



Worcestershire
Minerals Local Plan

Second Consultation

Summary document



This summary document is composed of extracts from the main consultation document. The main consultation document contains significantly more detail, setting out the processes we have undertaken and options we have considered to arrive at the current proposed approaches.

Although we would value your opinion on the whole of the plan, we understand that the main consultation document is lengthy and you may not have the time to dedicate to reading all of it in detail. The summary document therefore gives an overview of the issues the new Minerals Local Plan will address and how we have used the comments you made on the first consultation on the Minerals Local Plan to develop the approaches we are proposing now. It then highlights the issues considered further in each section and which consultation questions this relates to.

We hope that the summary document will give you a good overview and enough information to decide which sections you want to look at in more detail. We welcome any comments you are able to make on any part of the consultation.



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Please note: This summary document is composed of extracts from the main consultation document. Figure and table numbering are consistent with the main document to aid cross-referencing and to simplify analysis of responses. This means that figure and table referencing in this summary document is not sequential.



Processing at Clifton sand and gravel working

1. What are minerals and why do we need them?

- 1.1 Minerals are an essential raw material in our daily lives. Without minerals, we would not be able to build our houses, schools, hospitals, roads and railway lines, and this is only part of what minerals are used for.
- 1.2 Different types of minerals are used for different things:
 - Aggregate minerals are used without much treatment for building things like roads and houses. Sand, gravel and crushed rock are aggregate minerals.
 - Industrial minerals are used to manufacture products. These include special types of sand for making glass, clay for making bricks and ores for metals.
 - Energy minerals such as coal, oil and gas are used for fuel.
- 1.3 Minerals naturally occur due to variations in geology. This means that minerals are not evenly distributed. In Worcestershire we have sand and gravel, some types of rock, brick clay, silica sand, coal and salt.



Beckford Nature Reserve, a former sand and gravel working

2. What is a Minerals Local Plan and why do we need one?

- 2.1 Minerals need to be ‘won’ for us to be able to use them. This means that they need to be dug from the ground or extracted from the sea. Minerals can come from the land or sea (primary sources), they can be a by-product of other industrial processes (secondary sources) or they can be substituted by materials like crushed bricks or concrete (recycled sources).
- 2.2 The planning system needs to make sure that there are enough minerals for our current needs and that enough minerals are safeguarded for use in the future. It is a national requirement for County Councils to have planning policies for the winning of minerals. The Council’s current policies are set out in the 1997 adopted Hereford and Worcester Minerals Local Plan, (subsequently referred to as the current Minerals Local Plan). These policies are dated and need replacing. One of the primary roles of the Minerals Local Plan is to set out guidelines for the amount of minerals which should come from Worcestershire.
- 2.3 It is also the role of the Minerals Local Plan to balance the need for minerals and benefits sites can bring against any impacts they might have. To do this, the Minerals Local Plan should make the most of the positives and minimise any negatives from minerals sites. It will include policies to make sure that development happens in the right places, and put the right policies in place to control impacts from development.
- 2.4 A “mineral working” or site is always temporary because once all of the mineral has been ‘won’ the site will no longer be useful for mineral extraction and an afteruse will have to be established. The process of preparing a site for its agreed afteruse is commonly referred to as “restoration”, even though sites are not always returned to their original use. The Minerals Local Plan will also include policies about restoration.
- 2.5 Once completed, the new Minerals Local Plan will be used by the County Council to make decisions about planning applications for mineral extraction and processing in Worcestershire.

3. What is the Council going to do about it?

3.1 We are currently preparing a new Minerals Local Plan to set out the mineral planning policy for the whole of Worcestershire. When it is finished and adopted it will set out:

- What minerals we have in Worcestershire;
- How much we need to provide and when we need to provide it;
- How minerals sites should be worked;
- Where minerals should be extracted;
- How minerals sites should be restored; and
- Where minerals should be safeguarded for use in the future.

It will be used by the County Council to determine planning applications for mineral development and will replace the current Minerals Local Plan.

3.2 It will be a long-term plan and national policy expresses a preference for these plans to cover 15 years, whilst taking into account longer term requirements.¹



Our approach now...

3.4 This consultation includes:

- **A portrait of Worcestershire** giving an overview of the minerals found in Worcestershire and identifying the key issues affecting the county.
- **A draft vision and objectives** for what we think the Minerals Local Plan should aim to achieve.
- **Details of how much of each mineral we need to provide and when** including alternative methods considered in making this calculation and options for when it should be provided.
- **Our ideas about how minerals should be worked**, setting out the issues to be considered when developing criteria to manage working practices.
- **Our ideas about where minerals should be worked**, setting out the issues to be considered when developing location criteria for all mineral workings and identifying “areas of search” for aggregates and an “opportunity area” for clay.
- **Our ideas about how mineral workings should be restored**, setting out issues to be considered when developing high-level principles for all workings and our proposed approach to identifying key considerations and restoration priorities for each individual “Area of Search”.
- **Details of how minerals should be safeguarded for future use** including alternative options to consider.

This summary document gives an overview of the approaches we are proposing. Further detail of the approaches and alternatives we have considered is provided in the main consultation document.



In the previous consultation...

3.3 We consulted on our initial ideas in October 2012 – January 2013. We have taken on board the comments we received and we have used them to inform the approach set out in this consultation.

¹ National Planning Policy Framework, paragraph 157.



Archaeological investigation at Clifton sand and gravel working

4. Why should you get involved?

- 4.1 We have to prepare planning policy for minerals in the county but we can't do this alone. We need your help to make sure that we have the correct evidence to base our decisions on and, importantly, to make sure we know what matters most to you, your business and your community.
- 4.2 Different people will be able to play a part in helping shape the plan in different ways. For example, we need **residents, parish councils** and **community groups** to help provide information about their local area to ensure that the policies we develop protect the things most valued by you. Your feedback will also help us to make sure that restored sites will be valued by future generations.
- 4.3 **Mineral companies** can help us to understand where the best minerals are found, whether we have made the right assumptions about the resources and whether the policies in the plan will work in reality. This is important so that we know that the final plan can be delivered as expected.
- 4.4 Similarly, **special interest groups** and **national advisory bodies** can assist with the expertise to help us develop effective policies. They can also provide us with information on any specific priorities that could or should be delivered through the Minerals Local Plan.
- 4.5 It is useful for us to get as much information as possible as soon as possible to help us to plan positively for the future.

5. How can you get involved?

There are plenty of ways for you to get involved:

Respond to this document...

This summary document outlines our proposed approach so far and includes some questions to highlight the issues that we would like your opinion on. The main consultation document sets out further details of the approaches and alternatives we have considered and includes further questions on these details. The questions can be answered by completing the questionnaire online, or downloading and printing or emailing the completed form to us:

The online questionnaire is available at:

www.worcestershire.gov.uk/minerals

Email: minerals@worcestershire.gov.uk

Post: FREEPOST SWC-I253
Minerals and Waste Planning Policy
Worcestershire County Council
County Hall, Worcester, WR5 2NP

Please return any questionnaires to us by
Friday 31st January 2014.

There are a lot of different issues considered in this consultation; if you only wish to comment on specific issues, please feel free to just focus on these questions. We think it is very important for you to look at the detail we have set out in the main consultation document to inform your answers to some of the questions, but please feel free to look at the sections which interest you, or to only answer some of the questions.

It should be noted that all responses to this consultation will be made public on the council's website. They will be published in a document outlining how we intend to address the issues raised. Address details will not be published.

Find out more...

Pop along to one of our open days
to ask us questions. We will be at:

Worcester Woods Country Park
from 10am - 3.30pm on Saturday 30th November 2013

Spadesbourne Suite at Bromsgrove
District Council Offices
from 2.30pm - 8.00pm on Wednesday 4th December

Kidderminster Library
from 10am - 3.30pm on Saturday 7th December 2013

These sessions are designed for residents, Parish Councils and other interested parties to drop-in and ask us any questions about the consultation.

Give us a call and talk to Nick Dean the Minerals and Waste Planning Policy Manager on **(01905) 766374**

Attend our industry workshop.

This session is aimed specifically at operators to get an industry perspective and to focus on technical issues and deliverability. Please email minerals@worcestershire.gov.uk to register an interest.

Attend our green infrastructure workshop.

This session is aimed at organisations involved in delivering and managing green infrastructure in and around the county. It will focus on the implementation and deliverability of our restoration aspirations. Please email minerals@worcestershire.gov.uk to register an interest.

Test your knowledge...

New to minerals planning? Have a go at our interactive quiz on minerals at www.worcestershire.gov.uk/minerals - maybe even challenge your friends.

Dig Deeper...

We will be preparing a suite of background documents to set out the evidence that the Minerals Local Plan will be based on and to flag up the key issues.

These documents will be quite detailed and will inevitably be more technical. If you think you have the expertise to help us out, please have a look at the background documents we have prepared so far. These are available at www.worcestershire.gov.uk/mineralsbackground and cover the following key issues so far:

Key issue:

What minerals are found in Worcestershire?

- ***New*** Background Document: Analysis of Mineral Resources in Worcestershire - If you have any additional information on sites or resources then please respond to this document.
- Background Document: Coal in Worcestershire
- Background Document: Salt and Brine in Worcestershire
- Background Document: Clay in Worcestershire
- Background Document: Building Stone in Worcestershire

Key issue:

How much of each mineral do we need to make provision for?

- ***New*** The Local Aggregates Assessment for Worcestershire - June 2013
- The Draft Local Aggregates Assessment for Worcestershire - October 2012
- Background Document: Ensuring adequate and steady supply of industrial and energy minerals

We expect to prepare more background documents over the coming months. We will be producing documents on sand and gravel and silica sand in the county. We will also write separate background documents on any important economic or environmental issues that we identify. When they are ready these documents will be put on our website.

Key issue:

How the Minerals Local Plan will be appraised against sustainability, habitats and equality considerations?

- Sustainability Appraisal: A Scoping Report was prepared and was consulted on alongside the first stage consultation on the Minerals Local Plan.
- ***New*** Initial Sustainability Appraisal - prepared and consulted on alongside this stage of consultation on the Minerals Local Plan
- ***New*** Habitats Regulations Assessment Scoping Report
- Equality Impact Assessment Desktop Screening

Key issue:

What are the other local issues?

- Background Document: Contributing towards Worcestershire's priorities
- ***New*** Background Document: Climate Change
- Background Document: The Malvern Hills Acts
- ***New*** Profile documents for Environmental Character Areas: These detail the mineral and environmental context in the Environmental Character Areas which form the basis for the Worcestershire Green Infrastructure Framework. There are 30 Environmental Character Areas.

Let us know you are interested...

