershire Local Nature Partnership. It advises on the protection and delivery of strategic Green Infrastructure alongside the Gloucestershire Nature Map. It can be obtained at: - <http://gloucestershirenature.org.uk/publications/index.php>.

²⁵³ Gloucestershire – 'Building for Nature' benchmark standard can be obtained at: - [http://www.gloucestershirewildlifetrust.co.uk/sites/default/files/files/Building%20with%20Nature%20\(screen\)\(1\).pdf](http://www.gloucestershirewildlifetrust.co.uk/sites/default/files/files/Building%20with%20Nature%20(screen)(1).pdf)

²⁵⁴ Planning Practice Guidance (PPG), Minerals Section, paragraph: 001, Reference ID: 27-001-20140306.

²⁵⁵ National Planning Policy Framework (NPPF), paragraph 109, bullet point 5 and Planning Practice Guidance (PPG), Land Stability Section, paragraph: 001 Reference ID: 45-001-20140306.

could attract large and / or flocking bird species that in turn might be hazardous to air traffic safety. It may prove advantageous to adopt a holistic approach where this matter arises, with particular attention given to demonstrating how possible challenges to the desirable restoration strategy will be tackled and satisfactorily overcome. Evidence applicable to policy DM11 could prove to be pivotal in the decision making process.

431. Importing materials for restoration purposes must be scrutinised to ensure that any attributable, unacceptable adverse impacts are not created and that high quality standards will prevail. The acceptability of importing materials can only be secured, where sufficient evidence has been submitted regarding how possible risks to the natural environment and local communities from importation-related activities can either be avoided or mitigated so that any residual adverse impacts will be minimised to a satisfactory level. It is important that the timescales for delivering high quality restoration and aftercare will not be subjected to unjustifiable delays.
432. Possible benefits linked to importing materials for restoration purposes such as improving in soil conditions must be justified in terms of their wider sustainability credentials. This should include consideration of the proposed time period over which importation will occur; the impact importation may have on the timescales for completing restoration and facilitating the delivery of future beneficial after-uses; and the transport implications incorporating effects and their significance, upon the safe and efficient functioning of the local highway network, and possible impacts related to local actions for tackling climate change. Evidence used to show the relevant criteria of policies DM01, DM03, DM05, DM08, DM07 and DM09 have been met, could reasonably be applied in these circumstances.
433. Importing recovered waste²⁵⁶ for use in mineral restoration may be considered acceptable as outlined in paragraph 4.43 of the adopted Gloucestershire Waste Core Strategy²⁵⁷. Imported waste suitable for mineral restoration but managed by way of disposal to landfill, might also be justified²⁵⁸. However, the relevant criteria contained within adopted Gloucestershire Waste Core Strategy policy WCS 8 (Landfill) will need to be successfully addressed²⁵⁹.
434. Planning practice guidance advises that the delivery of plans for mineral restoration and aftercare should be secured through the use of appropriate conditions and in some

²⁵⁶ The definition of waste recovery is set out in Article 3(15) of the Waste Framework Directive (Directive 2008/98/EC on waste). The Directive explains that to be termed 'recovery' the waste must serve a useful purpose by replacing other materials that would otherwise be used to fulfil a particular function. The Environment Agency (EA) provides detailed technical guidance on defining waste recovery for permitting purposes (RGN 13). This may act as a guide in determining whether the use of imported waste for mineral restoration purposes represents a 'recovery' or 'disposal' operation. RGN 13: Defining waste recovery – *permanent deposit of waste on land* can be obtained at: -

<https://www.gov.uk/government/collections/regulatory-guidance-series-environmental-permitting>

²⁵⁷ See page 48 of the adopted Gloucestershire Waste Core Strategy, which can be obtained at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/gloucestershire-waste-core-strategy/>

²⁵⁸ Planning Practice Guidance (PPG), Minerals Section, paragraph: 045, Reference ID: 27-045-20140306.

²⁵⁹ Page 68 of the adopted Gloucestershire Waste Core Strategy Policy contains the details for policy WCS8 (Landfill). It can be obtained at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/gloucestershire-waste-core-strategy/>

cases, planning obligations²⁶⁰. National policy states that the use of financial guarantees should only be sought in exceptional circumstances²⁶¹. This could include: - large scale and very long-term projects that do not involve progressive restoration for practical reasons; more innovative restoration schemes; and / or where there is a risk of possible financial or technical failure but which is not sufficient to justify refusal of planning permission. Where an operator is able to show membership of and is contributing to an established mutual funding scheme to support mineral restoration, there should be no requirement to use financial guarantees for individual proposals even in exceptional circumstances.

²⁶⁰ Planning Practice Guidance (PPG), Minerals Section, paragraph: 041 Reference ID: 27-041-20140306.

²⁶¹ National Planning Policy Framework (NPPF), paragraph 144, bullet point 6.

Section 12 | Managing and monitoring plan delivery

435. Monitoring is a vital part of evidence-based plan making. National policy states that local planning authorities should ensure that their plans are based on adequate, up-to-date and relevant evidence²⁶². To achieve this, it is necessary to provide a clear monitoring schedule within emerging plans to ensure that policies will remain appropriate and fit for purpose as time passes and that progress will be made to meeting the plan's vision and objectives.
436. A monitoring and delivery framework has been established. It details how monitoring data indicators relevant to each of the plan's policies will help demonstrate the successful delivery of the plan's objectives. The framework includes targets against which the performance of the policies can be monitored, plus 'triggers' to signpost when corrective action may need to be investigated.
437. The monitoring of each indicator will be carried out as part of the production of the Gloucestershire Minerals & Waste Authorities Monitoring Report²⁶³. Where data outputs indicate a materially significant change has happened, or is beginning to occur with mineral development proposals including trends which could undermine the vision or objectives, this may instigate a detailed analysis leading to a more formal policy review.
438. Data collection and management will be undertaken in a collaborative manner. A number of indicators require the support from other local planning authorities throughout the county. Some local minerals data will also be of significance at a national and sub-national level planning. In particular aggregate supply data from Gloucestershire should continue to feed into the monitoring and reporting of the South West Aggregate Working Party (SW-AWP) through the Local Aggregate Assessment (LAA) process.
439. Gloucestershire County Council as the local MPA will publish monitoring data regularly and in a consistent format to allow its analysis by all other interested parties. However, circumstances may occur which prevent full disclosure on all occasions due to commercial confidentiality. Furthermore, there may also be limitations to the amount of data that is collected or has been made available. An example of this is the local supply of recycled aggregate. This is heavily reliant upon the willingness of operators to co-operate often under only informal, individual and unwritten voluntary agreements.

²⁶² National Planning Policy Framework (NPPF), paragraph 158.

²⁶³ The Gloucestershire Minerals & Waste Authorities Monitoring Report (AMR) can be viewed at: - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/authorities-monitoring-report-amr/>

440. The following monitoring schedule reiterates the link made between each of the plan's objectives and its policies. It also sets out the mechanism for local monitoring and how effective policy delivery will be measured and scrutinised.

Minerals Local Plan for Gloucestershire (2018 – 2032) | Monitoring Schedule

Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
SR01 Maximising the use of secondary and recycled aggregates	Planning applications for major non-minerals development being permitted that will result in primary aggregates being used in preference to viable and available sources of alternative – secondary and / or recycled aggregates	GCC District Councils	Review of district DM decisions Review of non-minerals County Council DM decisions	On-going / Annually reported	100% refusal of non-minerals major development that do not provide a reasoned justification as to why alternative – secondary and / or recycled aggregates could be used within the development.	1 application permitted where material considerations have outweighed the criteria set out in the policy and the determining authority received an objection from the MPA concerning the failure to use viable and available sources of alternative – secondary and / or recycled aggregates. The publication of new or revised national policy that would represent a departure from the policy.
MS01 Non-minerals development within MSAs	Planning applications for non-minerals development being permitted within MSAs	GCC District Councils	Review of district DM decisions Review of non-minerals County Council DM decisions	On-going / Annually reported	100% refusal of non-minerals development within MSAs that would otherwise needlessly sterilise mineral resources	1 application permitted where material considerations have outweighed the criteria set out in the policy and the determining authority received an objection from the MPA relating to mineral sterilisation and / or restricted operations. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
MS02 Safeguarding mineral infrastructure	Planning applications for non-minerals development being permitted on, or within 150m of safeguarded mineral infrastructure sites (see appendix 4)	GCC District Councils	Review of district DM decisions	On-going / Annually reported	100% refusal of non-minerals development being permitted on, or within 150m of safeguarded mineral infrastructure sites that would prejudice the capability and / or capacity of mineral operations in the county	1 application permitted where material considerations have outweighed the criteria set out in the policy and the determining authority received an objection from the MPA linked to the safeguarding of mineral infrastructure. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.

Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
MW01 Aggregate provision	Sales and reserve data for sand & gravel and crushed rock limestone	GCC Mineral Operators	Aggregate Monitoring Survey	Annual data from the previous calendar year	The annual supply of aggregates to equal at least the 10 year rolling average of sales for crushed rock (1.452mt as of 2016) and sand & gravel (0.742mt as of 2016) and the maintenance of at least a 10 year landbank for crushed rock or at least a 7 year landbank for sand & gravel.	Remaining estimated aggregate yields contained in site allocations being insufficient to facilitate the maintenance of at least a 10 year landbank for crushed rock or at least 7 year landbank for sand & gravel.
MW02 Natural building stone	Sales and reserves data for natural building stone and planning applications being permitted for working natural building stone.	GCC Mineral Operators	Mineral Monitoring Survey and review of County Council DM decisions	Annual data from the previous calendar year	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
MW03 Clay for civil engineering purposes	Planning applications being permitted for working clay for civil engineering purposes.	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
MW04 Brick clay	Sales and reserves data for brick clay and planning applications being permitted for working brick clay	GCC Mineral Operators	Mineral Monitoring Survey and review of County Council DM decisions	Annual data from the previous calendar year	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
MW05 Coal	Planning applications being permitted for working coal	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.

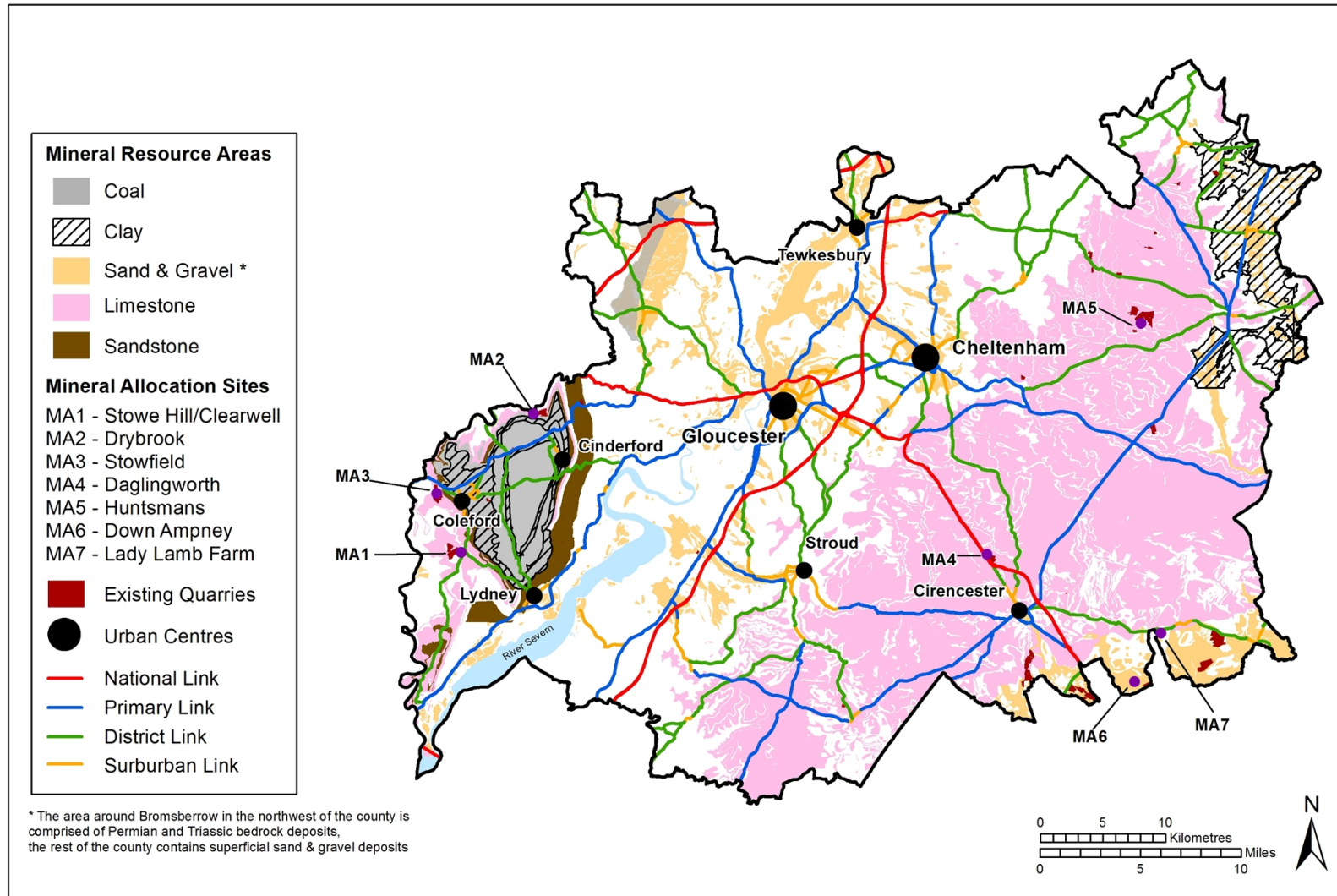
Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
MW06 Ancillary Development	Planning applications permitted for ancillary minerals development	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	<p>1 application permitted where material considerations have outweighed the criteria set out in the policy.</p> <p>The publication of new or revised national policy that would represent a departure from the relevant MLP policy.</p>
MA01 Aggregate working within site allocations	Planning applications for non-minerals development being permitted within site allocations	District Councils	Review of District DM decisions	On-going / Annually reported	100% refusal of non-minerals development within site allocations that received an objection from the MPA	<p>1 application permitted where material considerations have outweighed the criteria set out in the policy.</p> <p>The publication of new or revised national policy that would represent a departure from the relevant MLP policy.</p>
	Planning applications for aggregate working within site allocations	GCC	Review of County Council DM decisions		100% of applications meeting all policy criteria including Site Specific Requirements granted planning permission	<p>1 application permitted where material considerations have outweighed the criteria set out in the policy.</p> <p>The publication of new or revised national policy that would represent a departure from the relevant MLP policy.</p>
MA02 Aggregate working outside of site allocations	Planning applications permitted for aggregate working on land outside of site allocations	GCC	Review of County Council DM decisions	On-going / Annually reported	100% refusal of decisions that do not meet requirements of the policy.	<p>1 application permitted where material considerations have outweighed the criteria set out in the policy.</p> <p>The publication of new or revised national policy that would represent a departure from the relevant MLP policy.</p>
DM01 Amenity	Planning applications for minerals development being permitted where amenity issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	<p>1 application permitted where material considerations have outweighed the criteria set out in the policy.</p> <p>The publication of new or revised national policy that would represent a departure from the relevant MLP policy.</p>

Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
DM02 Cumulative Impact	Planning applications for minerals development being permitted where cumulative impacts from other on-site operations and / or those in the nearby locality where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM03 Transport	Planning applications for minerals development being permitted where transport issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM04 Flood risk	Planning applications for minerals development being permitted where flood risk issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM05 Water resources	Planning applications for minerals development being permitted where water environment issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM06 Biodiversity and Geodiversity	Planning applications for minerals development being permitted where biodiversity and / or geodiversity issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.

Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
DM07 Soil resources	Planning applications for minerals development being permitted where soil resources issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM08 Historic environment	Planning applications for minerals development being permitted where historic environment issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM09 Landscape	Planning applications for minerals development where landscape issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
DM10 Gloucester-Cheltenham Green Belt	Planning applications for minerals development where permitted within the Gloucester-Cheltenham Green Belt	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.

Policy	Indicator(s)	Who?	How?	When?	Target	Trigger
DM11 Aerodrome safeguarding and aviation safety	Planning applications for minerals development being permitted where aerodrome safeguarding and / or aviation safety issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy and the MPA received an objection from aviation safeguarding bodies. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.
MR01 Restoration, aftercare and facilitating beneficial after- uses	Planning applications for minerals development being permitted where site restoration and aftercare issues where relevant and underwent scrutiny	GCC	Review of County Council DM decisions	On-going / Annually reported	100% of applications meeting all policy criteria granted planning permission	1 application permitted where material considerations have outweighed the criteria set out in the policy. The publication of new or revised national policy that would represent a departure from the relevant MLP policy.

Appendix 1 | Key diagram



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Appendix 2 | Safeguarded mineral infrastructure sites

Mineral infrastructure	Site location
Wharfage with storage / handling / processing potential	The Docks, Sharpness, Berkeley, GL13 9UX
Concrete batching plant	Land at Naunton Quarry, Buckle Street, Naunton, GL54 3BA
	Land at the Old Bakery, Lower Tuffley Lane, Gloucester, GL2 5DP
	Land at Netherhills, Fromebridge Lane, Whitminster, GL2 7PD
	Land at Claydon Pike Works, Claydon Pike, Lechlade, GL7 3DT
	Land at Swindon Road, Cheltenham, GL51 9NB
	Hayricks Wharf, Tewkesbury Road, Cheltenham, GL51 9AA
	Land at Barnwood Junction, Myers Road Off Horton Road, Gloucester, GL1 3QA
	The Old Ryeford Sawmills, Ryeford Industrial Estate, Stonehouse, GL10 3HE
	Land at the Old Airfield, Moreton Valence, GL2 7NG
	Land at Golden Valley, Gloucester Road, Cheltenham, GL51 0TT
	Land at Ruardean Hill, Drybrook, GL17 9AR
Coated Road stone Plant	Land at Stowfield Quarry, Staunton Road, Coleford GL16 8NS
	Land at Clearwell Quarry, Stowe Green, St. Briavels, GL15 6QW
Concrete Products Plant	Land at Naunton Quarry, Buckle Street, Naunton, GL54 3BA
Sites for handling and / or processing and distributing recycled and secondary aggregates	Land at the Old Airfield, Moreton Valence, GL2 7NA
	Land at Netherhills, Fromebridge Lane, Whitminster, GL2 7PD
	Land at Allstone, Myers Rd, Gloucester, GL1 3QD
	Land off Buckle Street, Honeybourne, Evesham, WR11 7QE
	Land at Overton Farm, Maisemore, GL2 8HR
	Land at Javelin Park, Haresfield, GL10 3DP

Appendix 3 | Forecast of aggregate supplies and provision figures

10-year rolling average of annual sales for primary land-won aggregates from within Gloucestershire (2007-2016 inclusive): -

- 1.452 million tonnes per annum for crushed rock
- 0.742 million tonnes per annum for sand and gravel;

Source data: 6th LAA for Gloucestershire

Remaining reserves of primary land-won aggregates from within Gloucestershire as at the end of 31/12/2016: -

- 24.32 million tonnes for crushed rock;
- 4.41 million tonnes for sand and gravel

Source data: 6th LAA for Gloucestershire

Total aggregates provision requirement in years

Crushed Rock		Sand & Gravel	
Year prior to submission (2017) #	1	Year prior to submission (2017) #	1
Plan period (2018-2032) ##	15	Plan period (2018-2032) ##	15
Landbank at end of plan (2033-2042) ###	10	Landbank at end of plan (2033-2039) ###	7
Total requirement (years)	26	Total requirement (years)	23

Included because reserve data is only available up until 31/12/2016 at this time;

See NPPF – paragraph 157, bullet 2;

See NPPF – paragraph 145, bullet 6

Mineral	A. Requirement (years)	B. Annual provision (mt)	C Total requirement	D. Landbank as at 31/12/2014	E Permissions granted since 31/12/2016	Provision requirement for plan C-(D+E)
Carboniferous Limestone	26	*1.0164	26.426	*** 16.00	0	10.426
Jurassic Limestone	26	** 0.4356	11.326	*** 8.31	0	3.016
Total Crushed Rock	26	1.452	37.752	24.31	0	13.442
Sand & Gravel	23	0.742	17.066	4.41	3.2	9.456

* Based on 70% of 1.452mt

** Based on 30% of 1.452mt

*** Taken from the 6th Gloucestershire's Local Aggregate Assessment (LAA): - <http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/local-aggregates-assessment-laa/>

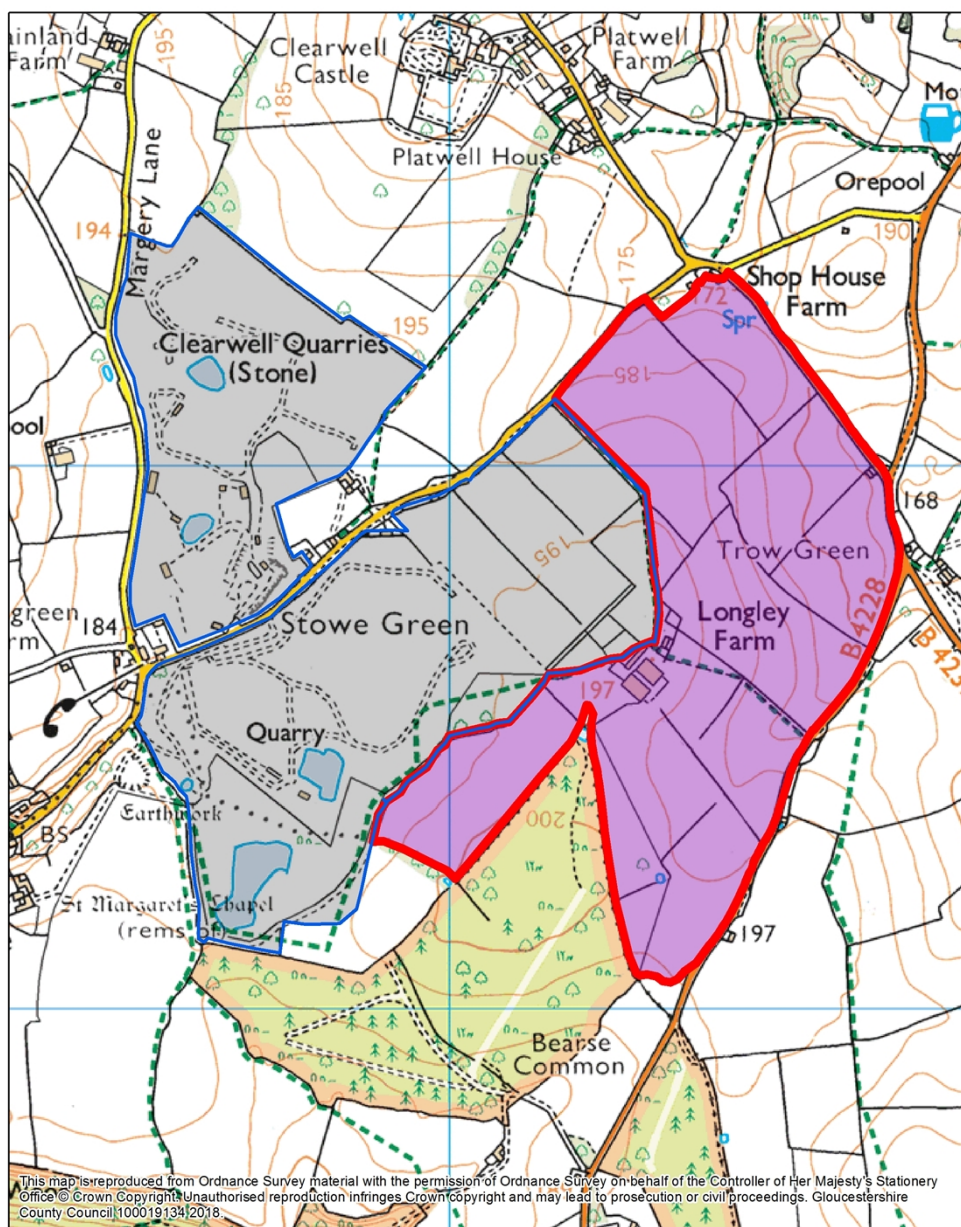
Appendix 4 | Detailed development requirements for plan allocations

- 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 Quarry²⁶⁴;
- Allocation 06 : Land south east of Down Ampney;
- Allocation 07 : Land at Lady Lamb Farm, west of Fairford;

²⁶⁴ As of November 2017 the quarry formerly known as "Huntsman's Quarry" has been renamed Naunton Quarry by the site owner

Allocation 01: Land east of Stowe Hill Quarry

Aggregate type:	Forest of Dean (Carboniferous) Limestone			Allocation type:	Preferred area
Yield and Illustrative aggregate supply potential	The entire allocation may yield in the region of 10mt to 17mt of crushed rock limestone. Based upon the existing operating capacity permitted at the Stowe Hill / Clearwell Quarries complex, the allocation could make a contribution towards the maintenance of steady local aggregate supplies by as much as 28 years worth of additional working beyond that already permitted.				
Site area:	Approximately 54 ha	District:	Forest of Dean	Parish:	Newland
Relevant planning permissions: (as of November 2017)	DF/2238/W: Concrete batching plant and ancillary facilities dated - 19/12/02; DF/2238/1/A: Operation of a coated roadstone (asphalt) plant dated – 01/11/05; DF/2238/X: Extension of Stowe Hill Quarry and consolidation of existing consents dated - 05/01/07;				



- Site Allocation
- Existing Quarries



01: Land east of Stowe Hill Quarry



Detailed Development Requirements for Allocation 01 : Land east of Stowe Hill Quarry;	
Theme	Specific Requirement
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of the potential health impacts of local communities within the sphere of influence of the allocation ²⁶⁵ . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁶⁶ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located close to the allocation and those that comprise the nearby hamlets of Stowe, Stowe Green, Trow Green, Mork and Lower Cross and the villages of Clearwell, Sling and St. Briavels. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along freight routes to be used to support aggregate supplies from Stowe Hill Quarry will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic development	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of further aggregate working at Stowe Hill Quarry. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Stowe Hill Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational matters / site infrastructure	The existing permitted production limit of 600,000 tonnes per annum or 60,000 tonnes per calendar month should not be exceeded in association the working of the allocation, unless it can be demonstrated an alternative production limit will be environmentally acceptable in planning terms. It is preferable that all site infrastructure including plant, necessary to support future working is also concentrated within the Stowe Hill Quarry unit so that the restoration of the adjacent Clearwell Quarry can be achieved as soon as is practicably possible. Alternative site infrastructure proposals must be robustly justified and accompanied by sufficient evidence to show how they will be environmentally acceptable in planning terms.
Highways	A Transport Assessment (TA) will very likely be required. Advice on the content of a TA should be sought from the Local Highway Authority at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated include: - the creation of a safe and suitable vehicular access; and the continued adherence to acceptable, established freight routes (vehicular movements associated with the working of the allocation should ideally use the A48 via the B4321 (Bream Road) or the A4136 via the B4228, which are classified as mostly 'District Links' and recognised as part of the 'Primary Route Corridor for HGVs'). It is preferable that consideration is given to alternative access arrangements to those currently afforded to Stowe Hill Quarry and that service the current plant area within Clearwell Quarry. A previously approved proposal has already considered the possibility of a new route off the B4228 ²⁶⁷ which was supported. This circumstance could prove materially significant in the assessment of the transport impacts of any future working. Furthermore, the TA should pay particular attention to any freight routes that include the A48. This is due to the presence of the declared Lydney Air Quality Management Area (AQMA) and restrictions at the Bream Road junction with Lydney High Street. All proposed routing plans will need to take

²⁶⁵ Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁶⁶ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: - <https://fingertips.phe.org.uk/>

²⁶⁷ Planning permission under reference 09/0072/FDMAJM included a new haul road and vehicular access off the B4228. The permission was granted in 2013 but has now lapsed following the cessation of the conditional time period for commencement.

	account of Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁶⁸ and follow the advice contained within the Gloucestershire Freight Gateway ²⁶⁹ .
Public Rights of Way (PRoW)	An assessment of the PRoW network should be undertaken with particular attention given to paths RNE 66/1, RNE 67/1 and FSB 138/1. Details of possible temporary diversions or permanent re-routings of any affected paths will be required. It is strongly encouraged that advice is sought at the earliest possible opportunity from the Local Highways Authority in respect of this matter.
Flood Risk	A site-specific flood risk assessment (FRA) will be required. The possibilities of elevated flood risk from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater and increased surface run-off will need to be investigated. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, will also need to be assessed. Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at the existing Stowe Hill Quarry and the adjacent Clearwell Quarry will need to be considered. In addition, potential flood-risk sensitive receptors such as the residential properties and commercial premises of the hamlets of Stowe, Stowe Green, Trow Green and the villages of Clearwell and Sling and will require investigation. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters requiring attention include: - the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. It will also need to be effectively integrated with any previously approved flood risk management solution at the existing Stowe Hill Quarry. Where infilling using inert materials (imported and / or internal to the site) for profiling landforms, this must also incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.
Water resources	A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing 24-months prior to development, continuing throughout the operational phase, and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (up to 5km) will require scrutiny. These include: - several tributaries of Oakwood Brook, a small spring and the resulting flow into the Slade Brook, several unnamed springs to the north of the allocation, Valley Brook, Warth Brook and Cannop Brook. However, a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Particular attention will need to be given to the potential hydrological / hydrogeological impacts on the Slade Brook SSSI. This contains a karst feature – an active tufa-forming stream, which is likely to be sensitive to local hydrological change. A holistic approach should be adopted when considering the Slade Brook SSSI with technical advice on this matter sought from both the EA and Natural England at the earliest possible opportunity. Avoiding the derogation of the SSSI must be the primary focus. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as proposed restoration and aftercare at the existing Stowe Hill Quarry and the adjacent Clearwell Quarry. The HIA will need to establish mitigation requirements and where necessary provide a strategy for their implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and improving the water environment in line with the Severn River Basin Management Plan (RBMP) ²⁷⁰ .