If you don't want to respond to this consultation but would like to be kept up to date with how future work on the Minerals Local Plan is progressing you can register on our planning consultation database:

<http://www.worcestershire.gov.uk/researchweb/planning/involved.htm>. If you were sent this consultation directly there is no need to register again.

The main stages in the development of the Minerals Local Plan are outlined in Figure 1. Consultation is integral to this process.

Figure 1. Main stages in the preparation of the Minerals Local Plan





Church Farm East sand and gravel working near Grimley

6. Portrait of Worcestershire

Context

- 6.1 The county of Worcestershire has a population of 566,600² and covers an area of 173,529ha. There are six District, City and Borough Councils in Worcestershire: Bromsgrove; Malvern Hills; Redditch; Worcester City; Wychavon and Wyre Forest.

Minerals

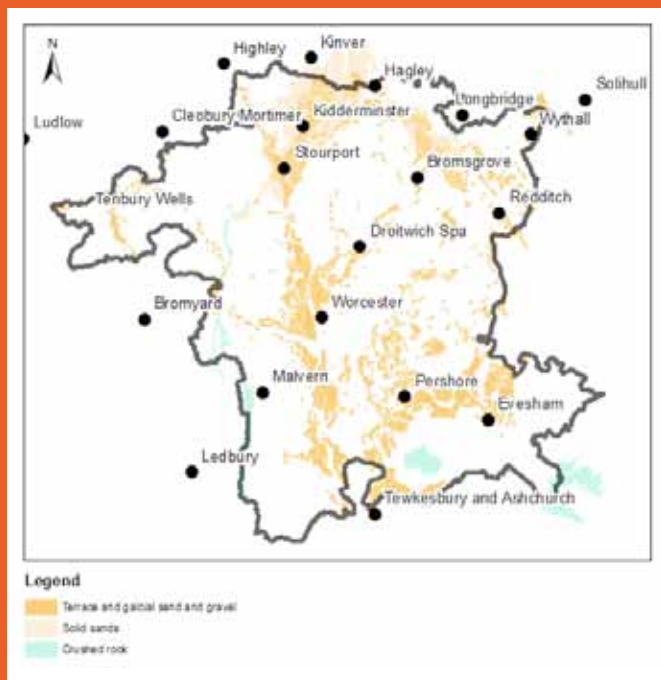
- 6.2 Worcestershire has a diverse geology. It is made up of a wide variety of rock types covering 600 million years of earth history.
- 6.3 In the west, the Malvern Hills run north-south along the county boundary and are largely formed from ancient Precambrian rocks. These are some of the oldest rocks in England and form one of the most important basement structures of southern Britain. In the north the county is bounded by the Clent Hills and Lickey Hills, which are formed from Carboniferous and Cambrian rock from the more recent Paleozoic era. Carboniferous formations are also found in the Wyre Forest Area in the form of red mudstone and coal.
- 6.4 Elsewhere in the county the broad floodplains of the Severn, the Teme Valley and Vale of Evesham are floored by easily eroded mudstones and sandstone of Devonian, Triassic and Jurassic age. In the east of the county, Jurassic mudstone is overlaid by Jurassic sandstones and limestones, which form the limestone escarpment of the Cotswolds.
- 6.5 Over the past 500,000 years ice sheets and melt water have covered the land surface, and the resulting sediments and alluvium deposited have formed terraces along the major river systems.
- Building Stone³**
- 6.6 There are examples of buildings across the county which have been constructed from local stone. This tends to be of poor quality, particularly sandstones found in the north west of the county and Cotswold limestone around Bredon Hill and Broadway, the exception is granite found in the Malvern area. Building stone is not currently worked in Worcestershire.

² ONS mid-year estimate for 2011.

³ For the purpose of this document, the term “building stone” is intended to incorporate both building and roofing stones.

Aggregate minerals

Figure 2. Aggregate Minerals in Worcestershire



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Amended British Geological Survey © NERC

- 6.7 Between 2006 and 2010, 0.5-0.8 million tonnes of sand and gravel were produced each year in Worcestershire. There are currently 7 active sand and gravel workings in the county.

Glacial and terrace sand and gravel

- 6.8 Worcestershire has a history of sand and gravel working along the Severn and Carrant Brook Valleys. There have been no recent workings along the Carrant Brook, however working along the Severn Valley is currently ongoing at several sites.

Solid sand

- 6.9 Away from the river valleys, sand and gravel has also been worked north of Bromsgrove in the Wildmoor and Blackwell areas, where moulding and silica sands were once nationally important for the iron founding industry. There are active workings in the Wildmoor area at present.

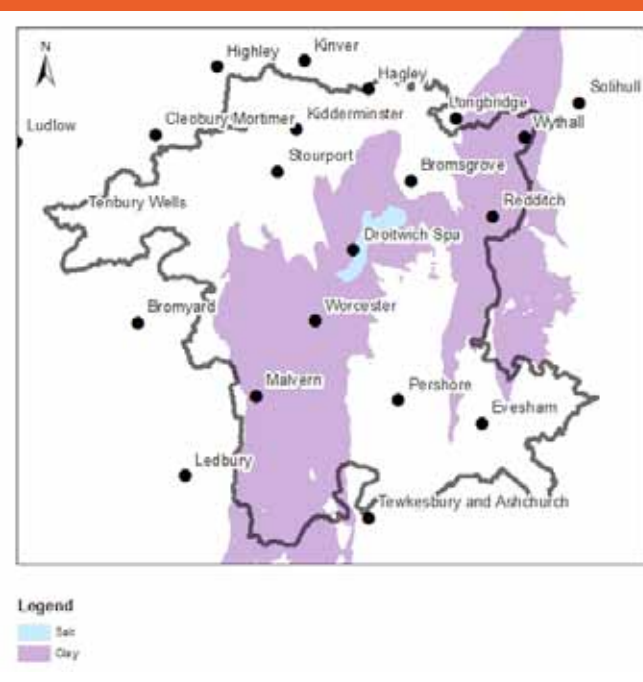
Crushed Rock

- 6.10 Crushed rock has been worked in the Abberley and Woodbury Hills, Malvern Hills and Fish Hill (near Broadway) over the last 50 years. However there are currently no workings or

planning permissions for crushed rock in the county. Several private Acts of Parliament between 1884 and 1924 established the Malvern Hills Conservators and gave the body the responsibility to protect the beauty of the Malvern Hills from the 'threat' of quarrying. It is therefore unlikely that large scale mineral working will take place in the Malvern Hills in the future, although this is not specifically prevented by the Acts⁴.

Industrial minerals

Figure 3. Industrial minerals in Worcestershire



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Clay

- 6.11 Clay is widely found across the central area of the county and historically there have been many small-scale local workings. The only place that clay is currently worked in Worcestershire is at Hartlebury, near Kidderminster. There are two operational sites and two associated brick works which together are capable of producing over 2 million bricks per week, although they are not currently operating at full capacity.

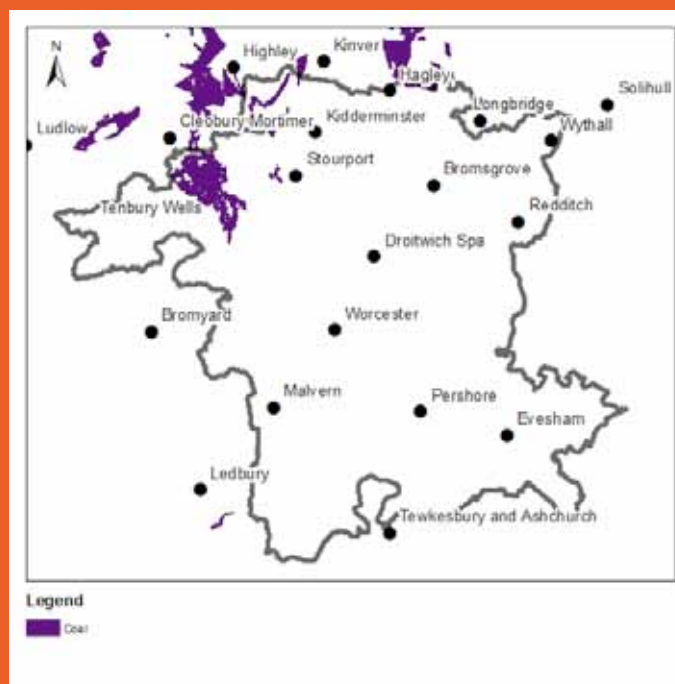
⁴ See Background Document: The Malvern Hills Acts

Salt and Brine

- 6.12 Salt deposits, which can be found in two areas in Worcestershire, Droitwich and Stoke Prior, were also worked until the 1920s and 1970's respectively. This involved pumping brine from the ground. The salt and brine resources in Worcestershire are not considered likely to be workable or commercially attractive in the future due to issues relating to ground stability and subsidence.

Energy minerals

Figure 4. Energy minerals in Worcestershire



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Coal

- 6.13 Coalfields in Worcestershire are restricted to the north of the county, to the west of Kidderminster and just south of Stourbridge. These are part of larger coalfields that extend north of the county, but the area of workable coal in Worcestershire is relatively small. Coal has not been worked in Worcestershire since the 1970s and is unlikely to attract further interest.

Hydrocarbons

- 6.14 There is no history of “conventional” oil and gas, coalbed methane or unconventional hydrocarbons such as shale gas being worked in Worcestershire. Coal bearing and shale strata exist in the county, however there is no evidence to suggest that these contain unconventional hydrocarbons such as shale gas.
- 6.15 Based on current evidence⁵ the county is not considered prospective for coalbed methane. One exploration well for oil and gas has been drilled in the county and another on the border. Neither of these led to the discovery of oil or gas.

Secondary and recycled resources

- 6.16 Secondary aggregates are produced as by-products from other industrial processes. There are currently no industrial processes in Worcestershire which are known to produce secondary aggregates or any waste management facilities that are known to process them.
- 6.17 A significant amount of recycled aggregates are produced in the county from the management of construction and demolition waste (C&D waste). This could provide up to 420,000 tonnes of recycled aggregates per year⁶.

Imports and exports

- 6.18 The information available indicates that Worcestershire is a net exporter of sand and gravel, however overall the county is a net importer of aggregate. Imports and exports are also commonplace for other minerals products, for example customers often choose bricks based on aesthetic qualities and there is therefore a national market. Worcestershire is a net exporter of bricks.