²⁶⁸ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: -

http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁶⁹ The Gloucestershire Freight Gateway can be obtained at:- <http://freightgateway.co.uk/gloucestershire/>

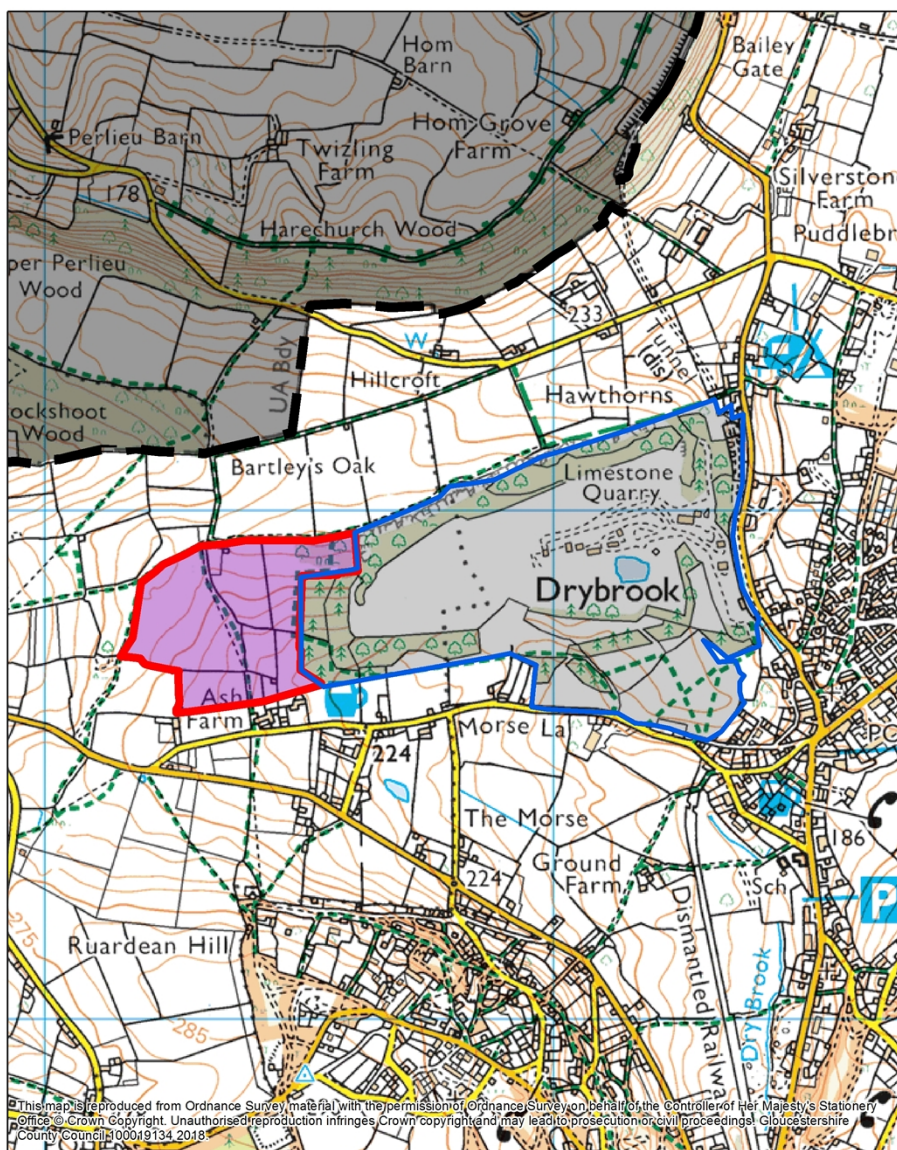
²⁷⁰ Information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

Natural Environment	<p>A comprehensive assessment of the natural environment will be required. This should include natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development (e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - the Wye Valley & FoD Bat Sites SAC, Wye Valley Woodlands SAC, River Wye SAC, Old Bow & Old Ham Mines SSSI, Devil's Chapel Scowles SSSI, Tudor Farm Bank SSSI, River Wye SSSI and Slade Brook SSSI. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues arising, have been considered in a holistic manner and within a strategic context. In particular it must be clear as to how the characteristic habitats and the supported wildlife of the Wye Woods Strategic Nature Area (SNA) as identified on the Gloucestershire Nature Map will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits (both during and post-mineral working), due consideration should also be given to possible collaborations and coordination with the programme of nature conservation actions identified for the Forest of Dean Nature Improvement Area (NIA). An analysis of whether any significant effects are likely to arise on the Wye Valley and Forest of Dean Bat Sites SAC, the Wye Valley Woodlands Sites SAC and / or the River Wye SAC either alone or in combination with other plans or projects, must be carried out through a formal screening process to establish the requirement for an Appropriate Assessment (AA).</p>
Geodiversity	<p>In the event the existing Stowe Green / Clearwell Quarries Regionally Important Geological and Geomorphological Site (RIGS ref: 236) may be affected, a proportionately detailed assessment of possible impacts will need to be carried out. At the earliest opportunity advice should ideally be sought from the Gloucestershire Geology Trust. Key items that will need careful consideration include whether mitigation is possible and how this might be achieved; and to what extent future management practices can practicably and reasonably be brought forward to maximise opportunities to improve the protection of geological assets, enable greater access to them, and / or facilitate greater scientific understanding.</p>
Soil Resources	<p>A Soil Survey and Agricultural Land Classification (ALC) Report will be required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocation lies within an area that may contain grade 3 agricultural land (good to moderate quality). This will need further investigation, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the sub-grade of the soil (i.e. whether it is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the resource to the individual proposal under consideration along with the wider allocation. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to possible implications for the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy and aftercare programme.</p>
Archaeology / Historic Environment	<p>A Heritage Statement (HS) will be required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance to the allocation is the grade II historic park at Clearwell Castle (NL list entry: 1000758) and the grade II listed building known as Toll House (NL list entry: 1186347).</p>

Landscape & Visual Impact	<p>A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters requiring careful scrutiny include the sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all proposed mineral-development activities and their evolving influence over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - the National landscape character NCA105 (Forest of Dean and Lower Wye) and the regional / local level classification – The Limestone Plateau landscape character type and the Tidenham Chase landscape character area, which are described in the Forest of Dean Landscape Character Assessment. The Wye Valley AONB lies less than 1km of the allocation; therefore special consideration must also be given to the particular elements and features that contribute to the landscape character of the designation. It is important that the LVIA applies published landscape studies when establishing baseline conditions. Specifically in terms of visual impact, the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum, include: - the individual properties, farms and agricultural premises that surround the perimeter of the allocation, the properties that form the hamlet of Trow Green; the settlements of Clearwell and Bream; nearby sections of the B4231 / Bream Avenue and B4228; and the network of paths and recreational routes in the locality. In assessing both landscape and visual impacts possible cumulative / in-combination effects associated with the existing permitted mineral operations at Stowe Hill Quarry and Clearwell Quarry will need to be taken into account. A further essential element is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on anticipated landscape and visual impacts (e.g. resulting from the preparation of land prior to mineral working, mineral working itself, and subsequent restoration incorporating aftercare).</p>
Restoration opportunities & constraints	<p>A restoration strategy including appropriate and sufficient commitments towards aftercare programme will be required. The strategy must be coherent and where necessary holistic in its approach to ensure an effective solution is deliverable across the entire allocation. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to adopt alternative arrangements. In developing the strategy, evidence must be presented to show how compatibility with the existing local environment will be achieved and the approved restoration schemes of the existing Stowe Hill and Clearwell Quarries will not be prejudiced. Where the public rights of way network has been affected, attention will need to be given to the integration of acceptable long-term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the Wye Woods Strategic Nature Area (SNA) and the nature conservation actions for the Forest of Dean Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Forest of Dean Core Strategy and the Wye Valley AONB Management Plan (the AONB designation is located less than 1km from the allocation). Furthermore, all proposed restoration solutions must be mindful of climate change and seek to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-years post-mineral working period will normally be required as part of the restoration strategy. This must set out commitments for carrying out aftercare into the future and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>

Allocation 02: Land west of Drybrook Quarry

Aggregate type	Forest of Dean (Carboniferous) Limestone			Allocation type	Preferred area
Illustrative aggregate supply potential	The entire allocation may yield in the region of 4mt of crushed rock limestone. However, under potential constrained circumstances ²⁷¹ , this could fall to around 3mt. Based upon established operating practices at the existing permitted Drybrook Quarry, the allocation could make a contribution towards the maintenance of steady local aggregate supplies by as much as 16 years worth of additional working beyond that already permitted.				
Site area:	Approx. 10ha	District	Forest of Dean	Parish	Ruardean
Relevant planning permissions: (as of Nov. 2017)	14/0032/FDMAJM: Extended time for previously permitted operations dated – 21/10/14				



■ Site Allocation ■ Existing Quarries
--- Gloucestershire County Boundary ■ Out of County

0 500 Yards
 0 500 Metres

02 : Land west of Drybrook Quarry


gloucestershire
 COUNTY COUNCIL

**Detailed Development Requirements for Allocation 02 : Land west of Drybrook Quarry;**

²⁷¹ A gas pipeline has been identified running through part of the allocated area. It is currently unknown whether it is technically achievable and / or viable for aggregate working to take place beyond the gas pipeline. It is also likely that a stand-off / buffer zone may be required.

Theme	Specific Requirement
Local Communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ²⁷² . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁷³ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation and those that comprise the settlements of Ruardean, Ruardean Hill, Drybrook and Puddlebrook. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along freight routes to be used to support aggregate supplies from Drybrook Quarry will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic Impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of further aggregate working at Drybrook Quarry. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence that will show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Drybrook Quarry must also be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	The working of the allocation should not exceed the established production capacity of Drybrook Quarry, which stands at 250,000 tonnes per annum. This capacity figure accords with the envisaged amount of production applied to the transport evidence that supported the current planning permission at Drybrook Quarry. Although not conditionally restricted to 250,000 tonnes per annum, this figure could be materially significant when considering future working proposals. Any higher production level should be accompanied by sufficient evidence to demonstrate it would be environmentally acceptable in planning terms. Site infrastructure necessary to support the working of the allocation should be provided through the permitted facilities contained within Drybrook Quarry and accord with the relevant requirements set out under the extant permission. Any alternative site infrastructure arrangements must be accompanied by sufficiently robust evidence to demonstrate they will be environmentally acceptable in planning terms.
Highways	A Transport Assessment (TA) will very likely be required. Advice on the content of a TA should be sought from the Local Highway Authority at the earliest possible opportunity as part of pre-application preparations. Highways matters likely to require investigation include using the existing vehicular access arrangements and following the existing acceptable, established freight routes (i.e. the A4136 via Drybrook Road, which is recognised as part of the 'Primary Route Corridor for HGVs'). Aggregate supplies from the working of the allocation should ideally continue to use the existing Hawthorns Road entrance rather than create a new or additional access. Any alternative routing proposals will need to take account of Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁷⁴ and follow the advice contained within the Gloucestershire Freight Gateway ²⁷⁵ .

²⁷² Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁷³ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: <https://fingertips.phe.org.uk/>

²⁷⁴ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁷⁵ The Gloucestershire Freight Gateway can be obtained at: <http://freightgateway.co.uk/gloucestershire/>

Public Rights of Way (PRoW)	An assessment of the PRoW network should be undertaken with particular attention given to paths DRD 11 and 43. Details of possible temporary diversions or permanent re-routings of any affected paths will be required. It is strongly encouraged that advice is sought at the earliest possible opportunity from the Local Highway Authority in respect of this matter.
Flood risk	A site-specific flood risk assessment (FRA) will be required. The possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater and increased surface run-off will need to be investigated. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, should also be assessed. Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at the existing Drybrook Quarry will need to be considered. In addition, potential flood-risk sensitive receptors such as the residential properties and commercial premises located within Drybrook, Ruardean, and the northern side of Ruardean Hill will require investigation. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters likely to require attention include the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. It will also need to be effectively integrated with any previously approved flood risk management solution at the existing Drybrook Quarry. For infilling using inert materials (imported and / or internal to the site) for profiling landforms, this must also incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.
Water resources	A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny. These includes: - Cinderford Brook to Blackpool Brook, Dry Brook, Bailey Brook, Lodgegrove Brook and the quarry lagoons within the existing Drybrook Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as proposed restoration and aftercare at the existing Drybrook Quarry. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and improving the water environment in line with the Severn River Basin Management Plan (RBMP) ²⁷⁶ .