5 “Mineral Resource Information for Development Plans: Herefordshire and Worcestershire: Resources and Constraints.” British Geological Survey 1999

6 See “Waste Core Strategy for Worcestershire” for further details.

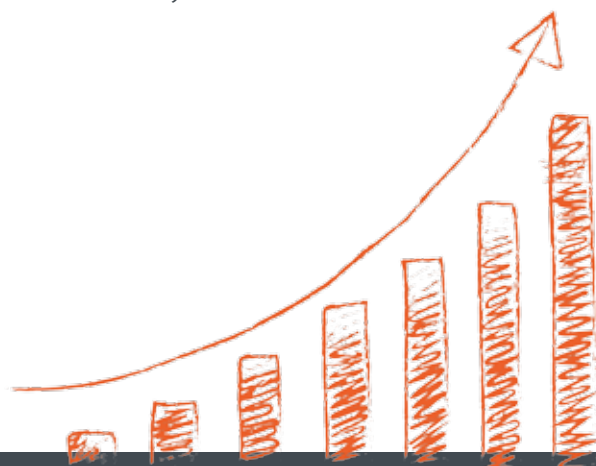


Environment

- 6.19 Worcestershire's landscape is one of the most diverse in Britain, with 22 significantly different rural landscape types. The Malvern Hills and Cotswolds Areas of Outstanding Natural Beauty are both partly within the county. Worcestershire is exceptionally biologically rich as it encompasses the southern limit of many northern plant and animal species and the northern limit of many southern species. There are 114 biological SSSIs and over 460 Local Wildlife Sites in the county. Worcestershire also has over a quarter of the UK's resource of unimproved neutral grassland habitat. The county also has a diverse and rich historic environment with over 29,000 heritage assets currently recorded on the county Historic Environment Record, 135 conservation areas, 6,300 listed buildings and 168 scheduled ancient monuments.
- 6.20 There are 13 geological SSSIs and more than 90 Local Geological Sites in Worcestershire. The Abberley and Malvern Hills Geopark which covers 1250 square kilometres, is partly in Worcestershire and extends into Gloucestershire, Herefordshire and Shropshire. Part of the 109 mile Geopark Way walking trail also runs through the county. The Malvern Hills and Cotswolds Areas of Outstanding Natural Beauty are both partly within the county and are also noted for their geology.
- 6.21 Worcestershire's natural and historic environment helps to define the county, providing a strong sense of place, attracting and retaining people and businesses and contributing a vast range of services which are sometimes overlooked. As a rural county, there are significant areas of green space. These areas

do not exist in isolation, they are an integrated system of environmental stepping stones in a wider network.

- 6.22 Traditionally, the environmental value of these green spaces has been considered in isolation, however in Worcestershire there is support for taking a "Green Infrastructure" approach. This means integrating the consideration of economic, health and social objectives into the protection, planning and management of environmental assets. Flooding and climate change resilience are of particular concern in the county.



Economy

- 6.23 71% of the population of Worcestershire live in urban areas, principally Worcester, Redditch, Bromsgrove and Kidderminster. Future growth in Worcestershire is expected to maintain and reinforce the current distribution of population and employment with a focus in and around Worcester, Redditch and Kidderminster and some growth in Malvern, Droitwich Spa and Evesham. The development of over 25,500 new houses and over 250 ha of employment land is anticipated in Worcestershire in the next 14-18 years.⁷ Significant development is also planned in other areas close to the county boundary. Minerals will be required to enable this growth.
- 6.24 Employment in Worcestershire is predominantly urban based, with the majority being service-based, however manufacturing, research and development, agriculture and food-related industries are locally important. As over 80% of Worcestershire is categorised as having high quality agricultural land, there is significant cross-over between the location of mineral resources and good quality land.

⁷ Estimated level of housing and employment land development based on information from WCC Strategic Planning team, March 2013. These estimates are likely to change as each of the City, Borough and District Councils in Worcestershire and the adjoining areas develop their Local Plans.



Transportation of sand and gravel on the River Severn

Transport

Water

- 6.25 The River Severn is navigable as far north as Stourport-on-Severn and is currently used to transport sand and gravel between Ryall and Ripple quarries in Worcestershire and into Gloucestershire. The River Avon is navigable from Tewkesbury to Stratford upon Avon and is capable of carrying commercial traffic. There is also an extensive canal network in the county, with the Worcester & Birmingham Canal, Staffordshire & Worcestershire Canal and Droitwich Canals. There are however some limitations on vessel size due to the locks on or between the waterways.

Rail

- 6.26 Strategic rail networks within Worcestershire have strong links to the north and south of the county, with all of the main towns being connected to the rail network. There are no major rail freight facilities in Worcestershire and limited opportunities for rail freight transport at present. The development of new railheads is likely to be challenging and would require the development of a sizeable mineral working to warrant the investment in new rail infrastructure.

Road

- 6.27 The county is well connected to the strategic road network with links to the M5, M42, and M50. Worcester, Droitwich Spa, Bromsgrove and Redditch are well placed on the motorway network and Kidderminster, Malvern and Evesham are also well served by A roads. However as mineral workings often take place in rural areas the quality and condition of local road links will also be a consideration.

Consultation Question

Q1. Do you think there are any other issues we should be aware of when preparing the Minerals Local Plan?



Retreat Farm sand and gravel working near Grimley

7. Vision and Objectives



In the previous consultation...

- 7.1 We said that the Minerals Local Plan priorities would be informed by other strategies. We listed:
- **Economic policies** and background evidence, including An Economic Strategy for Worcestershire.
 - **Environmental policies** and background evidence, including the Worcestershire Partnership State of the Environment Report, The Water Framework Directive and Worcestershire's Biodiversity Action Plan priorities.
 - **Community Strategies**, including The Single Sustainable Community Strategy for Worcestershire.
 - **Cross-cutting policies** and background evidence, including the Local Transport Plan, City, Borough and District Local Plans and the Worcestershire Green Infrastructure Framework Documents.

We also asked you what else you thought we should consider.



You said...

- 7.2 You said we should also take account of:

National considerations

- The National Planning Policy Framework
- The Natural Environment and Rural Communities Act (2006)

Local considerations

- Cotswolds Area of Outstanding Natural Beauty Management Plan
- Birmingham and Black Country Nature Improvement Area
- The Worcestershire Green Infrastructure Strategy
- Severn River Basin Management Plan
- Geodiversity Action Plan
- The Strategic Stone Study Database
- Worcestershire Archaeology and Aggregate Resource Assessment
- Malvern Hills Acts
- Local Plans
- The local economy



Our approach now...

- 7.3 We have used this information to identify key issues. The issues listed in Figure 5 were either highlighted in the previous consultation, are key to the strategies identified above or are otherwise locally relevant.
- 7.4 These issues have informed the development of the draft vision and objectives for the Minerals Local Plan.
- 7.5 **The vision** sets out the Council's ambition for what mineral provision and restoration will

'look like' in the county in the next 15 years. **The objectives** outline high-level priorities for realising the vision.

- 7.6 The objectives will then be **delivered through the policy framework** in the Minerals Local Plan. This can be broadly thought of in terms of 'criteria-based' policies that apply to all proposals and area specific priorities which apply to the identified areas of search and opportunity area for clay. The relationship between these aspects is set out in Figure 6.

Figure 5. Issues identified

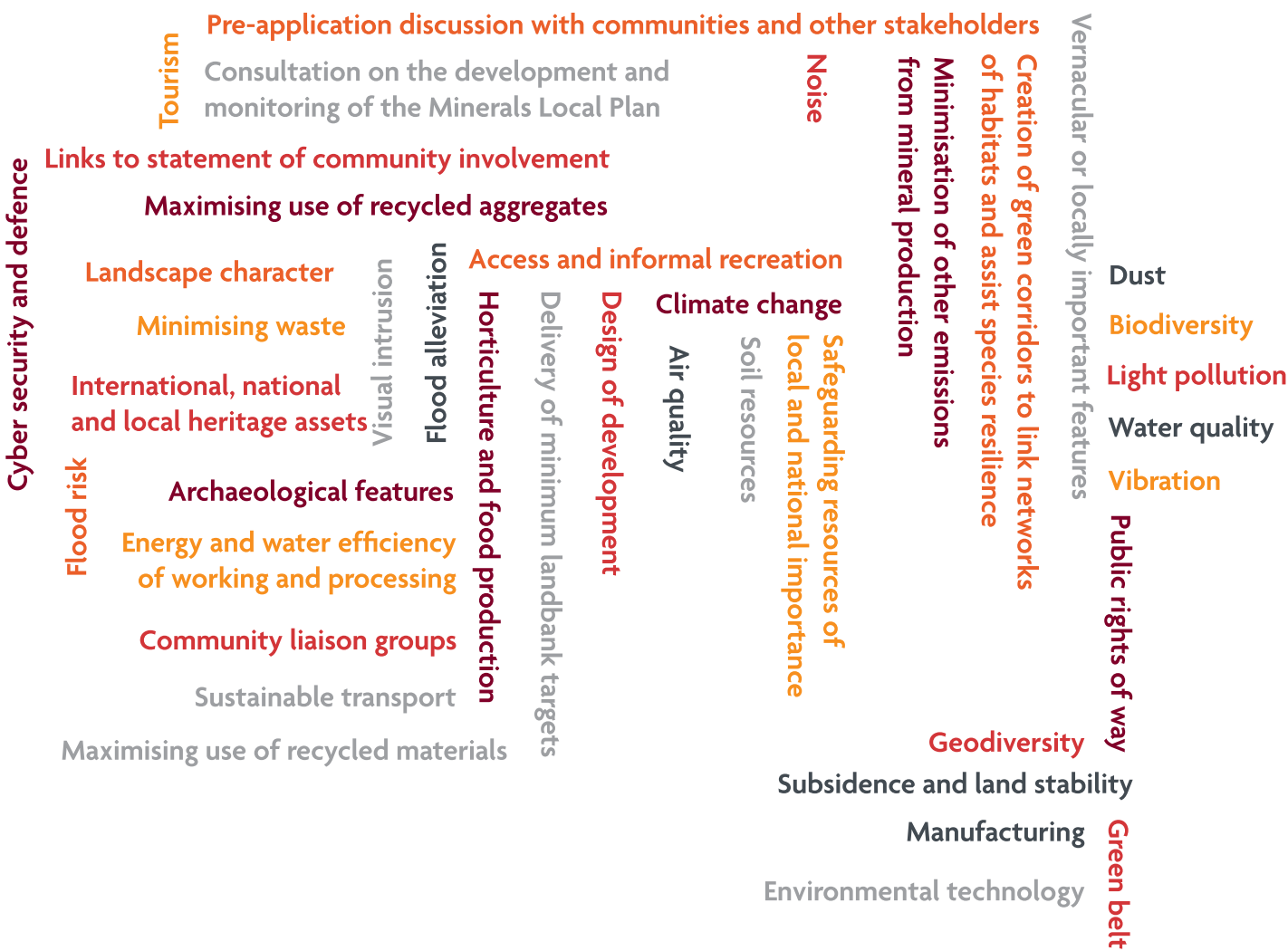


Figure 6. The relationship between the vision, the objectives and the policy framework



The detail...

Draft vision

7.7 The vision should give a **high-level overview** of the following issues:

- How much mineral resource will be worked in Worcestershire and broadly when this will take place;
- Where minerals should be extracted;
- How minerals sites should be worked;
- How minerals sites should be restored; and
- How and where minerals should be safeguarded for use in the future.

Each of these issues is then addressed in detail in the rest of the plan. This consultation document includes chapters addressing each of them in turn.

7.8 The vision should also be a high-level indication of how the Minerals Local Plan will deliver the requirements of the National Planning Policy Framework. These are⁸:

- **to contribute to the achievement of sustainable development:**
Local Plans should include a presumption in favour of sustainable development.

- **to seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development:**
Local Plans should deliver net gains across all three dimensions.
- **to set out the strategic priorities for the area:** Strategic priorities include the provision of minerals, ensuring adequate housing, employment and infrastructure provision, climate change mitigation and adaptation and conservation and enhancement of the natural and historic environment, including landscape.
- **to contain a clear strategy for enhancing the natural, built and historic environment**
- **to reflect the vision and aspirations of local communities**
- **to take an approach which is aspirational but realistic**

⁸ Paraphrased from the National Planning Policy Framework, paragraphs 151-157.

7.9 Taking all of this into account the following draft vision has been developed.

Draft Vision

The Minerals Local Plan will deliver sustainable minerals development in Worcestershire up to 2030 and beyond.

In order to support a sustainable economy and to maintain and foster local distinctiveness, mineral provision in Worcestershire will be adequate to contribute to national and local needs, enabling the contribution of at least 18.54 million tonnes of sand and gravel and 3.61 million tonnes of crushed rock to national supply, and enabling the provision of industrial and energy minerals and local building stone where appropriate. Annual requirements for minerals will be met and reserves replenished to ensure the delivery of minerals throughout the life of the plan and beyond. To enable sustainable supply in the long-term, reserves of aggregates will meet minimum landbank targets by halfway through the plan-period; nationally and locally important mineral resources will be safeguarded for future use; and the use of secondary and recycled materials will be encouraged.

Minerals will be worked and located in a socially and environmentally sustainable way that takes account of the health and amenity of local people, the vitality of the local economy, the integrity of the environment and the value of local features and characteristics. Mineral workings will be restored to maximise social, environmental and economic gains, through coordinated restoration that delivers networks of green infrastructure in an integrated way.

These economic, social and environmental achievements will be delivered through the Spatial Strategy (Figure 7) which drives development to the locations where the working of viable mineral resources will meet market demand and enable the delivery of the strategic restoration priorities identified.

Draft Spatial Strategy

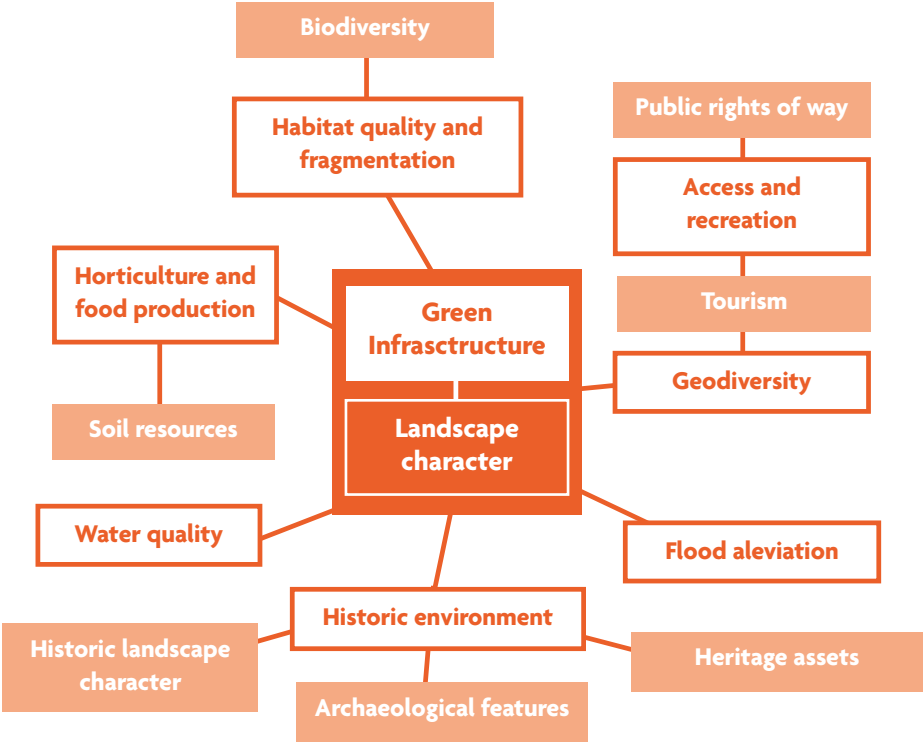
7.10 The role of the **Spatial Strategy** is to set out very broadly what type of development we would like where. This is an important aspect of the plan, giving a geographic dimension to the vision.

7.11 The Spatial Strategy (Figure 7) sets out:

- Areas of search for the working of:
 - Terrace and glacial sand and gravel;
 - Solid sands; and
 - Crushed rock
 (Details of how these have been developed are set out in Section 11 of the main consultation document)

- A potential opportunity area for the working of clay (Details of how this has been developed are set out in Section 11 of the main consultation document)
- Over-arching restoration priorities for sand and gravel and crushed rock corridors (Details of how these have been developed are set out in Section 12 of the main consultation document)

Figure 6a. High-level strategic restoration priorities

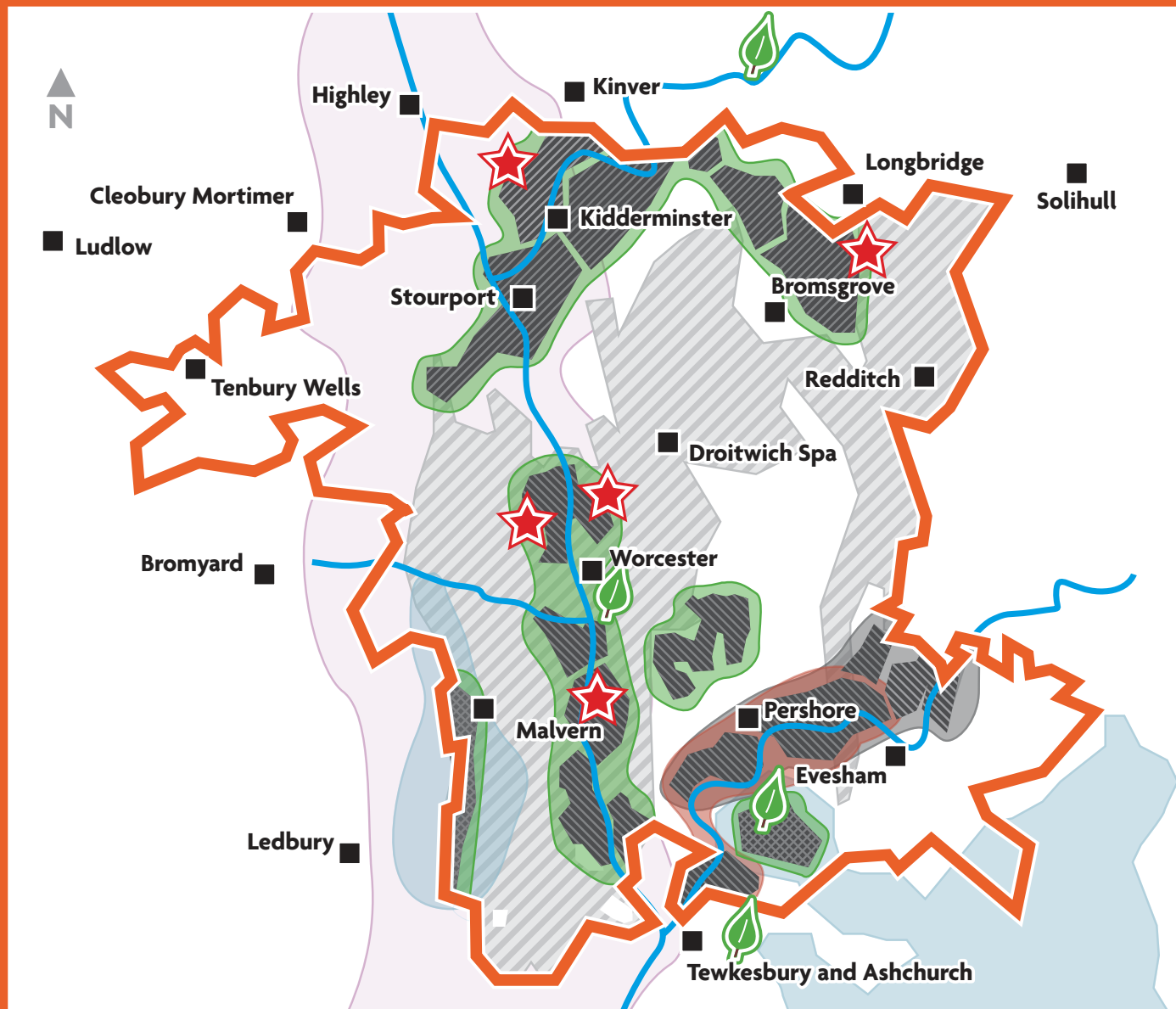


Strategic restoration priorities





7.12 The draft vision and objectives of the Minerals Local Plan and the relevant issues they should address have been used to identify eight high-level strategic restoration priorities (shown in bold on Figure 6a) and several relevant issues (shown in the shaded boxes) to be considered for each area of search, the opportunity area for clay and in developing the restoration priorities in the Spatial Strategy.

7.13 Although the fundamental principle of Green Infrastructure is that it should integrate a number of priorities and considerations, in order to give strategic direction in the Spatial Strategy we have identified corridors where there is a real opportunity to deliver the strategic restoration benefits rather than piece-meal restoration schemes. These are shown as over-arching restoration priorities on the spatial strategy diagram (Figure 7).

Figure 7. Spatial Strategy










Legend

-  Terrace and Glacial sand and gravel area of search
-  Solid Sand area of search
-  Crushed Rock area of search
-  Clay opportunity areas

Map features

-  Rivers
-  County boundary

Over-arching restoration priorities

-  Habitat quality and fragmentation
-  Horticulture and food production
-  Water Quality
-  Abberley and Malvern Hills Geopark
-  Area of Outstanding Natural Beauty
-  Special Area of Conservation (SAC)
-  "Areas of Search" for informal recreation

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Consultation Questions

Q2. Do you think that the vision successfully addresses the following broad issues?