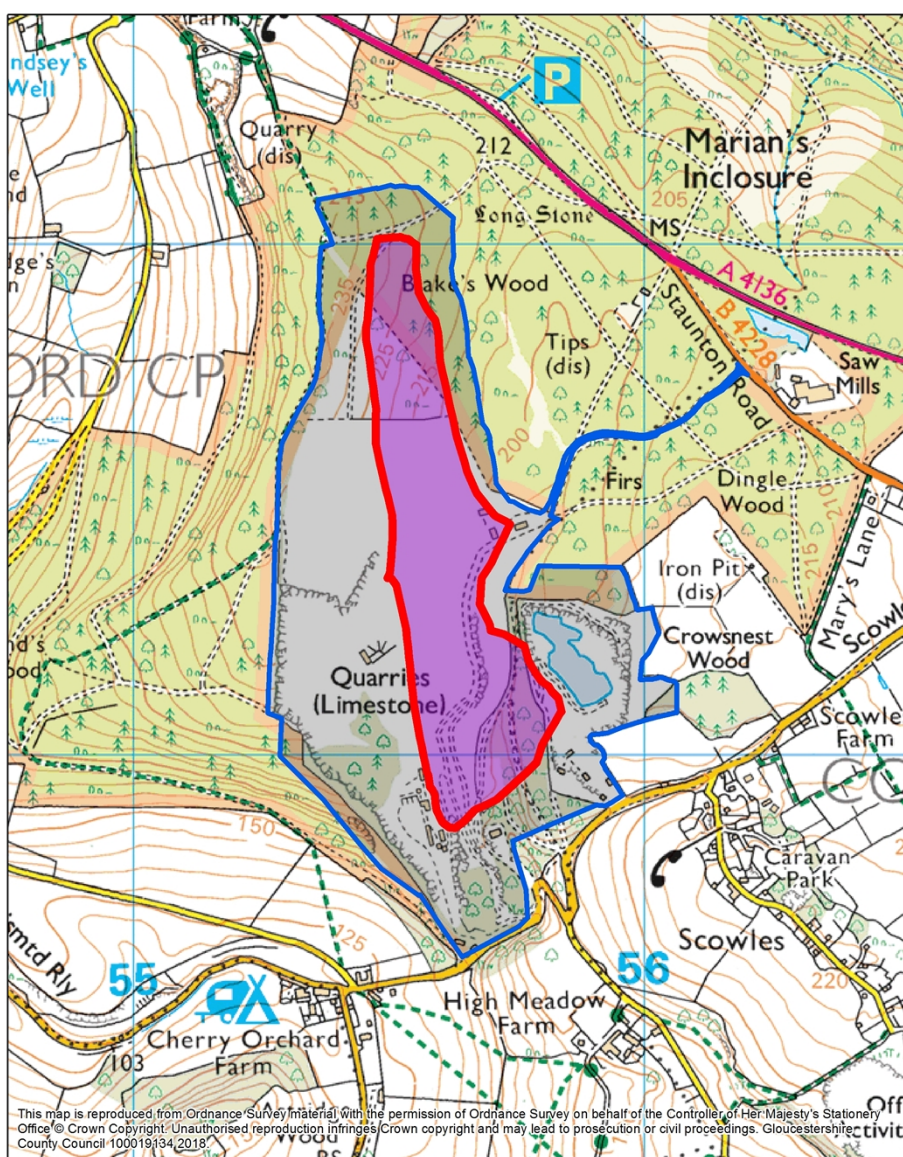
²⁷⁶ Information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

Natural environment	<p>A comprehensive assessment of the natural environment will be required. This should consider the natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development (e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - Woodlands near Hope Mansell Local Wildlife Site (Herefordshire), Lea Bailey Enclosure Local Wildlife Site (Herefordshire) and Ruardean Hills KWS. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic manner and within a strategic context. In particular it must be clear as to how the characteristic habitats and the supported wildlife of the Ruardean Woods Strategic Nature Area (SNA), identified on the Gloucestershire Nature Map, will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits (both during and post-mineral working), due consideration should also be given to possible collaborations and coordination with the programme of nature conservation actions identified for the Forest of Dean Nature Improvement Area (NIA).</p>
Soil resources	<p>A Soil Survey and Agricultural Land Classification (ALC) Report will be required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocation lies within an area that may contain grade 3 agricultural land (good to moderate quality). This will need to be further investigated, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the sub-grade of the soil (i.e. whether it is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the resource to the individual proposal under consideration and the wider allocation. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to implications to the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy.</p>
Archaeology / Historic Environment	<p>A Heritage Statement (HS) is required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance to the allocation is evidence of early activity from the prehistoric or Roman period, which has been drawn from recordings at the adjacent Drybrook quarry and the surrounding landscape. This will need to be appropriately evaluated.</p>
Landscape & Visual Impact	<p>A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters requiring careful scrutiny include the sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all activities associated with minerals development and how these evolve over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - the National landscape character NCA 105 (Forest of Dean and Lower Wye) and the regional / local level classification – The Limestone Hills landscape character type and the Ruardean Hills landscape character area, which are both described in the Forest of Dean Landscape Character Assessment. It is important that the LVIA applies published landscape studies when establishing baseline conditions. Specifically in terms of visual impact, the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum, include: - individual properties, farms and agricultural premises particularly those located at the western end of Morse Lane, the properties that comprise the south east and south west of Drybrook; the settlement of Ruardean, and the network of paths and recreational routes in the locality. In assessing both landscape</p>

	<p>and visual impacts possible cumulative / in-combination effects associated with the existing permitted mineral operations at the existing Drybrook Quarry will need to be taken into account. A further essential element of the LVIA is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of land prior to working, mineral working itself and processing, and subsequent restoration incorporating aftercare).</p>
Restoration opportunities & constraints	<p>A restoration strategy including appropriate and sufficient commitments towards aftercare programme will be required. The strategy must be coherent and where necessary holistic in its approach to ensure an effective solution is deliverable across the entire allocation. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the strategy, evidence must be presented to show how compatibility with the existing local environment will be achieved and the approved restoration scheme of the existing Drybrook Quarry will not be prejudiced. Where the public rights of way network has been affected, attention will need to be given to the integration of acceptable long-term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the Ruardean Woods Strategic Nature Area (SNA) and the nature conservation actions for the Forest of Dean Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Forest of Dean Core Strategy. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>

Allocation 03: Depth extension to Stowfield Quarry

Aggregate type	Forest of Dean (Carboniferous) Limestone			Allocation type	Preferred Area
Yield and illustrative aggregate supply potential	The entire allocation may yield approximately 7.4mt of crushed rock limestone. Based upon the existing operating capacity permitted at Stowfield Quarry, the allocation could make a contribution towards the maintenance of steady local aggregate supplies by as much as 9 years worth of additional working beyond that already permitted. However, this timeframe could shorten considerable to around 6 additional years, if an outstanding legal agreement was to be completed, which will allow for the operating capacity of Stowfield Quarry to increase.				
Site area:	Approx. 20 ha	District	Forest of Dean	Parishes	Coleford and Staunton Coleford
Relevant planning permissions : (as of Nov. 2017)	09/0013/FDMAJM: Extension to Stowfield and Rogers Quarries dated – 11/04/11; 16/0018/FDMAJM: Extended operation of site infrastructure dated – 21/02/17				



■ Site Allocation
■ Existing Quarries

03 : Depth extension to Stowfield Quarry



Gloucestershire

 COUNTY COUNCIL



Detailed Development Requirements for Allocation 03: Depth extension to Stowfield Quarry	
Theme	Specific Requirement
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ²⁷⁷ . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁷⁸ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation and those that comprise the nearby hamlets and villages of Crossways, Scowles, Staunton and Newland. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along freight routes to be used to support aggregate supplies from Stowfield Quarry will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of further aggregate working at Stowfield Quarry. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Stowfield Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	The extant production limit for the existing Stowfield Quarry is 800,000 tonnes per annum. However, subject to meeting conditions of a Section 106 legal agreement, the limit could rise to 1.2 million tonnes per annum or 400,000 tonnes per quarter. The working of the depth extension should not exceed the extant production limit in place at the time of determination, unless it can be demonstrated an alternative limit will be environmentally acceptable in planning terms. Site infrastructure necessary to support the working of the allocation should be provided through the permitted facilities contained within Stowfield Quarry and accord with the relevant requirements set out under the extant permission. Any alternative site infrastructure arrangements must be accompanied by sufficiently robust evidence to demonstrate they will be environmentally acceptable in planning terms.
Highways	A Transport Assessment (TA) will be required. Advice on the content of a TA should be sought from the Local Highway Authority at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated, include the continuation of the existing vehicular access off the Staunton Road and use of the established, acceptable freight routes (i.e. the A4136 via Staunton Road, which is recognised as part of the 'Primary Route Corridor for HGVs'). Any alternative routing proposals will need to take account of Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁷⁹ and follow the advice contained within the Gloucestershire Freight Gateway ²⁸⁰ .

²⁷⁷ Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁷⁸ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: <https://fingertips.phe.org.uk/>

²⁷⁹ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁸⁰ The Gloucestershire Freight Gateway can be obtained at: <http://freightgateway.co.uk/gloucestershire/>

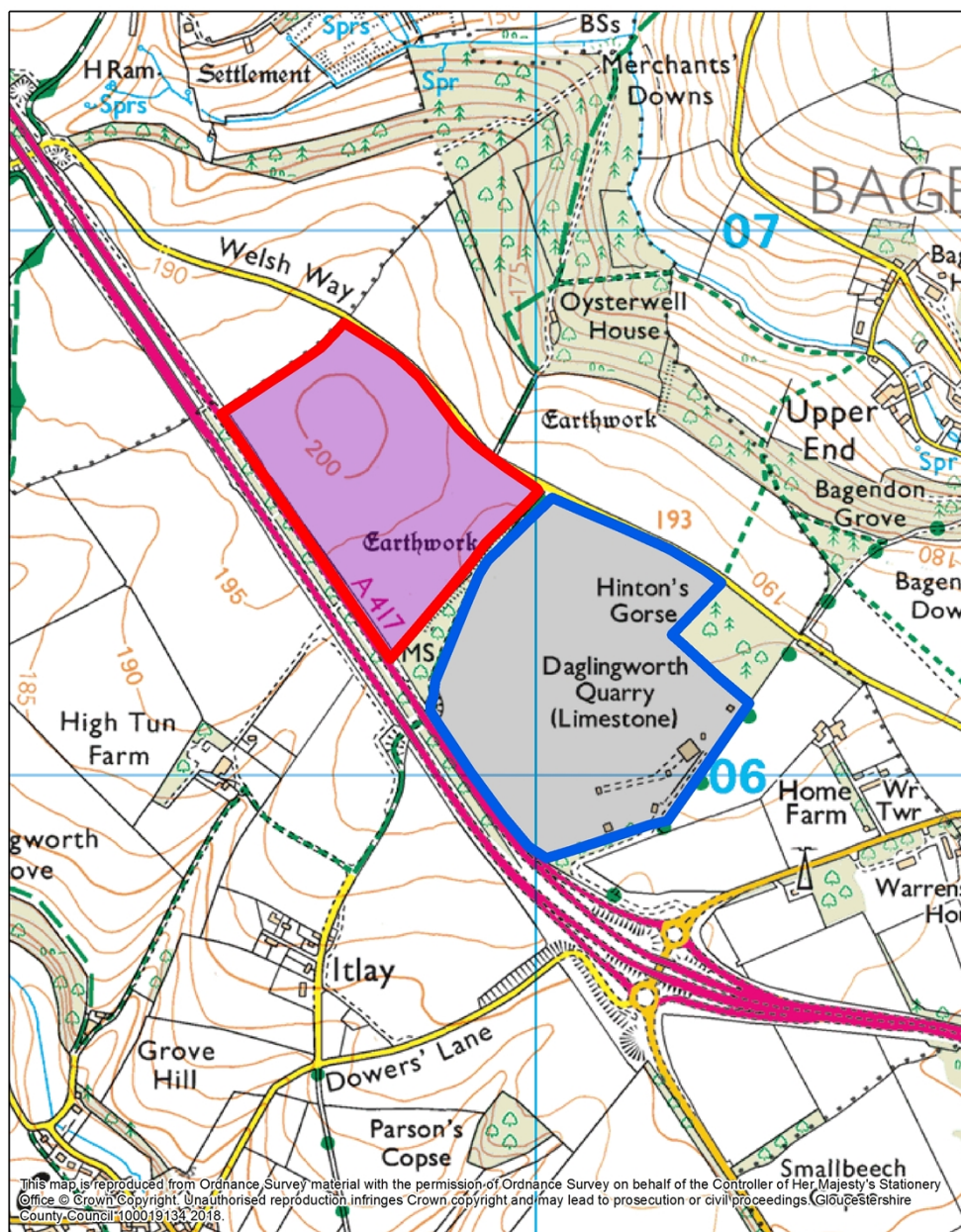
Flood risk	<p>A site-specific flood risk assessment (FRA) will be required. The possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater and increased surface run-off will need to be assessed... Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts should also be considered.</p> <p>Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at the existing Stowfield Quarry will need to be investigated. In addition, potential flood-risk sensitive receptors such as the residential properties and commercial premises located within and near to the village of Scowles, particularly along Scowles Road will require assessment. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters that will require attention include: - the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. It will also need to be effectively integrated with any previously approved flood risk management solution at the existing Stowfield Quarry. For any infilling using inert materials (imported and / or internal to the site) for profiling landforms, this must also incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.</p>
Water resources	<p>A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny. These includes: - Whippington Brook, an unnamed drain, tributary and pond at Swan Pool, and the lagoon within Stowfield Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities such as proposed restoration and aftercare at the existing Stowfield Quarry should also be considered. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management and identify how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Severn River Basin Management Plan (RBMP)²⁸¹.</p>

²⁸¹ Information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

Natural environment	<p>A review of previous assessment of natural environment affected by the existing Stowfield Quarry will be required. This should probably focus on those natural assets which rely upon, and / or that are located within the sphere of influence of the depth extension. This may include species, which remain active within or have colonised the existing quarry site since working has taken place. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development (e.g. mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need to be considered include: - Wye Valley Woodlands Sites SAC; the Wye Valley & FoD Bat Sites SAC, Dingle Wood SSSI; Swanpool Wood & Furnace Grove SSSI; Blakes Wood KWS; Whitecliffe Recreation Ground KWS; and Staunton Woods KWS. In addition, any priority habitats and / or priority species, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning any measures needed to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic manner taking account of the established environmental capacity identified at the existing Stowfield Quarry. Where opportunities exist to deliver tangible environmental benefits (both during and post-mineral working), these should be assessed. Furthermore, any possibly to enhance existing / or planned for programmes of nature conservation actions identified within the existing Stowfield Quarry should be explored. An analysis of whether any significant effects are likely to arise on the Wye Valley Woodlands Sites SAC and / or the Wye Valley & FoD Bat Sites SAC either alone or in combination with other plans or projects is needed. This should be undertaken through a formal screening process to establish the requirement for an Appropriate Assessment (AA).</p>
Soil resources	<p>A review of previous soil / agricultural land quality assessments associated with the existing Stowfield Quarry will be required. Particular attention should be given to any possible impacts a deepening would have on matters such as resource safeguarding through soil handling and storage. For example: a deepening proposal(s) is likely to affect current soil storage timescales as it will ultimately delay the overall restoration and the return to normal soil conditions for the site.</p>
Archaeology / Historic Environment	<p>A review of previous assessments of heritage assets including those of archaeological interest associated with the existing Stowfield Quarry will be required. It will be essential that previously agreed protection measures are not prejudiced and that any alternative arrangements will be acceptable in planning terms.</p>
Landscape & Visual Impact	<p>A review of landscape and visual impacts associated with the existing Stowfield Quarry focused on possible additional or heightened impacts relate to deepening will be required. The review should seek to identify and establish the significance of any changes on previously identified sensitive receptors. Care should be taken to ensure any possible cumulative / in-combination effects associated with the existing quarry are taken into account. Where necessary, the review should detail any measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and able demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of land prior to working, mineral working itself and processing, and subsequent restoration incorporating aftercare).</p>
Restoration opportunities & constraints	<p>A restoration strategy will be required. This must be fully integrated with existing permitted restoration proposals at Stowfield Quarry or where wider changes are proposed, not result in a degraded solution. Carefully consideration of how deepening may alter the final landform, landscaping and potential future land uses and how significant such changes may prove to be will be crucial. A review of any habitat creation and biodiversity ambitions previously identified for Stowfield Quarry should be carried out. Furthermore, restoration proposals must be mindful of climate change the potential need to deliver a greater degree of environmental resilience. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of the restored area. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are to be identified.</p>

Allocation 04: Land northwest of Daglingworth Quarry

Aggregate type	Cotswolds (Jurassic) Limestone		Allocation type	Preferred Area	
Yield and illustrative aggregate supply potential	The entire allocation may yield up to 9mt of crushed rock limestone. Based upon established operating capacities at the existing permitted Daglingworth Quarry, the allocation could support the maintenance of steady local aggregate supplies for upwards of 30 years beyond that already permitted				
Site Area	Approx. 17ha	District	Cotswold	Parish	Daglingworth
Relevant planning permissions: (as of Nov. 2017)	CT.0511/V: Review of Mineral Planning Permissions; New conditions dated – 21/01/00				



- Site Allocation
- Existing Quarries

**04 : Land northwest of Daglingworth Quarry**

Detailed Development Requirements for Allocation 04: Land northwest of Daglingworth Quarry	
Theme	Specific Requirement
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ²⁸² . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁸³ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation and those that comprise the hamlets of Itlay and Upper End near to Bagendon. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along freight routes to be used to support aggregate supplies from Daglingworth Quarry will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic Impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of further aggregate working at Daglingworth Quarry. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Daglingworth Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	The working of the allocation not to exceed the established production capacity of Daglingworth Quarry, which stands at around 250,000 tonnes per annum. This capacity figure accords with the envisaged amount of production reported within the evidence base that supported the allocation of the site previously within the adopted Gloucestershire Minerals Local Plan 2003. Whilst no conditionally restrictions apply to the extant permission, the figure could be materially significant when considering future working proposals. Any higher production level should ideally be accompanied by sufficient evidence to demonstrate it would be environmentally acceptable in planning terms. Site infrastructure necessary to support the working of the allocation should be provided through the permitted facilities contained within Daglingworth Quarry and accord with the relevant requirements set out under the extant permission. A service tunnel will most likely be required in order to achieve the necessary movement of worked primary minerals for processing and eventual sale. Any alternative site infrastructure proposals must be accompanied by robust evidence to demonstrate these will be acceptable in planning terms.
Highways	A Transport Assessment (TA) will be required. Advice on the content of a TA should be sought from the Local Highway Authority and Highways England at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated, include the continued use of the existing vehicular access off the Welsh Way and Daglingworth junction with the A417. The A417 should be used as the established freight route as it forms part of the 'Primary Route Corridor for HGVs'. Any alternative routing proposals will need to take account of Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁸⁴ , and follow the advice contained within the Gloucestershire Freight Gateway ²⁸⁵ .

²⁸² Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁸³ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: <https://fingertips.phe.org.uk/>

²⁸⁴ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁸⁵ The Gloucestershire Freight Gateway can be obtained at: <http://freightgateway.co.uk/gloucestershire/>

Public Rights of Way (PRoW)	An assessment of the PRoW network should be undertaken with particular attention given to paths BDH3/2 and 10/1. Details of possible temporary diversions or permanent re-routings of any affected paths will be required. It is strongly encouraged that advice is sought at the earliest possible opportunity from the Local Highway Authority in respect of this matter.
Flood risk	A site-specific flood risk assessment (FRA) will be required. The possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater and increased surface run-off are likely will need to be investigated. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, will need to be assessed. Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at the existing Daglingworth Quarry will need to be considered. In addition, potential flood-risk sensitive receptors such as the residential properties and commercial premises located within and surrounding the hamlet of Itlay and the villages of Daglingworth and Bagendon will require investigation. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters likely to require: -the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. It will also need to be effectively integrated with any previously approved flood risk management solution at the existing Daglingworth Quarry. For infilling using inert materials (imported and / or internal to the site) for profiling landforms this must also incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.
Water resources	A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. As the underlying geology of the allocation is classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. The allocation also lies within a Source Protection Zone 1 (SPZ1). This will require a very specific risk assessment to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies. Beyond the allocation, potential hydrological impacts on nearby surface water bodies (within 1km) will require scrutiny. These include: - Elkstone Brook and Daglington Stream. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. For example, the River Churn is just over 3 km to the South East of the allocation. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities such as proposed restoration and aftercare at the existing Daglingworth Quarry should also be considered. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP) and also the Severn RBMP, which covers an area that may be within the sphere of influence of the allocation ²⁸⁶ .

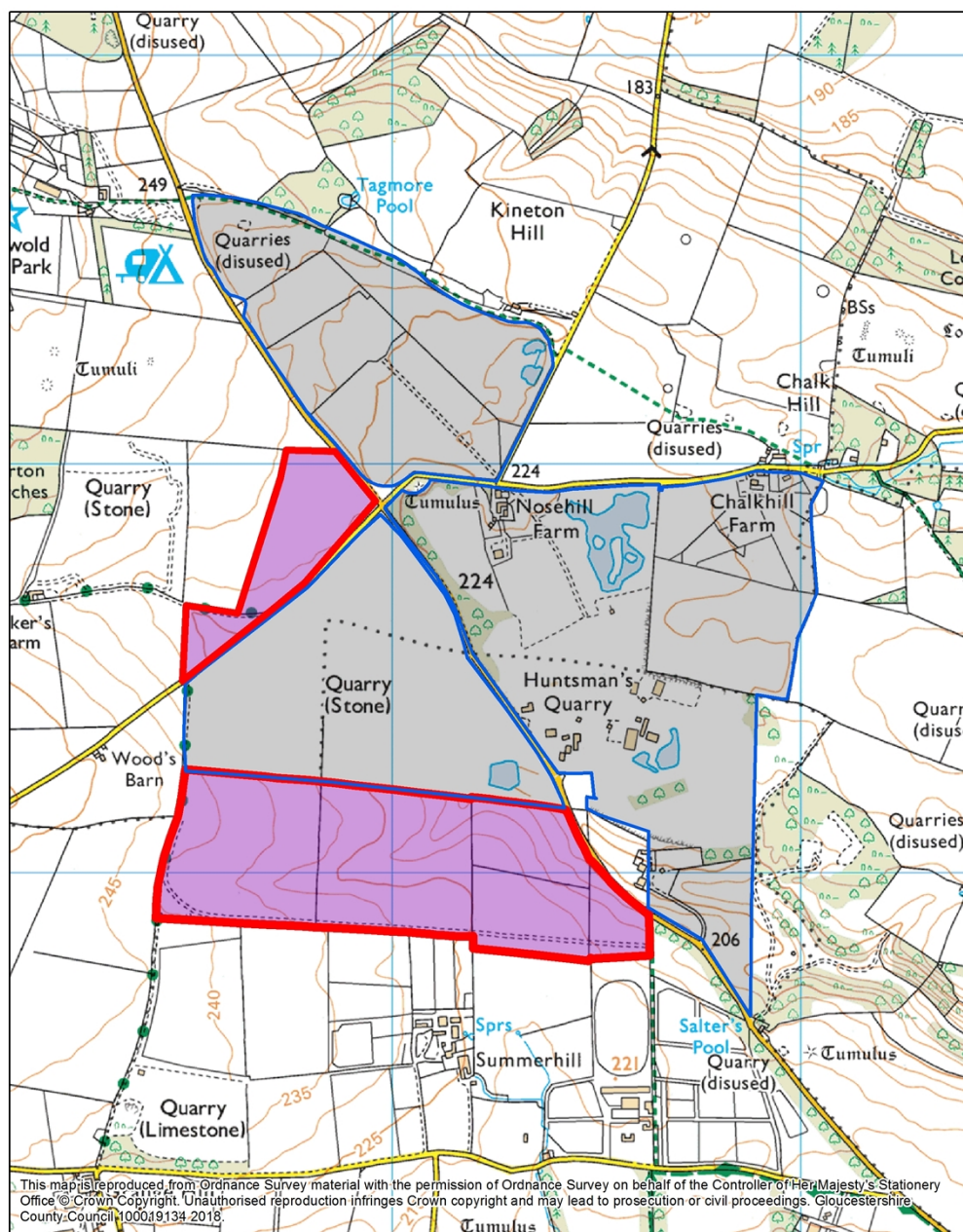
²⁸⁶ Information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

Natural environment	<p>A comprehensive assessment of the natural environment will be required. This should include those natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development (e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - High Tun Farm KWS, Itlay KWS, Stancombe Grove & Oysterwell Wood KWS, Bagendon Grove & Oysterwell Wood KWS, Merchants Downs KWS, Daglingworth & Snakes Groves KWS, Duntisbourne Grove KWS and Five Acre Grove (Bagendon) KWS. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures deemed necessary to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic manner and within a strategic context. Where opportunities exist to deliver tangible benefits (both during and post-mineral working), due consideration should be given to possible collaborations and coordination with the programme of nature conservation actions identified for the nearby Cotswold Valley Nature Improvement Area (NIA).</p>
Geodiversity	<p>In the event the existing Daglingworth Quarry Regionally Important Geological and Geomorphological Sites (RIGS ref: 164 and 165) will be affected, a proportionately detailed assessment of possible impacts must be carried out. At the earliest opportunity advice should be sought from the Gloucestershire Geology Trust. Key items that will need careful consideration include: - whether mitigation is possible and how this might be achieved; and to what extent future management practices can practicably and reasonably be brought forward to maximise opportunities to improve the protection of geological assets, enable greater access to them, and / or facilitate greater public awareness and scientific understanding.</p>
Soil resources	<p>A Soil Survey and Agricultural Land Classification (ALC) Report is required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocation lies within an area that may contain grade 3 agricultural land (good to moderate quality). This will need further investigation, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the sub-grade of the soil (i.e. whether it is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the resource to the individual proposal under consideration and the wider allocation. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to implications to the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy.</p>
Archaeology / Historic Environment	<p>A Heritage Statement (HS) will be required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance to the allocation is the grade II listed milestone (NL list entry: 1090206.) and the linear earthwork located close to the south eastern boundary. Other archaeological features associated with the historic settlement of Bagendon may need investigation.</p>

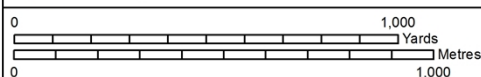
Landscape & Visual Impact	<p>A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters requiring careful scrutiny include the likely sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all activities associated with minerals development and how these evolve over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - national landscape character NCA 107 (Cotswolds) and the regional / local level classification – The High Wold Dip Slope landscape character type and area. As the allocation is located within the Cotswold AONB special consideration must also be given to the particular elements and features that contribute to the landscape character of the designation. It is important that the LVIA applies published landscape studies when establishing baseline conditions. In terms of visual impact the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum include: - a number of individual properties, farms and agricultural premises; the settlements of Woodmancote and Bagendon; several nearby paths and recreational routes and the highway network including stretches of the A417, Welsh Way and Cutham Lane. In assessing both landscape and visual impacts possible cumulative / in-combination effects associated with the existing permitted mineral operations at the existing Daglingworth Quarry will need to be taken into account. A further essential element of the LVIA is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of land prior to working, mineral working itself and processing, and subsequent restoration incorporating aftercare).</p>
Restoration opportunities & constraints	<p>A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the entire allocation. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how: - compatibility with the existing local environment the approved restoration scheme of the existing Daglingworth Quarry will not be prejudiced. Where the public rights of way network has been affected, attention will need to be given to the integration of acceptable long-term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the nature conservation actions proposed for the nearby Cotswold Valley Nature Improvement Area should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Cotswold District Local Plan and Cotswold AONB Management Plan. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>

Allocation 05: Land south and west of Naunton Quarry

Aggregate type	Cotswolds (Jurassic) Limestone		Allocation type		Preferred Area
Yield and illustrative aggregate supply potential	The entire allocation may yield in the region of 10mt of crushed rock limestone. Based upon established operating capacities at the existing permitted Naunton Quarry, the allocation could support the maintenance of steady local aggregate supplies by as much as 20 years worth of additional working beyond that already permitted				
Site area	Approx. 39ha	District	Cotswold	Parishes	Naunton and Temple Guiting
Relevant planning permissions: (as of Nov. 2017)	CD.0165/1/X: Existing quarry deepening with revised restoration dated – 21/04/06; 13/0090/CWMAJM: Revised restoration and site infrastructure dated – 28/01/14; 14/0052/CWMAJM: Extended operation of concrete batching plant dated – 15/07/14.				