- a) **How much** mineral resource will be worked in Worcestershire and broadly when this will take place;
- b) **Where** minerals should be extracted;
- c) **How minerals sites should be worked;**
- d) **How minerals sites should be restored**

If not, please provide details of how you think the vision could be improved to address these points.

Q3. Do you think that the vision addresses the principles of the National Planning Policy Framework by:

- a) **contributing to the achievement of sustainable development?**
Local Plans should include a presumption in favour of sustainable development.
- b) **seeking opportunities to achieve each of the economic, social and environmental dimensions of sustainable development?**
Local plans should deliver net gains across all three dimensions.
- c) **setting out the strategic priorities for the area?**
Strategic priorities include the provision of minerals, ensuring adequate housing, employment and infrastructure provision, climate change mitigation and adaptation and conservation and enhancement of the natural and historic environment, including landscape.
- d) **containing a clear strategy for enhancing the natural, built and historic environment?**
- e) **reflecting the vision and aspirations of local communities?**
- f) **taking an approach which is aspirational but realistic?**

If not, please give details of how you think the vision could be improved to address these points.

Q4. Do you have any other comments on the vision or spatial strategy?

Draft objectives

- 7.14 The objectives set out high-level priorities for the delivery of the vision. We think that the following objectives will deliver the vision. These are not listed in order of importance.

Draft Objectives

The following objectives will deliver sustainable minerals development in Worcestershire:

Draft objective 1

Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan.

Draft objective 2

Ensure the long term sustainability of supply of minerals resources.

Draft objective 3

Protect and enhance Worcestershire's key economic sectors ⁹.

Draft objective 4

Ensure mineral operations are resilient to and mitigate the impacts of climate change.

Draft objective 5

Utilise mineral restoration to enhance the climate change resilience of the county.

Draft objective 6

Protect and enhance the natural and historic environment.

Draft objective 7

Protect and enhance health and amenity.

Draft objective 8 - Involve all those affected as openly and effectively as possible.

- 7.15 The objectives have been derived from the consideration of the issues and principles highlighted above. The relevant issues for each objective are outlined in Table 1 (below).

⁹ Worcestershire's key sectors are outlined in the Worcestershire Local Enterprise Partnership's Business Plan 2012 "The Outlook is Bright in Worcestershire".

Table 1. Issues and objectives

Draft objective	Relevant issues
1) Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan.	<ul style="list-style-type: none"> • Delivery of minimum landbank targets • Maximising use of recycled aggregates
2) Ensure the long term sustainability of supply of minerals resources.	<ul style="list-style-type: none"> • Safeguarding resources of local and national importance • Maximising use of recycled aggregates
3) Protect and enhance Worcestershire's key economic sectors.	<ul style="list-style-type: none"> • Manufacturing • Cyber security and defence • Horticulture and food production • Environmental technology • Tourism
4) Ensure mineral operations are resilient to and mitigate the impacts of climate change.	<ul style="list-style-type: none"> • Sustainable transport • Energy and water efficiency of working and processing • Minimisation of other emissions from mineral production • Maximising use of recycled materials and minimisation of waste • Design of development • Flood risk • Subsidence and land stability
5) Utilise mineral restoration to enhance climate change resilience of the county.	<ul style="list-style-type: none"> • Habitat quality and fragmentation • Flood alleviation • Soil resources
6) Protect and enhance the natural and historic environment.	<ul style="list-style-type: none"> • Water quality and quantity • Geodiversity • Biodiversity • Landscape character • International, national and local heritage assets • Archaeological features • Vernacular or locally important features • Green Belt
7) Protect and enhance health and amenity.	<ul style="list-style-type: none"> • Air quality • Dust • Noise • Vibration and seismic instability • Visual intrusion • Light pollution • Safety • Public rights of way • Access and informal recreation
8) Involve all those affected as openly and effectively as possible.	<ul style="list-style-type: none"> • Pre-application discussion with communities and other stakeholders • Links to statement of community involvement • Community liaison groups • Consultation on the development and monitoring of the Minerals Local Plan



Fish Hill Quarry

Consultation Questions

We would like to know if you support the draft objectives and if you think they will deliver the vision.

Q5. Do you support the objectives?

Q6. Will the objectives deliver the vision?

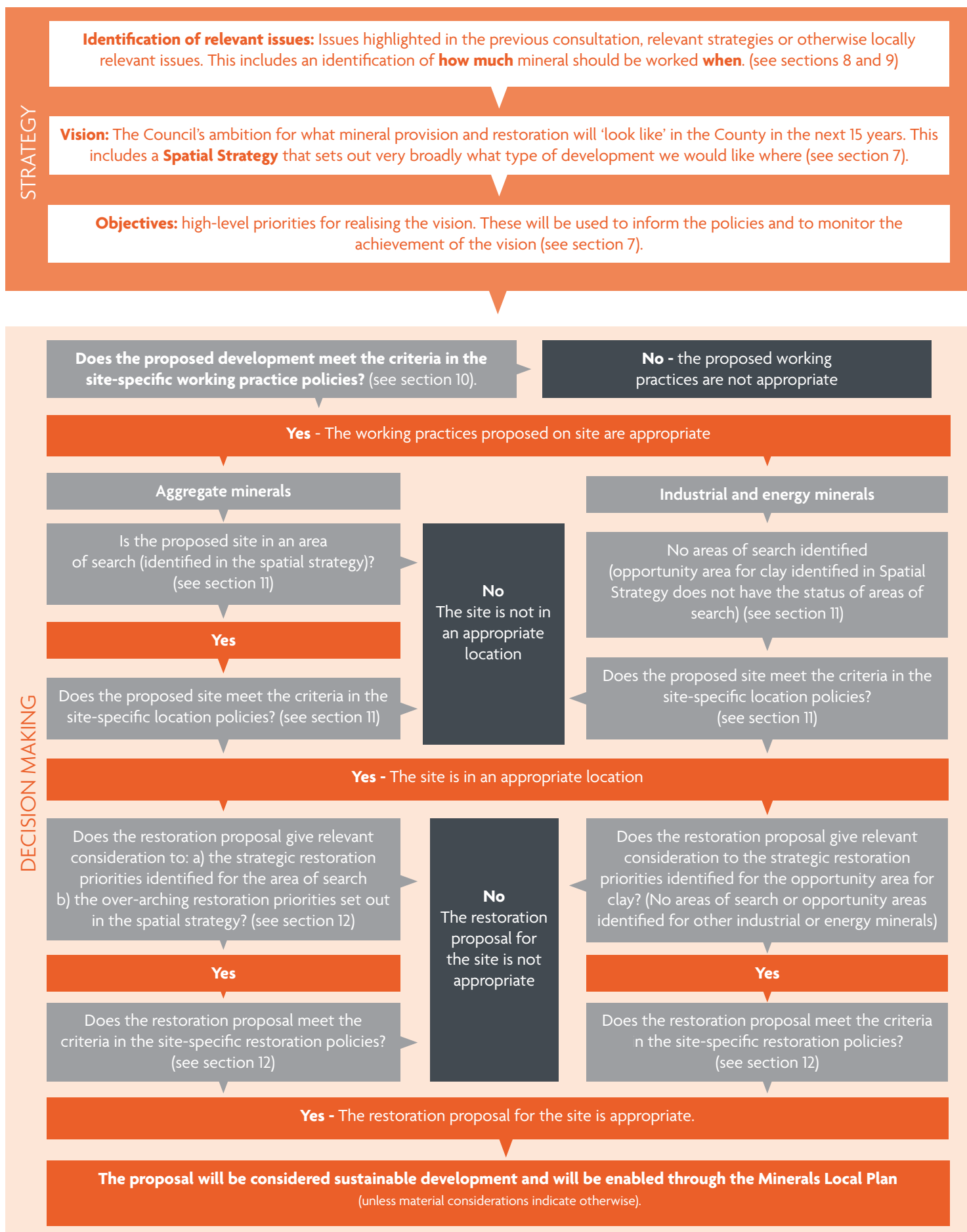
Q7. Please give details of any other strategic issues that you think should be considered. Please refer to the relevant objective number in your answer.

Q8. Do you have any other comments on the objectives, or do you think there are any additional objectives which would help deliver the vision?

Using the Minerals Local Plan to deliver sustainable mineral development

- 7.16 National policy¹⁰ states that:
- “Policies in Local Plans should follow the approach of the presumption in favour of sustainable development so that it is clear that development which is sustainable can be approved without delay. All plans should be based upon and reflect the presumption in favour of sustainable development, with clear policies that will guide how the presumption should be applied locally.”
- 7.17 We intend to use the vision, objectives and spatial strategy to develop policies that will guide how the presumption in favour of sustainable development should be applied locally, as set out in Figure 8.

Figure 8. Using the Minerals Local Plan to deliver sustainable mineral development



Note: When determining planning applications decisions must be made in accordance with the development plan unless material considerations indicate otherwise. Other policies in the development plan will therefore need to be considered to address other issues and it may be appropriate to take other material considerations into account.



Church Farm East sand and gravel working near Grimley

8. How much mineral resource will we make provision for?



In the previous consultation...

- 8.1 In the previous consultation we set out 5 alternative methods for calculating the amount of mineral resource that we need to make provision for over the life of the strategy. We said that we would make provision for a range between the highest and lowest of these alternatives, as shown in Table 2:

Table 2. Mineral provision requirements in Worcestershire as set out in the first stage consultation on the Minerals Local Plan

Aggregates	
Sand and gravel	18-35 million tonnes
Hard (crushed) rock	4-7 million tonnes
Secondary and recycled aggregates	5-7 million tonnes
Industrial Minerals	
Silica Sand	We've probably got permission for enough already
Clay	
Salt	We don't think resources are viable
Energy Minerals	
Coal	We don't think resources are viable



You said...

- Using a range was not a good idea because it would create uncertainty.
- The approach to working out demand for minerals should be based on the level of past sales.



In addition...

- New national guidance has been published¹¹ which gives more details about how requirements for the provision of aggregates should be calculated.



Our approach now...

- 8.2 We have refined our approach. To establish the minimum amount of aggregate we need to make provision for in the Minerals Local Plan we have calculated:
- The amount of aggregate that is needed to ensure that we have enough reserves to meet national 'landbank' targets; and
 - The amount of aggregate that we will need to replenish these reserves every year.