- Site Allocation
- Existing Quarries



05: Land south and west of Naunton Quarry



Detailed Development Requirements for Allocation 05: Land south and west of Naunton Quarry	
Theme	Specific Requirement
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ²⁸⁷ . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁸⁸ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along freight routes to be used to support aggregate supplies from Naunton Quarry will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of further aggregate working at Naunton Quarry. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from further aggregate working at Naunton Quarry must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	The existing production limit of 500,000 tonnes per annum from Naunton Quarry should not be exceeded in association with the working of the allocated units, unless it can be demonstrated an alternative production limit will be environmentally acceptable in planning terms. To support the working of the allocated units, existing site infrastructure contained within the existing Naunton Quarry should be used and this should also occur under the conditional restrictions imposed by relevant extant permissions. Any alternative site infrastructure proposals must be robustly justified and accompanied by sufficient evidence to show how they will be environmentally acceptable in planning terms.
Highways	A Transport Assessment (TA) will be required. Advice on the content of a TA should be sought from the Local Highway Authority at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated include: - the continued use of the existing main vehicular access off Buckle Street for the importation of any required materials and the sales of worked minerals associated with the working of the allocated units; the continued use of established, acceptable freight routes, which include the A429 via Buckle Street, and the A40 and A436, which are recognised as part of the 'Primary Route Corridor for HGVs'; and in the case of the western allocated unit, the creation of a new, safe service access that will need to cross the Snowhill Road to Chapel Ash. Where any alternative routing proposals emerge, these will need to take account of Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁸⁹ , follow the advice contained within the Gloucestershire Freight Gateway ²⁹⁰ , and also meet the requirements of the Cotswold Lorry Management Zone.

²⁸⁷ Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁸⁸ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: <https://fingertips.phe.org.uk/>

²⁸⁹ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁹⁰ The Gloucestershire Freight Gateway can be obtained at: <http://freightgateway.co.uk/gloucestershire/>

Flood risk	<p>A site-specific flood risk assessment (FRA) will be required. The possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater and increased surface run-off should be investigated. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, will also be assessed. Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at the existing Naunton Quarry and nearby existing Tinker's Barn Quarry will need to be considered. In addition, potential flood-risk sensitive receptors such as the isolated residential properties and agricultural / equestrian-related commercial premises largely located to the south of the allocation will require investigation. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters requiring attention include:- the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. It will also need to be effectively integrated with any previously approved flood risk management solution at the existing Naunton Quarry and where relevant the existing Tinker's Barn Quarry. For infilling using inert materials (imported and / or internal to the site) for profiling landforms this must also incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.</p>
Water resources	<p>A hydrological / hydrogeological impact assessment (HIA) in accordance with EA guidance will be required. As the underlying geology of the allocated units has been classified as a Principal aquifer, attention will need to be given to identifying and quantifying risks associated with all possible minerals-related development activities (e.g. working, processing and site restoration) to groundwater resources and for establishing a stringent monitoring regime commencing at least 12-months prior to development, continuing throughout the operational phase and including site restoration and aftercare. In addition, potential hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny. These includes: - the River Windrush, River Eye, several springs feeding an unnamed tributary of the Windrush; and small ponds and a small lake that are linked to existing and previous mineral working at the existing Naunton Quarry. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with permitted mineral working and other related activities should also be considered such as proposed restoration and aftercare proposals at the existing Naunton Quarry and also the nearby Tinker's Barn Quarry. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocated units may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP) and the Severn RBMP, which covers an area that may be within the sphere of influence of the allocation²⁹¹.</p>
Natural environment	<p>A comprehensive assessment of the natural environment will be required. This should include those natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocated units. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development ((e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - Huntsman's Quarry SSSI, Barton Bushes SSSI, Warren Beds KWS and Barton Vale KWS. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocated units must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures deemed necessary to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic manner and within a strategic context. In particular it must be clear as to how the characteristic habitats and the supported wildlife of the Barton, Brockhill, Naunton and Swell Strategic Nature Areas (SNAs) will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits both during and post-mineral working, due consideration should be given to possible collaborations and coordination with the programme of</p>

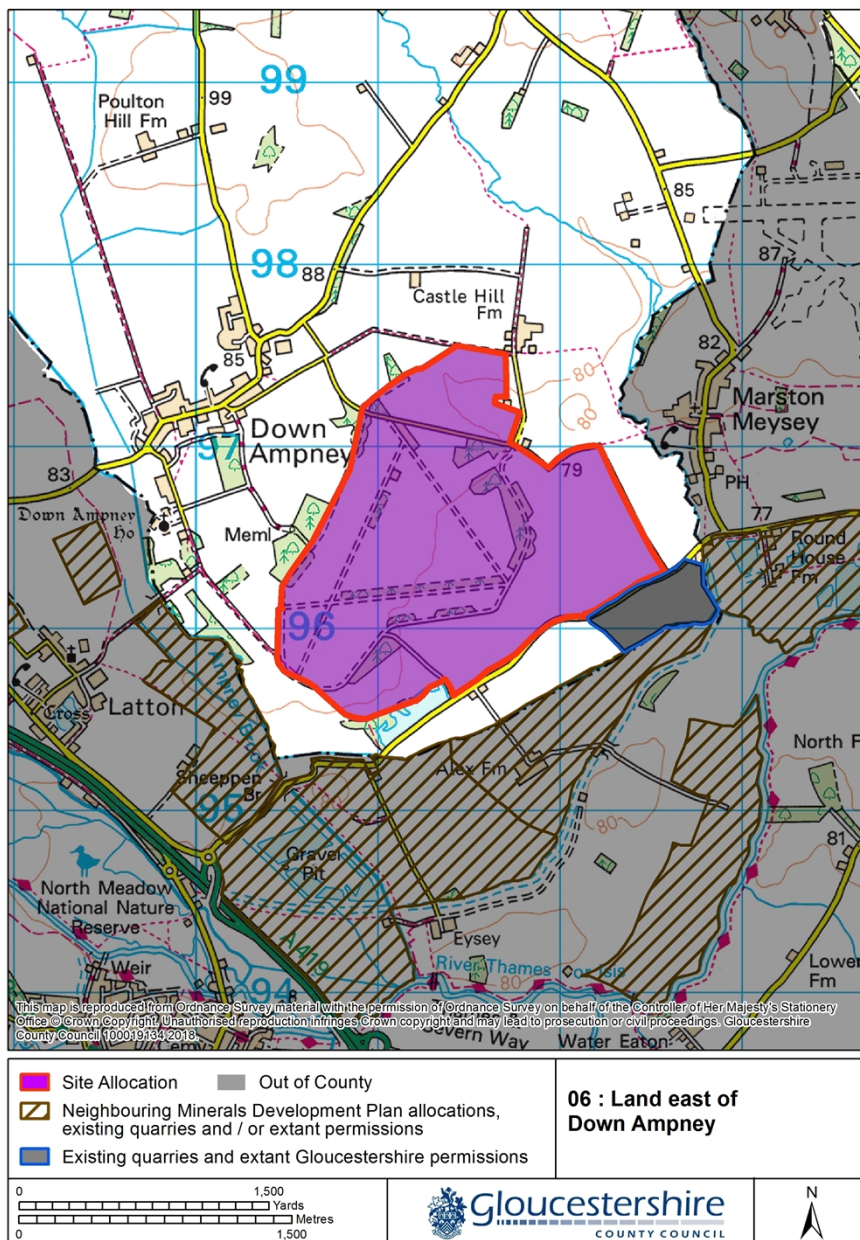
²⁹¹ Information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

	nature conservation actions identified for the nearby Cotswold Valley Nature Improvement Area (NIA).
Geodiversity	In the event the existing Huntsman's Quarry Regionally Important Geological and Geomorphological Site (RIGS ref: 92) will be affected, a proportionately detailed assessment of possible impacts must be carried out. In addition, due to previous recorded exposures of 'Cotswold Slates' and fossil-bearing rocks, a wider analysis of potential geodiversity resources is required. At the earliest opportunity advice should be sought from the Gloucestershire Geology Trust. Key items that will need careful consideration include whether mitigation is possible and how this might be achieved; and to what extent future management practices can practicably and reasonably be brought forward to maximise opportunities to improve the protection of geological assets, enable greater access to them, and / or facilitate greater scientific understanding.
Soil resources	A Soil Survey and Agricultural Land Classification (ALC) Report will be required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocated units lie within an area that may contain grade 3 agricultural land (good to moderate quality). This will need further investigation, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the sub-grade of the soil (i.e. whether it is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the soil resource to any individual proposal under consideration and the overall impact of the allocated units. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to implications to the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy.
Archaeology / Historic Environment	A Heritage Statement (HS) will be required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance to the allocated units are the Bowl Barrow Scheduled Monuments at Nosehill Farm and Bemborough Farm (NH list entries: 1011981, 1008786 and 1020654); and the Summerhill prehistoric site Scheduled Monument (NH list entry: 1003339.).
Landscape & Visual Impact	A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters to be scrutinised include:- the likely sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all activities associated with minerals development and how these evolve over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - national landscape character NCA 107 (Cotswolds) and the regional / local level classification – The High Wold Dip Slope landscape character type and area. As the allocated units are located within the Cotswold AONB special consideration must also be given to the particular elements and features that contribute to the landscape character of the designation. It is important that the LVIA applies published landscape studies when establishing baseline conditions. In terms of visual impact the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum include: - the recreational facilities associated with Cotswold Farm Park, the Summerhill prehistoric site and Bowl Barrows Scheduled Ancient Monuments and stretches of the local highway network along Buckle Street and the Snowhill Road to Chapel Ash. In assessing both landscape and visual impacts possible cumulative / in-combination effects associated with the existing permitted mineral operations at the existing Naunton Quarry and Tinker's Barn Quarry will need to be taken into account. A further essential element of the LVIA is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of

	land prior to working, mineral working itself and processing, and subsequent restoration incorporating aftercare).
Restoration opportunities & constraints	<p>A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the relevant allocated unit. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how compatibility with the existing local environment will be achieved and the approved restoration schemes for the existing Naunton and Tinker's Barn Quarries will not be prejudiced. Where any part of public rights of way network has been affected by development of the allocated units, attention will need to be given to the integration of acceptable long term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions and targets of the nearby Barton, Brockhill, Naunton and Swell Strategic Nature Areas (SNAs) and the nature conservation actions for the nearby Cotswold Valley Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Cotswold District Local Plan and Cotswold AONB Management Plan. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>

Allocation 06: Land south east of Down Ampney

Aggregate type	Sand & Gravel	Allocation Type	Preferred Area
Yield and illustrative aggregate supply potential	The entire allocation may yield approximately 7.8mt of sand & gravel. Whilst the absence of any existing working means there are no established or restricted capacities to generate a likely supply scenario, industry interest has indicated that the allocation could meaningfully contribute to the maintenance of steady local aggregate supplies for at least around 15.5 years ²⁹² .		
Site area	Approx. 250ha	District	Cotswold
		Parish	Down Ampney
Relevant planning permissions: (as of Nov. 2017)	No extant planning permissions associated with the future working of allocation 06: Land east of Down Ampney.		

**Development Requirements for Allocation 6: Land east of Down Ampney**

²⁹² Established mineral resource information for this locality indicates that the allocation does not represent the full extent of potential workable and viable sand & gravel resources. The fact that these resources have not been specifically identified as a plan allocation should not prejudice their future consideration either as part of a new allocation in a review of the plan or through their submission as part of planning proposals for mineral working. However, if proposals were to come forward to work unallocated resources during the current plan period; these would be rigorously assessed against MLP plan policy MA02.

Theme	Specific Requirement
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ²⁹³ . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ²⁹⁴ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation and those that comprise the villages of Down Ampney (including Broadleaze); Latton; and Marston Meysey. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along any proposed freight routes to support aggregate supplies will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of aggregate working taking place at land south east of Down Ampney. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from aggregate working starting up at land south east of Down Ampney must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	A production limit and restricted hours of operation may form part of an acceptable mitigation package for ensuring the amenity of local communities and the quality and health of the natural environment are not subject to unacceptable adverse impacts resulting from mineral-related activities with the allocation and also cumulatively from minerals developments permitted within the locality. In addition, site infrastructure may need to be subject to restrictions such as the removal of permitted development rights
Highways	A Transport Assessment (TA) will be required. Advice on the necessary content of a TA should be sought from the Local Highway Authority, Highways England and also the neighbouring Local Highway Authority for Wiltshire (Wiltshire Council) at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated include: - the creation of a safe and suitable means of vehicular access that will achieve the shortest possible route to the A419 and avoid, wherever possible, the locally significant settlement of Latton; and the establishment of acceptable freight routes using the A419, which do not create a conflict with Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ²⁹⁵ , and follow the advice contained within the Gloucestershire Freight Gateway ²⁹⁶ . In addition, where it is relevant, consideration should be given to the Wiltshire Local Transport Plan Freight Strategy ²⁹⁷ .
Public Rights of Way (PRoW)	An assessment of the PRoW network should be undertaken with particular attention given to paths BDA 2/1, 9/2, 7, 10/1 and 11,. Details of possible temporary diversions or permanent re-routings of any affected paths will be required. It is strongly encouraged that advice is sought at the earliest possible opportunity from the Local Highway Authority in respect of this matter.