¹¹ Department for Communities and Local Government, October 2012, "Guidance on the Managed Aggregate Supply System" available on www.gov.uk

- 8.3 Alternative approaches are set out in detail in the main consultation document, but to summarise: this time we have identified minimum amounts, rather than using a range. The figures we have calculated using our preferred method have been incorporated directly into the draft vision, which says:

“In order to support a sustainable economy and to maintain and foster local distinctiveness, mineral provision in Worcestershire will be adequate to contribute to national and local needs, enabling the contribution of at least 18.54 million tonnes of sand and gravel and 3.61 million tonnes of crushed rock to national supply, and enabling the provision of industrial and energy minerals and local building stone where appropriate....”

- 8.4 You will note that we don't set out specific levels of provision for non aggregate minerals. This is either because there is already adequate provision for these minerals or because they are not considered viable in Worcestershire (further details are set out in the main consultation document). However the vision aims to enable all types of mineral development where it is appropriate.
- 8.5 The draft objectives are intended to support the delivery of the vision:

Draft objective 1 - Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan.

Draft objective 2 - Ensure the long term sustainability of supply of minerals resources.

Consultation Questions

Section 8 of the main consultation document contains further detail of how we have calculated the annual provision requirements for aggregates and sets out options for ensuring the security of future supply.

It also sets out the reasons that we do not intend to identify milestones for the provision of non-aggregate minerals.

If you would like to answer the consultation questions relating to these issues (questions 9-12), please refer to Section 8 of the main consultation document.



Sorted stockpiles of sand and gravel

9. When will minerals be worked and when will our reserves meet national targets?



In the previous consultation...

- 9.1 We have not previously asked you about any issues relating to the timing of supply.



Our approach now...

- 9.2 As set out in Section 8, we have established the minimum amount of aggregate we need to make provision for in the Minerals Local Plan. The vision clearly identifies this as:

“... enabling the contribution of at least 18.54 million tonnes of sand and gravel and 3.61 million tonnes of crushed rock to national supply, and enabling the provision of industrial and energy minerals and local building stone where appropriate.”

- 9.3 For aggregates this level of provision is made up of two components:

- **The amount of aggregate reserves required to meet national targets:** We know that we currently do not have enough reserves to meet minimum targets set in the National Planning Policy Framework, so we need to find the best approach to building these reserves up during the plan-period.

This would mean having planning permission for reserves of at least:

- Sand and gravel: 6.1 million tonnes (7 year landbank)
- Crushed rock: 1.63 million tonnes (10 years landbank)

In section 9 of the main consultation document we have considered the alternatives and we think that it is most realistic to aim for achieving these levels of reserves by halfway through the plan-period and then seek to maintain or increase them over the rest of the plan period and beyond.

- **The amount of aggregate that we will need to replenish these reserves every year:** We estimate (see Section 8 of the main consultation document) that to replenish reserves we need to make the following annual provision:

	2015 - 2016	2017 - 2030
Sand and gravel	0.871 million tonnes	0.764 million tonnes
Crushed rock	0.163 million tonnes	0.118 million tonnes

We will seek to deliver these annual levels consistently during the plan-period, whilst also ensuring that we build up enough reserves to meet the land-bank requirements.

- 9.4 As well as identifying overall levels of supply, the vision sets out the timescales for building up adequate reserves to meet national targets:

“Annual requirements for minerals will be met and reserves replenished to ensure the delivery of minerals throughout the life of the plan and beyond. To enable sustainable supply in the long-term, reserves of aggregates will meet minimum landbank targets by halfway through the plan-period; nationally and locally important mineral resources will be safeguarded for future use; and the use of secondary and recycled materials will be encouraged.”

Jargon Buster

Landbank

In aggregate planning, the term “landbank” is used to refer to the stock of reserves of minerals with planning permission for extraction within a particular area; it can be used as a tool to assess how long supply can be maintained for based on forecasted level of demand. It is expressed in years.

Consultation Questions

Section 9 of the main consultation document contains further detail of the options we have considered for when we will aim to meet national landbank targets for aggregates, information about the amount of aggregates we will need to replenish reserves every year and the approach we propose to industrial and energy minerals.

If you would like to answer the consultation questions relating to these issues (questions 13-16), please refer to Section 9 of the main consultation document.



Machinery at Church Farm East sand and gravel working near Grimley

10. How will minerals be worked?



In the previous consultation...

- 10.1 **We said:**
- “A mineral “working” or site has different impacts through its life. These vary through the operational and restoration stages and need to be considered right from the start of designing the development all the way through to looking after the site once it has been restored.

We will develop the Minerals Local Plan to address:

- The environment – including habitats, species, landscape, archaeology, historic environment, surface and ground water
- Transport – including site access and methods for transporting materials including road, rail, water, conveyors and pipelines
- Impacts on those nearby – including noise, dust, vibrations, visual impacts.”

- 10.2 We asked you if there are any other issues we should consider and whether you are aware of any information that would help us to develop these policies.



You said...

- 10.3 You agreed that:
- The issues we outlined were appropriate
 - Sustainable transport should be considered, but greater definition is needed.
 - The natural and historic environment are important considerations.

- 10.4 You also said we should think about:

Green Infrastructure Priorities
Water Framework Directive

Features of high ecological value
Traffic and congestion
Biodiversity
Monitoring workings
Carbon dioxide emissions
Impacts on local roads
Geological conservation
Encouraging the use of secondary aggregates
Pollution prevention
Climate change mitigation
The positive impact on local employment
The adjoining Nature Improvement Area

The impact of a high concentration of mineral workings in an area
Considering enforcement and compliance from the outset

Public rights of way, particularly the protection of the Severn Way.
Water resource protection: Groundwater and water catchment areas

- 10.5 You drew our attention to the following additional information/guidance:
- Archaeology and Aggregates in Worcestershire – A Resource Assessment¹²
 - Mineral Extraction and Archaeology practice guide¹³
 - Data held at the Geological Records Centre¹⁴
 - Geodiversity Action Plan for Worcestershire¹⁵
 - The England Biodiversity Strategy¹⁶
 - The Natural Environment White Paper¹⁷
 - The Lawton Review: “ Making Space for Nature: A review of England’s Wildlife Sites and Ecological Network ”¹⁸
 - RSPB report: ‘Nature After Minerals: how mineral site restoration can benefit people and wildlife’¹⁹
 - The Worcestershire Biodiversity Action Plans²⁰
 - The Worcestershire Biodiversity Delivery Areas documents, which set out the biodiversity priorities for Worcestershire²¹.
 - Worcestershire Wildlife Trust’s ‘Living Landscape’²²



Our approach now...

- 10.6 The working phase of a minerals site can include different activities. Each of these can result in impacts that need to be managed to ensure that they are acceptable. Broadly speaking these activities relate to three main aspects:

- **The “winning” of the mineral:** Sand and gravel and clay can be won by digging the material out of the ground in open pits. In some cases these pits are naturally dry or are pumped to remove any water (“dry” working). Where open pits are below the

water table a dragline can be used to strip the mineral underwater rather than pumping the pit dry (“wet” working). Crushed rock is always worked dry.

Other methods include blasting quarry faces through controlled explosions, as is sometimes the case for crushed rock production. Underground mining may also take place but is not likely in Worcestershire. Boreholes can be used to reach some types of minerals which can be extracted by pumping, and historically this method has been used in the county to extract brine.

- **The processing of the material:** This commonly includes washing, screening (or sorting), and crushing the mineral. It can include added-value processes ranging from simple bagging or batching of products to more sophisticated activities that require significant investment in equipment to produce an end-product, such as the manufacture of bricks, or the production of asphalt or cement products. Some processing activities can result in by-products which need to be managed. Settlement ponds to deal with the silt washed off sand and gravel are common.
- **Moving and storing the mineral:** Once they have been worked it may be necessary to store minerals ready for market or further processing. Stockpiles are therefore not uncommon. In addition minerals need to be moved around the site from the area where they are won to the processing or loading facilities. There are a number of methods for doing this, but private haul roads for site plant and conveyors are the most common in Worcestershire.

12 Prepared by Worcestershire County Council

13 <http://www.english-heritage.org.uk/publications/mineral-extraction-and-archaeology/>

14 <http://www.earthheritagetrust.org/pub/about-the-trust/grc/the-geological-records-centre/>

15 <http://www.earthheritagetrust.org/pub/local-gaps/the-local-geodiversity-action-plans/>

16 <http://www.defra.gov.uk/publications/2011/08/19/pb13583-biodiversity-strategy-2020/>

17 <http://www.defra.gov.uk/environment/natural/whitepaper/>

18 <http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>

19 http://www.rspb.org.uk/Images/natureaftermineralsreport_tcm9-257075.pdf

20 <http://www.worcestershire.gov.uk/cms/biodiversity/actionplans.aspx>

21 <http://www.worcestershire.gov.uk/cms/biodiversity/landscape-scale-conservation.aspx#Delivery>

22 <http://www.worcswildlifetrust.co.uk/your-livinglandscape>

- 10.7 The policies in the Minerals Local Plan will need to address the impacts that these different aspects of working can have. They also need to be flexible enough to apply to different types of mineral workings, because impacts will vary depending on the type of mineral being worked, the methods used and the scale of the working.

- 10.8 The vision says:
“Minerals will be worked and located in a socially and environmentally sustainable way that takes account of the health and amenity of local people, the vitality of the local economy, the integrity of the environment and the value of local features and characteristics.”

- 10.9 We intend to deliver the objectives shown in Table 4 through policies that address how mineral working should take place. The issues for working practices that the policies might consider are also highlighted in Table 4.

Table 4. How the draft objectives will be delivered through site-specific criteria-based policies relating to working practices

Draft objective	How the objective will be considered through working practice criteria policies to apply to individual proposals on a site by site basis	
2) Ensure the long term sustainability of supply of minerals resources.	<ul style="list-style-type: none"> Safeguarding resources of local and national importance Maximising use of recycled aggregates 	
3) Protect and enhance Worcestershire's key economic sectors.	<ul style="list-style-type: none"> Manufacturing Cyber security and defence Horticulture and food production Environmental technology Tourism 	
4) Ensure mineral operations are resilient to and mitigate the impacts of climate change.	<ul style="list-style-type: none"> Sustainable transport Energy and water efficiency of working and processing Minimisation of other emissions from mineral production Maximising use of recycled materials and minimisation of waste Design of development Flood risk Subsidence and land stability 	
5) Utilise mineral restoration to enhance climate change resilience of the county.	<ul style="list-style-type: none"> Habitat quality and fragmentation Flood alleviation Soil resources 	
6) Protect and enhance the natural and historic environment.	<ul style="list-style-type: none"> Water quality and quantity Geodiversity Biodiversity Landscape character 	<ul style="list-style-type: none"> International, national and local heritage assets Archaeological features Green Belt
7) Protect and enhance health and amenity.	<ul style="list-style-type: none"> Air quality Dust Noise Vibration and seismic instability 	<ul style="list-style-type: none"> Visual intrusion Light pollution Safety Public rights of way Access and informal recreation
8) Involve all those affected as openly and effectively as possible.	<ul style="list-style-type: none"> Pre-application discussion with communities and other stakeholders Links to statement of community involvement Community liaison groups 	

Consultation Questions

Section 10 of the main consultation document sets out further detail of the issues which policies on working practices should consider and how they might be addressed.