²⁹³ Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

²⁹⁴ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: - <https://fingertips.phe.org.uk/>

²⁹⁵ Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: - http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

²⁹⁶ The Gloucestershire Freight Gateway can be obtained at: - <http://freightgateway.co.uk/gloucestershire/>

²⁹⁷ The Wiltshire Local Transport Plan (2011 - 2026) Freight Strategy can be obtained at: - www.wiltshire.gov.uk/ltp3-freight-strategy.pdf

Flood risk	<p>A site-specific flood risk assessment (FRA) will be required. A number of parcels of land within the allocation have been identified as Flood Zones 2 (medium probability of river flooding) and 3 (high probability of river flooding). In addition, the majority of the allocation is recorded as susceptible to groundwater flooding and there are small areas considered to be at either medium or high risk of surface water flooding largely associated with the field drains located within the southern, eastern and northern sections of the allocation. The possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from changes in groundwater flows, increased surface run-off and the discharge of water (following dewatering) into receiving stream that are already at capacity, will need to be assessed. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, should also be investigated. Possible cumulative / in-combination impacts on flood risk associated with permitted mineral working and other related activities such as restoration and aftercare at nearby permitted mineral workings including Whetstone Bridge Quarry and Roundhouse Farm Quarry and Eysey Manor Quarry (the final two are located across the administrative border in Wiltshire) should also be considered. In addition, potential flood-risk sensitive receptors should be assessed to determine their significance and sensitivity. Nearby to the allocation this includes a number of isolated residential properties and agricultural and other commercial premises situated close to the allocation boundary and the villages of Down Ampney, Marston Meysey and Latton. More distant sensitive receptors made up of the hamlet of Dunfield; the villages of Kempsford and Castle Eaton; the town Cricklade and RAF Fairford will also require investigation. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters likely to require attention include the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. Where infilling using inert materials (imported and / or internal to the site) for the profiling of landforms, this must not negatively impact any upon existing floodplain storage and incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.</p>
Water resources	<p>A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. The superficial deposits of the allocation host a Secondary 'A' shallow aquifer for which little information is known as to its properties. Consequently, a detailed analysis of the existing local groundwater regime will be essential. The assessment must also afford attention to identifying and quantifying groundwater risks associated with all possible minerals-related development activities (e.g. working, processing, site restoration including aftercare) and establish a stringent monitoring regime commencing at least 12-months prior to the commencement of the development, continuing throughout the operational phase and including site restoration and aftercare. The allocation mostly lies within a Source Protection Zone 2 (SPZ2) although a small area falls within a Source Protection Zone 1 (SPZ1). A very specific risk assessment will therefore need to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies. Beyond the allocation, potential hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny. These include: - Marston Meysey Brook; Ampney and Poulton Brooks; River Thames (from the River Churn to River Coln); River Churn (Baunton to Cricklade); Thames & Severn Canal; a number of unnamed tributaries and drains to the River Thames and Ampney Brook; and several ponds and lakes some of which can be traced back to previous and existing mineral workings in the locality. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. Possible cumulative / in-combination hydrological / hydrogeological impacts associated with nearby permitted mineral workings and other related activities such as restoration and aftercare should also be considered. This includes: - Whetstone Bridge Quarry and Roundhouse Farm Quarry and Eysey Manor Quarry (the final two are located across the administrative border in Wiltshire). An early up-to-date survey of the status of nearby mineral workings would be beneficial to this exercise. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP)²⁹⁸.</p>

²⁹⁸ information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

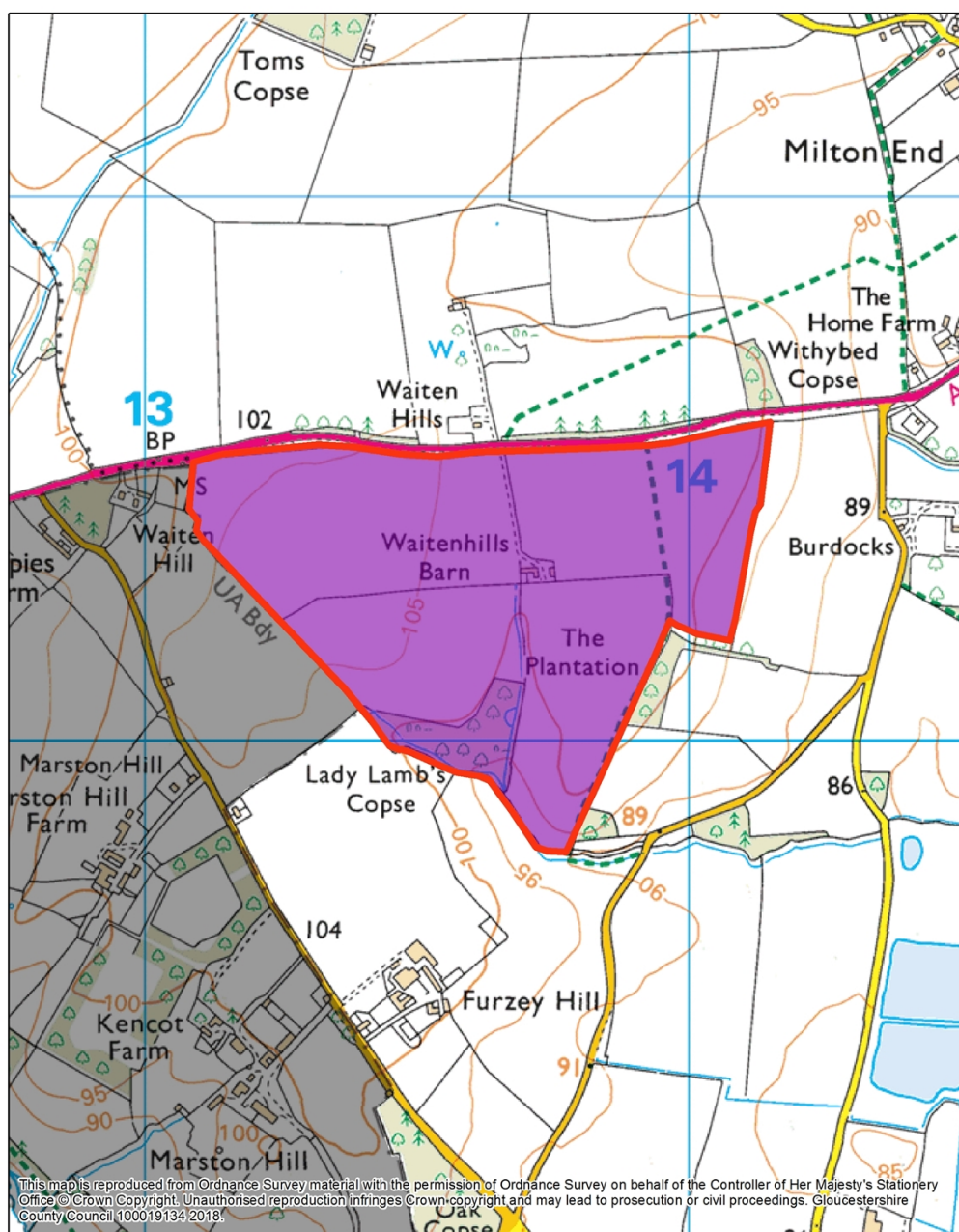
Natural Environment	<p>A comprehensive assessment of the natural environment will be required. This should include those natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development ((e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Environmental designations in the locality that will need careful consideration include: - North Meadow and Clattinger Farm SAC; North Meadow SSSI / NNR; and Down Ampney Pits KWS. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures deemed necessary to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic manner and within a strategic context. In particular it must be clear as to how the nearby: - Ampney Corridor; Eysey; Cleveland Lakes; and Roundhouse Farm Strategic Nature Areas (SNAs) as expressed upon the Gloucestershire Nature Map will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits, due consideration should be given to possible collaborations and coordination with the programme of nature conservation actions identified for the Cotswold Water Park Nature Improvement Area (NIA).</p>
Soil resources	<p>A Soil Survey and Agricultural Land Classification (ALC) Report will be required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocation lies within an area that may contain grades 2 and 3 agricultural land (very good to good or moderate quality). This will need to be further investigated, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the relevant sub-grade of the soil (i.e. whether the grade 3 quality is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the resource to the individual proposal under consideration and also the wider allocation. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to implications to the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy.</p>
Archaeology / Historic Environment	<p>A Heritage Statement (HS) is required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. The settlement at Bean Hay Copse Scheduled Monument (NH list entry: 1003446) and several grade II listed buildings at Castle Hill Farm (NH list entries: 1341032 and 1304915) are located near to the boundary of the allocation and will likely require some degree of analysis. There are also numerous records of prehistoric and Roman activity in the locality, which will likely require further investigation. In addition, 20th century military activity within the allocation is very evident and should also be carefully assessed²⁹⁹.</p>

²⁹⁹ Historic England has published research, information and advice on Historic Military Airfields, which may of assistance in preparing heritage assessments: - <https://historicengland.org.uk/research/current-research/assessing-significance/military/historic-military-airfields/>

Landscape & Visual Impact	<p>A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters requiring careful scrutiny include the likely sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all activities associated with minerals development and how these evolve over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - national landscape character NCA 108 (Upper Thames Clay Vales) and the regional and local level classifications – the River Basin Lowland Landscape Character Type and the Down Ampney Landscape Character Area. It is important that the LVIA applies published landscape studies when establishing baseline conditions. In terms of visual impact the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum include: - the individual properties, farmsteads and agricultural premises surrounding the allocation; the settlements of Down Ampney, Marston Meysey and Latton; the network of paths and recreational routes in the locality including the Thames Path National Trail and the local highway network, particularly along the southern and eastern boundary, which includes stretches of the Eastern Spine Road. In assessing both landscape and visual impacts possible cumulative / in-combination effects associated with the existing nearby permitted mineral operations at Whetstone Bridge, Roundhouse Farm Quarry and Eysey Manor Quarry (the final two are located across the administrative border in Wiltshire) will need to be taken into account. A further essential element of the LVIA is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of land prior to working, mineral working itself and processing, and subsequent restoration incorporating aftercare).</p>
Aerodrome Safeguarding	<p>A Bird Hazard Management Scheme (BHMS) will be required. Advice with respect to its scope and content should be sought at the earliest possible opportunity from Defence Infrastructure Organisation (DIO) Safeguarding. The BHMS should establish the nature, scale and significance of any potential bird hazards associated with all mineral-related activities that support the working of the allocation. Particularly attention will need to be given to the functioning of nearby RAF Fairford due to the location of the allocation within a statutory Birdstrike zone and an area where Instrumental Landing Systems (ILS) may need to operate. Although, other nearby aerodromes could require investigation and may need to be taken into account. Details of the deliverable measures and securable commitments to manage and reduce the frequency and severity of any possible bird hazard risks and the effective monitoring of their success over time, will likely form a major element of the BHMS.</p>
Restoration opportunities & constraints	<p>A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the entire allocation. Progressive restoration techniques should be applied unless it is demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how integration can be achieved with the existing local environment. Particular attention must be given to continued aviation safeguarding and the avoidance of any increased risk of bird strike at nearby RAF Fairford. Where the public rights of way network has been affected by development of the allocation, attention will need to be given to the integration of acceptable long term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the nearby Eysey and Ampney Corridor Strategic Nature Areas (SNAs) and the nature conservation actions for the Cotswold Water Park Nature Improvement Area (NIA) should be taken. Considered should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Cotswold District Local Plan and the Cotswold Water Park Master Plan. This could, under the right circumstances, include facilitating new infrastructure that will contribute towards the long-term restoration and possible expansion ambitions of the Thames and Severn Canal network. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>

Allocation 07: Land at Lady Lamb Farm, west of Fairford

Aggregate type	Sand & Gravel	Allocation Type	Area of Search		
Yield and illustrative aggregate supply potential	The entire allocation may yield in the region of 3mt of sand & gravel. The absence of any existing working means there are no established or restricted capacities to generate a likely supply scenario. However, accounting for the size and scale of possible supporting infrastructure commensurate to the type of mineral operation envisaged, a meaningfully contribute to the maintenance of steady local aggregate supplies could amount to about 12 years.				
Site area	Approx. 84ha	District	Cotswold	Parish	Fairford
Relevant planning permissions: (as of Nov. 2017)	No extant planning permissions associated with the future working of allocation 07: Land at Lady Lamb Farm, Fairford.				