If you would like to answer the consultation questions relating to these issues (questions 17-18), please refer to Section 10 of the main consultation document.



Sand and gravel working in Worcestershire

11. Where will minerals be worked?



In the previous consultation...

- We showed you what minerals we have in Worcestershire and explained that we can't control where minerals exist.
- We asked you if you had any additional information about quality, quantity or viability of resources.
- We said that the Minerals Local Plan would include a strategy to guide where minerals development should happen. We thought that this should be based on working **viable resources** in areas where there is the **greatest ability to achieve restoration priorities**.
- We said the Minerals Local Plan would not identify specific sites but would include:
 - a key diagram, directing development to broad areas where extraction is preferred, and identifying the restoration priorities in these areas.
 - Criteria-based location policies to assess the suitability of the site when proposals are brought forward.
 - Minerals safeguarding areas identifying areas where mineral resources should not be sterilised by other development.

Jargon Buster

Green Infrastructure (GI)

The planned and managed network of green spaces and natural elements that intersperse and connect our cities, towns and villages. GI comprises of many different elements including biodiversity, the landscape, the historic environment, the water environment (also known as blue infrastructure) and publicly accessible green spaces and informal recreation sites.



You said...

- With the exception of coal and one deposit of sand and gravel, you didn't tell us any additional information about mineral resources.
- You had mixed opinions about whether we should identify broad areas where extraction is preferred or focus on specific sites.
- In general you supported the consideration of the two location-drivers that we had identified to help us develop a strategy to guide where mineral development should happen:
 - Considering the location of viable resources: which you thought should include the consideration of demand and resource quality.
 - Identifying areas where there is the greatest ability to achieve restoration priorities.

You also agreed that these considerations need to be carefully balanced when considering location. However there were differences of opinion about what the right balance would be.

- You also told us about a wide range of things that we should think about when considering the location of mineral development:



- You commented specifically on saved policy 5 of the current Minerals Local Plan relating to the exclusion of mineral extraction within the Abberley Hills and expressed a wish to retain this policy.



In addition...

- More detailed consideration of the geological information indicated that:
 - The map entitled “sand and gravel” in the First Stage Consultation document included other ‘superficial deposits’ including Head, Boulder Clay, Till and Alluvium. We have now amended the map to correct this error by deleting these categories and only using the BGS Rock Classification Scheme categories of “sand”, “sand and gravel” and “gravel”.
 - The Kidderminster Formation and Wildmoor Sandstone Formation should have been shown as “solid sands” on the map entitled “sand and gravel” but were shown on the crushed rock map in error.

An updated overview of the resources is shown in Figures 2 and 3 (in Section 6).



Our approach now...

11.1 The vision says:

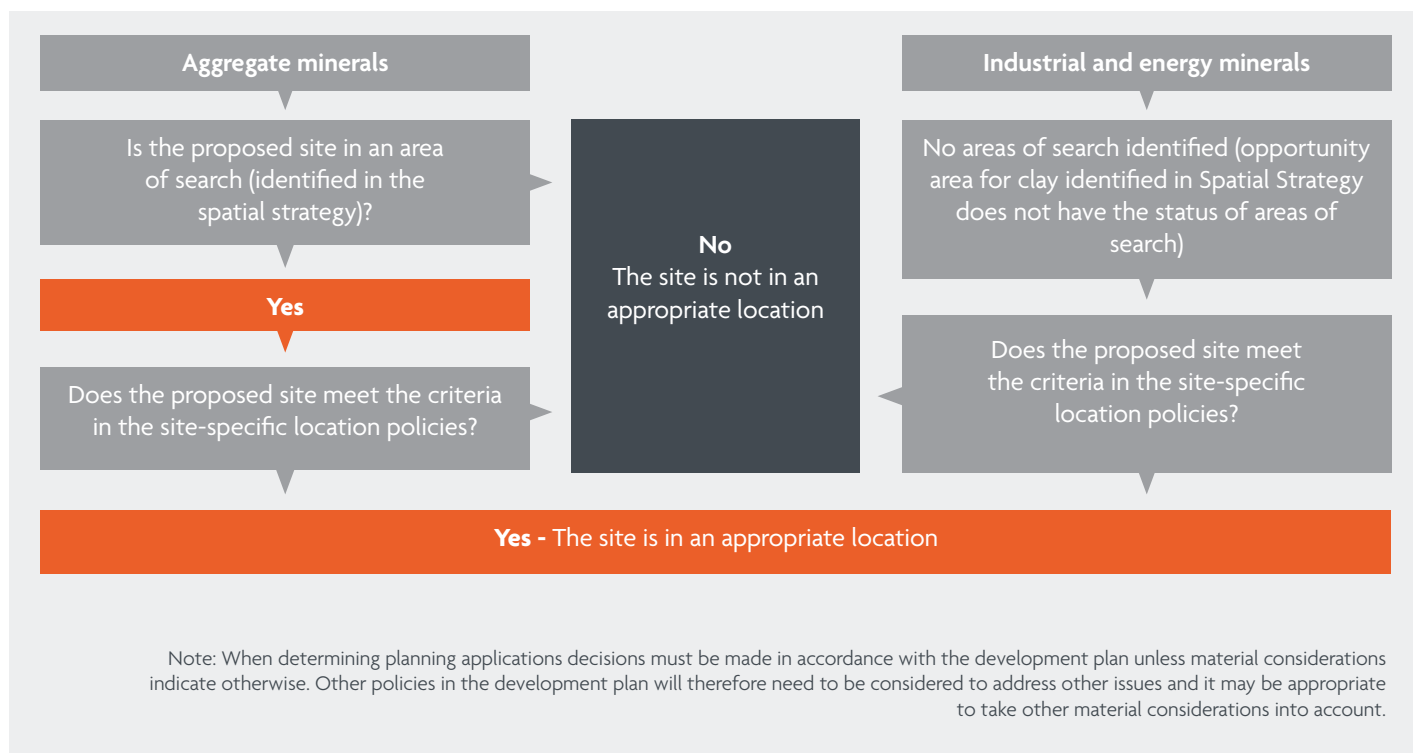
“...Minerals will be worked and located in a socially and environmentally sustainable way that takes account of the health and amenity of local people, the vitality of the local economy, the integrity of the environment and the value of local features and characteristics. Mineral workings will be restored to maximise social, environmental and economic gains, through coordinated restoration that delivers networks of green infrastructure in an integrated way.

These economic, social and environmental achievements will be delivered through the Spatial Strategy (figure 7) which drives development to the locations where the working of viable mineral resources will meet market demand and enable the delivery of the strategic restoration priorities identified.”



Croft Farm Water Park, Bredons Hardwick, a former sand and gravel working

Figure 10. Our broad approach to addressing the question “where will minerals be worked?”



11.2 To deliver this aspect of the vision we have developed areas of search for aggregates and an opportunity area for clay, and we will develop policies that applicants and planning officers will need in order to follow the decision making process set out in Figure 10 when considering whether a specific site is suitable for mineral working.

11.3 We intend to deliver the following objectives through a combination of defining areas of search for aggregates, an opportunity for clay and criteria-based policies that address where mineral working should take place:

Table 6. How the draft objectives will be delivered through areas of search, the opportunity area for clay and site-specific location-criteria policies

Draft objective	How the objective will be considered through	
	Areas of search (which inform the spatial strategy)	Location-criteria policies to apply to individual proposals on a site by site basis
1) Ensure adequate and steady supply of aggregate, industrial and energy minerals over the life of the plan.	<ul style="list-style-type: none"> • Delivery of minimum landbank targets 	
4) Ensure mineral operations are resilient to and mitigate the impacts of climate change.		<ul style="list-style-type: none"> • Sustainable transport • Flood risk • Subsidence and land stability
5) Utilise mineral restoration to enhance climate change resilience of the county.	<ul style="list-style-type: none"> • Habitat quality and fragmentation 	<ul style="list-style-type: none"> • Flood alleviation • Soil resources
6) Protect and enhance the natural and historic environment.		<ul style="list-style-type: none"> • Water quality and quantity • Geodiversity • Biodiversity • Landscape character • International, national and local heritage assets • Archaeological features • Vernacular or locally important features • Green Belt

11.4 We have taken the approach outlined in Figure 11 to identifying areas of search for aggregates. The identified areas of search are shown in Figure 12.