Site Allocation Out of County

07 : Land at Lady Lamb Farm, Fairford



Gloucestershire
COUNTY COUNCIL



Detailed Development Requirements for Allocation 07: Land at Lady Lamb Farm, Fairford	
<i>Theme</i>	<i>Specific Requirement</i>
Local communities	An initial Health Impact Assessment (HIA) screening exercise should be carried out at the project inception stage to establish how best to assess and take account of potential health impacts on local communities within the sphere of influence of the allocation ³⁰⁰ . Whether a dedicated HIA is prepared or related information is to be presented as part of another type of assessment, the different groups within the population that might be affected should be highlighted and any relevant health characteristics taken into account ³⁰¹ . It will be necessary for the wider amenity impacts on affected local communities to be assessed incorporating the individual residential properties, farms and commercial enterprises located nearby to the allocation and those that comprise the western side of the town of Fairford and the hamlets and villages of Meysey Hampton and Furzey Hill. An understanding of the scale and significance of possible attributable threats to the health and well-being of those communities that reside along any proposed freight routes to support aggregate supplies will also be required. In addition, carefully considered commitments regarding measures to avoid and / or mitigate adverse amenity impacts and to maximise and enhance positive effects upon health and well being should be submitted.
Economic impact	An Economic Impact Assessment (EclA) will be required to identify potential economic impacts and their significance as a result of aggregate working taking place at land at Lady Lamb Farm. The EclA must establish whether current local economic conditions are likely to be influenced and the scale and significance of any positive contribution to economic well being at the local, sub-national and national levels, having taken into account the occurrence of possible negative economic impacts. The EclA should be based on a balanced and credible analysis of evidence that has been published and / or has been robustly generated to support the proposal. Information concerning the potential impact on local employment both direct and indirectly will be crucial. The prospect of new jobs being generated should be highlighted. Commitments to secure employment and training opportunities that will benefit local communities (e.g. provision of local apprenticeships) will be best placed set out within the EclA. This is in addition to any evidence to show how existing direct and indirect employment will be safeguarded. The possibility that existing non-minerals related local businesses and / or permitted emerging enterprises could be exposed to undue economic risk from aggregate working starting up at land at Lady Lamb Farm must be explored. The nature of any risks to other businesses, their likely significance and any proposed means of mitigation will need to form part of the EclA.
Operational Matters / Site Infrastructure	A production limit and restricted hours of operation may form part of an acceptable mitigation package for ensuring the amenity of local communities and the quality and health of the natural environment are not subject to unacceptable adverse impacts resulting from mineral-related activities with the allocation and also cumulatively from minerals developments permitted within the locality. In addition, site infrastructure may need to be subject to restrictions such as the removal of permitted development rights.
Highways	A Transport Assessment (TA) will be required. Advice on the necessary content of a TA should be sought from the Local Highway Authority at the earliest possible opportunity as part of pre-application preparations. Highways matters, which will need to be investigated include the creation of a safe and suitable means of vehicular access onto the A417 and acceptable freight routes, which do not create a conflict with Gloucestershire Local Transport Plan policies LTP PD 3.1 and LTP PD 3.4 ³⁰² and follow the advice contained within the Gloucestershire Freight Gateway ³⁰³ . Wherever possible minerals-related traffic should avoid routes that run through the locally significant settlements of Fairford and Lechlade. However, if this is demonstrably unavoidable, the effectiveness and realistic deliverability of proposed mitigation measures will be rigorously scrutinised. Of paramount importance will be measures that will reduce the risk both in terms of frequency and severity of adverse impacts on the effective and efficient functioning of the local highway network, the safety for all potential road users and the amenity of local communities.

³⁰⁰ Best practice on HIA screening is contained within the Department of Health (DoH) Health Impact Assessment (HIA) of Government Policy document (July 2010): *A guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment process*. This guide can be obtained at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

³⁰¹ Public Health England regularly prepares Health Profiles at the county level. This information may be a useful starting point for preparing a robust and credible evidence base on the nature of local communities that may be affected. Information on Health Profiles can be obtained at: <https://fingertips.phe.org.uk/>

³⁰² Gloucestershire Freight Network Policies LTP PD 3.1 (Gloucestershire's Freight Network) and LTP 3.4 (Construction Management Plans) are set out in the Gloucestershire's Local Transport Plan (2015 – 2031) – Policy Document 3 – Freight can be obtained at: http://www.gloucestershire.gov.uk/media/2225/10_-_pd3_-_freight-66798.pdf

³⁰³ The Gloucestershire Freight Gateway can be obtained at: <http://freightgateway.co.uk/gloucestershire/>

Public Rights of Way (PRoW)	An assessment of the PRoW network should be undertaken with particular attention given to path BFA 6/1. Details of possible temporary diversions or permanent re-routings of any affected paths will be required. It is strongly encouraged that advice is sought at the earliest possible opportunity from the Local Highway Authority in respect of this matter.
Flood risk	A site-specific flood risk assessment (FRA) will be required. Parts of the allocation, particularly running along the field drains are recorded as susceptible to groundwater flooding. However, no parts have been identified as being at risk of river or surface water flooding. Nevertheless, the possibilities of elevated flood risks from all minerals-related development activities (e.g. site preparation, working, processing and site restoration) resulting from any changes in groundwater flows, increased surface run-off and the discharge of water (following de-watering) into receiving stream that are already at capacity, are likely to require particular attention. Although the risks posed from all forms of flooding under current conditions and those forecast in the future incorporating anticipated climate change impacts, should be assessed. Potential flood-risk sensitive receptors need to be identified and their significance and sensitivity scrutinised. This includes a number of isolated residential properties and agricultural and other commercial premises particularly surrounding Marston Hill, Furzey Hill and Waiten Hill. Although at some distance to the allocation, is the village of Whelford that may require some investigation as a consequence of possible hydrological impacts on Dudgrove Brook. The FRA must scrutinise the application of flood risk mitigation measures and provide a strategy for their implementation. During the preparation and operational phases of the development, flood risk mitigation matters likely to require attention include the siting of any hard-standing, buildings, storage and stockpiling of quarry materials, and other site infrastructure away from areas at a greater risk of susceptibility to flooding. For the restoration phase the incorporation of suitable flood risk mitigation must be carefully considered. This will likely involve the application of a sustainable drainage system with the core aim of ensuring the pre-development rate of surface water run-off will not be exceeded in line with SuDS guidance. Where infilling using inert materials (imported and / or internal to the site) for the profiling of land forms is proposed, this must not negatively impact upon any existing floodplain storage and incorporate sufficient provision for suitable safe pathways for ground water to move around and through the allocation to make sure that groundwater levels do not rise above those recorded prior to minerals development.
Water resources	A hydrological / hydrogeological impact assessment in accordance with EA guidance will be required. The superficial deposits of the allocation host a Secondary 'A' shallow aquifer for which little information is known as to its properties. Consequently, a detailed analysis of the existing local groundwater regime will be essential. The assessment must also afford attention to identifying and quantifying groundwater risks associated with all possible minerals-related development activities (e.g. working, processing, site restoration including aftercare) and establish a stringent monitoring regime commencing at least 12-months prior to the commencement of the development, continuing throughout the operational phase and including site restoration and aftercare. The allocation also lies within a Source Protection Zone 1 (SPZ1). This will require a very specific risk assessment to be carried out to consider potential pollution of potable water supplies and other sensitive commercial water supplies. Beyond the allocation, possible hydrological impacts on nearby surface water bodies (up to 3km) will require scrutiny. These include: Marston Meysey Brook; Dudgrove Brook; River Coln; a network of drains and tributaries to the River Coln; and several ponds and lakes some of which can be traced back to previous mineral workings in the locality. Although a more definitive sphere of hydrological influences will need to be established through a Water Features Survey. This could identify other and / or more distant surface water bodies that are also worth assessing along with other relevant receptors. The HIA must scrutinise the need to employ mitigation and where necessary provide a strategy for implementation. It must also incorporate a strategic, catchment-scale view of water resource management by identifying how development of the allocation may positively contribute towards protecting and the improving water environment in line with the Thames River Basin Management Plan (RBMP) ³⁰⁴ .
Natural environment	A comprehensive assessment of the natural environment will be required. This should include those natural assets present in, which rely upon, and / or that are located within the sphere of influence of the allocation. The assessment must identify potential impacts and scrutinise their significance taking into account the different activities / stages of minerals development ((e.g. the preparation of land prior to mineral working, mineral working and processing and subsequent restoration incorporating aftercare). Careful consideration will need to be given to Cotswold Water Park KWS as the key environmental designation in the locality. In addition, any priority habitats and / or priority species, which encompass or have been recorded in, which rely upon, and / or that are located within the sphere of influence of the allocation must be investigated. A further crucial aspect of the assessment will be the provision of sufficient details concerning measures deemed necessary to avoid, reduce, remedy and / or compensate possible unacceptable negative effects. Any scheme of mitigation must also be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. In totality, the assessment of natural resources must demonstrate how any issues which arising, have been considered in a holistic

³⁰⁴ information on river basin management plans (RBMPs) can be obtained at: - <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

	<p>manner and within a strategic context. In particular it must be clear as to how the nearby: - Bibury and Coln Corridor Strategic Nature Areas (SNAs) will not be subject to unacceptable adverse impacts. Where opportunities exist to deliver tangible benefits, due consideration should be given to possible collaborations and coordination with the programme of nature conservation actions identified for the Cotswold Water Park Nature Improvement Area (NIA).</p>
Soil resources	<p>A Soil Survey and Agricultural Land Classification (ALC) Report will be required. This will need to establish baseline conditions of soil resources (i.e. quality and quantity) contained in the allocation and within its sphere of influence. The allocation lies within an area that may contain grades 2 and 3 agricultural land (very good to good or moderate quality). This will need to be further investigated, possibly through a detailed site survey in order to: - determine the extent of the resource; establish the sub-grade of the soil (i.e. whether the grade 3 quality is 'good' (3a) and / or 'moderate' (3b)); and assess the relationship of the resource to the individual proposal under consideration and the wider allocation. In the presence of potentially valuable soil resources, a Soil Handling Strategy must also be prepared. This should consider the details of how best to safeguard against possible damage to existing soil quality and the potential, where practicable for the quality to be improved. A holistic approach to the management of soil resources will be needed, particularly with respect to implications to the proposed programme of working (e.g. progressive or otherwise) and the successful delivery of the restoration strategy.</p>
Archaeology / Historic Environment	<p>A Heritage Statement (HS) will be required to establish the presence of heritage assets that could be affected and to assess the nature, extent and importance of their significance and their settings. The HS must also provide a detailed analysis of potential impacts and their envisaged significance associated with all activities related to the working of the allocation. Where the potential for adverse impacts is identified, details of the means of avoiding such impacts or delivering sufficient mitigation to eradicate and / or reduce their significance to an acceptable degree must be included. The prime focus should be on the preservation of key heritage assets. A proportionately detailed, reasoned justification will be necessary in every instance that harm to, or the potential loss of a heritage asset is envisaged. Information regarding how recording and / or the excavation of heritage assets may also be necessary. The HS must be comprehensive in its coverage by considering both designated and undesignated heritage assets including those of potential archaeological interest. Information contained on the Gloucestershire Historic Environment Record (G-HER) should be interrogated along with the National Heritage List (NHL) produced by English Heritage. Of potential relevance to the allocation are: - the grade II listed farmhouse at Furzey Hill (NH list entry: 1303321); the grade II listed building known as The Lodge (NH list entry: 1089981); and the Hengiform barrow and associated ring ditch south of Burdocks Scheduled Monument (NH list entry: 1014394).</p>
Landscape & Visual Impact	<p>A Landscape and Visual Impact Assessment (LVIA) prepared in line with best practice guidelines will be required. It must comprise an analysis of the landscapes which contain, and are within the sphere of influence of the allocation. Matters requiring careful scrutiny include the likely sensitivity of affected landscapes, possible effects upon them and the relative significance of these effects in relation to all activities associated with minerals development and how these evolve over time (e.g. working, processing, site restoration and aftercare). Key landscapes likely to require assessment include: - national landscape character NCA 108 (Upper Thames Clay Vales) and the regional and local level classifications – the River Basin Lowland Landscape Character Type and the Fairford and Lechlade Landscape Character Area. It is important that the LVIA applies published landscape studies when establishing baseline conditions. In terms of visual impact the LVIA must identify visual receptors that are likely to be affected, determine their sensitivity to potential impacts and consider the relative significance of the impacts identified. Sensitive visual receptors that should be considered as a minimum include: - the individual properties, farmsteads and agricultural premises that surround the allocation, some of which are of historic significance and are listed; the network of paths and recreational routes in the locality and the local highway network along the northern boundary of the allocation, which is adjacent to the A417 and near to the western boundary along Marston Hill Road. A further essential element of the LVIA is the provision of details concerning measures to avoid, reduce, remedy and / or compensate any possible negative effects deemed sufficiently harmful to render a proposal unacceptable in planning terms. Any scheme of mitigation put forward must be accompanied by a clear strategy for implementation and be able to demonstrate its deliverability. It should also be reflective of the different activities / stages that are likely to have a material effect on the landscape and visual impacts experienced (e.g. resulting from the preparation of land prior to mineral working, mineral working and processing, and subsequent restoration incorporating aftercare).</p>
Aerodrome Safeguarding	<p>A Bird Hazard Management Scheme (BHMS) will be required. Advice with respect to its scope and content should ideally be sought at the earliest possible opportunity from Defence Infrastructure Organisation (DIO) Safeguarding. The BHMS should establish the nature, scale and significance of any potential bird hazards associated with all mineral-related activities that support the working of the allocation. Particularly attention will need to be given to the functioning of nearby RAF Fairford due to the location of the allocation within a statutory Birdstrike zone and an area where Instrumental Landing</p>

	Systems (ILS) may need to operate. Although, other nearby aerodromes could require investigation and may need to be taken into account. Details of the deliverable measures and securable commitments to manage and reduce the frequency and severity of any possible bird hazard risks and the effective monitoring of their success over time, will likely form a major element of the BHMS.
Restoration opportunities & constraints	<p>A restoration strategy will be required. Where necessary, individual proposals must give due consideration to their contribution to the delivery of a coherent and combined solution encompassing the entire allocation. Progressive restoration techniques should be applied unless it can be demonstrated and justified to be of greater benefit and / or less harmful to apply alternative arrangements. In developing the overall restoration strategy, evidence must be presented to show how compatibility and wherever possible, integration can be achieved with the existing local environment. Particular attention must be given to continued aviation safeguarding and the avoidance of increased risk of bird strike at nearby RAF Fairford. Where the public rights of way network has been affected by development of the allocation, attention will need to be given to the integration of acceptable long term resolutions such as the reinstatement or permanent re-routing of affected paths. Opportunities to contribute to the ambitions of the nearby Bibury and Coln Corridor Strategic Nature Areas (SNAs) and the nature conservation actions for the Cotswold Water Park Nature Improvement Area (NIA) should be taken. Consideration should also be given to the possibility of facilitating other beneficial land uses and / or positively contributing to the future management of land as identified in locally applicable plans and strategies such as the Fairford Neighbourhood Plan, Cotswold District Local Plan and the Cotswold Water Park Master Plan. Furthermore, all proposed restoration solutions must be mindful of climate change and the need to deliver a greater degree of environmental resilience to its envisaged impacts. Under certain conditions this could involve the careful integration of measures to facilitate desirable habitat shifts to take place, which may act as suitable refuges for displaced and / or vulnerable species. An outline aftercare management plan covering at least the 1st five-year post-mineral working period should be incorporated into the overall restoration strategy. This must set out the commitments for the carrying out aftercare and for undertaking a more detailed programme up to 12 months prior to the commencement of restoration. It must also contain the direction for future management of any restored areas. A longer timeframe of aftercare may be necessary where nature conservation and informal recreation after-uses are likely to dominate.</p>