Figure 11. Summary of approach to identifying areas of search for aggregates

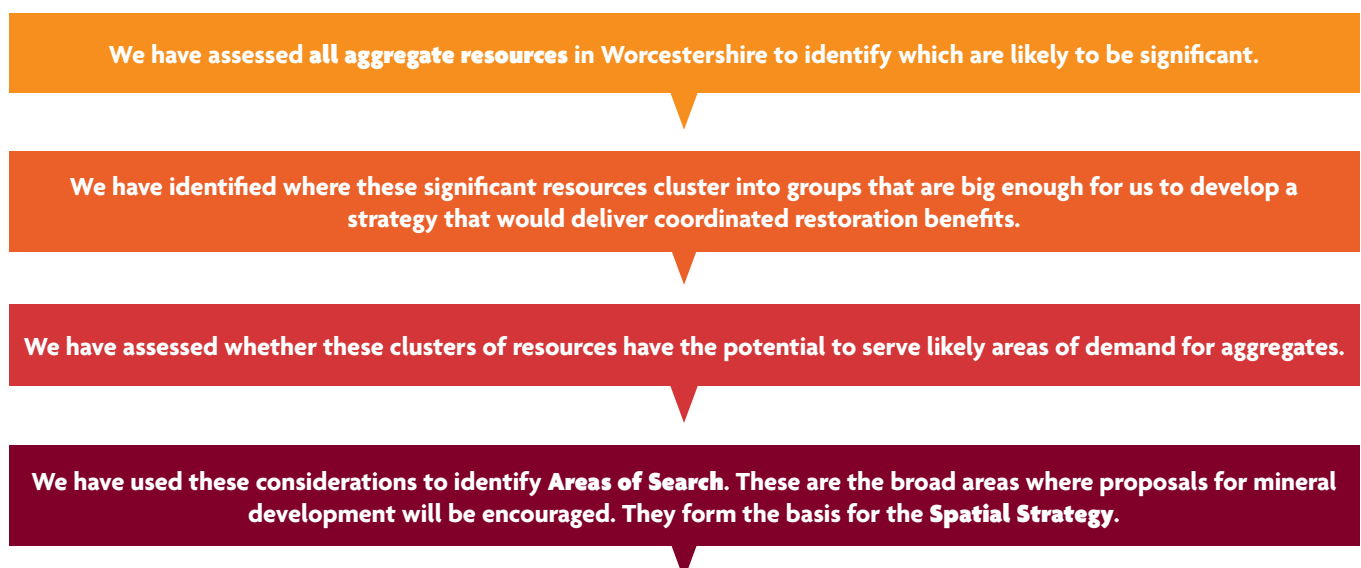
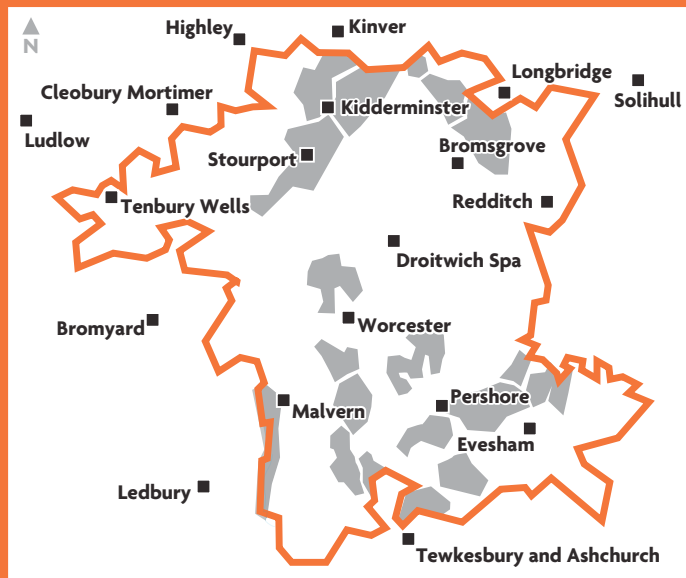


Figure 12. Identified areas of search for aggregates

**Legend**

■ Areas of Search

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Figure 13. Opportunity area for clay

**Legend**

■ Opportunity area for clay

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- 11.5 Due to a variety of factors we do not think that it is appropriate to identify areas of search for building stone or industrial or energy minerals. However, Mercia Mudstone (a type of clay) is currently worked in Worcestershire to make bricks and supplies a national market. Mercia Mudstone covers a large area of the county but as we have no information to refine this to identify meaningful areas of search we have instead identified an 'opportunity area' for clay. This will not have the same status as an area of search but will give an indication of areas where clay working is possible and will highlight its importance in the spatial strategy. The opportunity area for clay is shown in Figure 13.

- 11.6 We propose to develop site-specific location criteria policies to address the following issues:

Conservation areas**Green belt****Species****Archaeology****Aviation safety**

Congestion on the transport network

Areas of Outstanding Natural Beauty

Connectivity to the strategic transport network

Geological sites

Water quality and quantity

Nature conservation sites

Soil resources**Infrastructure****Habitats**

Heritage assets and their settings

Subsidence

Land stability

Flood risk

Amenity along transport networks

Landscape character and quality

Safety of the transport network

Access to the site

Consultation Questions

Section 11 of the main consultation document sets out our proposed approach to where aggregate and non-aggregate minerals should be worked, how areas of search for aggregates have been developed and further detail of the issues which policies on the location of mineral working should consider and how they might be addressed.

If you would like to answer the consultation questions relating to these issues (questions 19-25), please refer to Section 11 of the main consultation document.



Kemerton Lake Nature Reserve

12. How will mineral workings be restored?

← In the previous consultation...

12.1 We told you that:

“A “mineral working” or site is always temporary because once all of the mineral has been won the site will no longer be useful for mineral extraction and an after-use will have to be established. This is often referred to as “restoration”, even though sites are not always returned to their original use. For example, it may be more appropriate for low-grade agricultural land to be restored to a lake or nature reserve. The Minerals Local Plan will need to include policies about this restoration.”

“A mineral “working” or site has different impacts through its life. These vary through the operational and restoration stages and need to be considered right from the start of designing the development all the way through to looking after the site once it has been restored.”

12.2 We also outlined the approach we intended to take. We said that we would develop the Minerals Local Plan to address:

- “The environment – including habitats, species, landscape, archaeology, historic environment, surface and ground water
- Transport – including site access and methods for transporting materials including road, rail, water, conveyors and pipelines
- Impacts on those nearby – including noise, dust, vibrations, visual impacts.”

12.3 In addition we told you that we thought restoration potential should be a key driver when developing the Spatial Strategy for the Minerals Local Plan. This would mark a significant step-change in mineral planning policy in the county. We said that:

“The Minerals Local Plan will include a strategy to guide where minerals development should happen. We think this should be based on working viable resources in areas where there is the greatest ability to achieve restoration priorities.

The Minerals Local Plan will not identify specific sites. It will include:

- a key diagram, directing development to broad areas where extraction is preferred, and identifying the restoration priorities in these areas...
- Criteria-based location policies to assess the suitability of the site when proposals are brought forward”.

12.4 We asked if you had any comments on this approach and if there were any other issues we should consider and whether you were aware of any information that would help us to develop these policies.



You said...

- You raised concerns that a blanket policy or county-wide approach to setting issue-based restoration priorities would not be appropriate, but generally supported the idea of an area-based approach depending on how this was developed.
- You agreed that considering restoration as a driver in the spatial strategy could deliver significant potential for integrated restoration benefits and made specific reference to habitat connectivity, landscape character, historic landscape character and flood alleviation.
- You said that we should consider the issues listed to the right when addressing restoration:
- The need for clear restoration plans at application stage was reiterated through several responses as a way of taking into account local considerations, setting clear priorities and aiding on-going monitoring both on and off-site. However the long-term flexibility of such schemes to respond to changing circumstances was also considered key.

Flood alleviation

Water Framework Directive

Water resource protection

Inert waste

Geodiversity

Historic character

Green Infrastructure

Wetland ecosystems

Eco-system services

Tourism

Biodiversity

Health

Recreation

Aftercare

Agriculture

River flows

Priority habitats

Climate change

Visual landscape

Abberley and Malvern Hills Geopark

Water sports, moorings and other leisure facilities

Public rights of way (with specific reference to the Severn Way)



Our approach now...

12.5 The vision says:

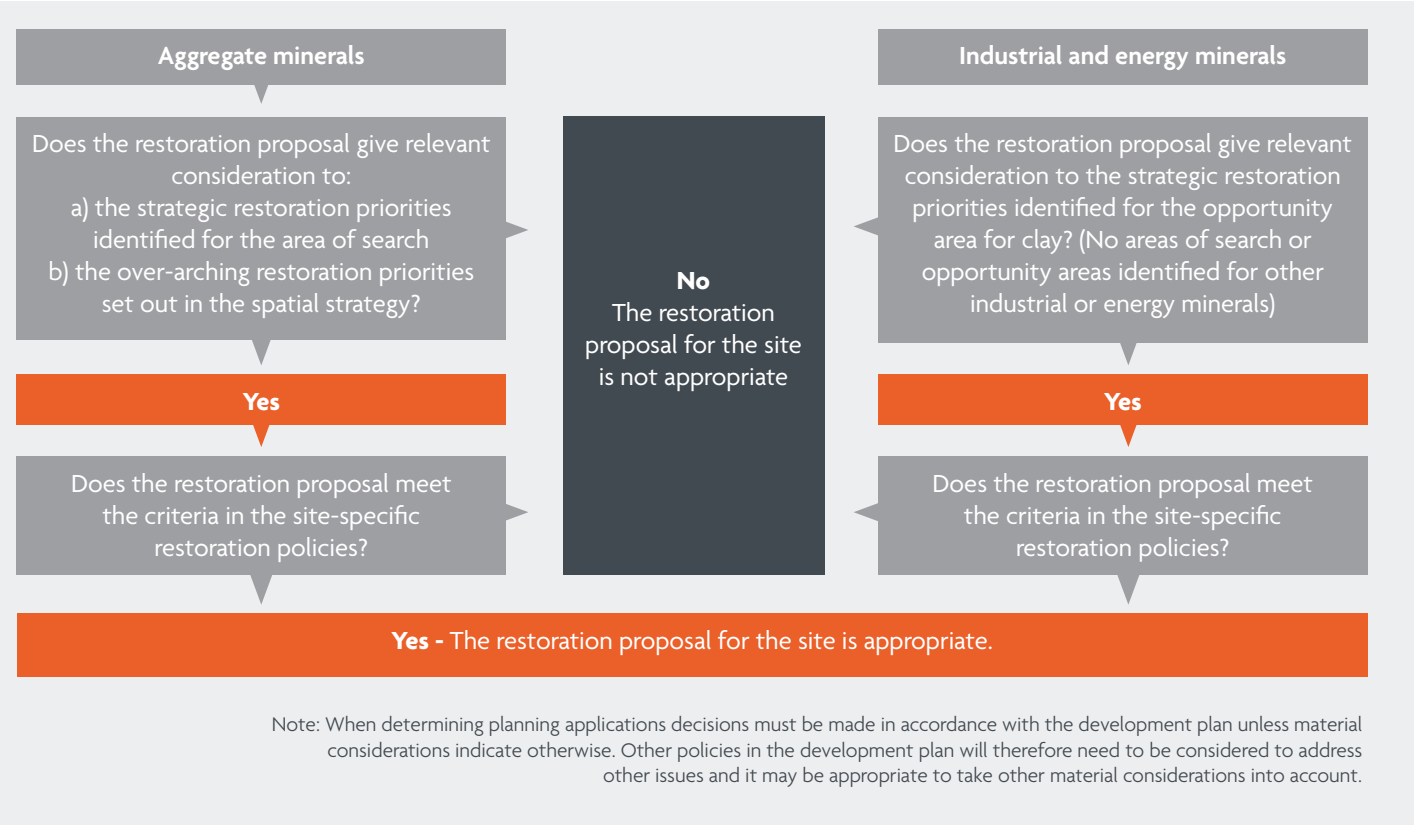
“...Mineral workings will be restored to maximise social, environmental and economic gains, through coordinated restoration that delivers networks of green infrastructure in an integrated way. These economic, social and environmental achievements will be delivered through the Spatial Strategy (Figure 7) which

drives development to the locations where the working of viable mineral resources will also enable the delivery of the strategic restoration priorities it identifies.”

12.6

To deliver this aspect of the vision we have taken the following approach to identifying how mineral workings should be restored:

Figure 23. Our broad approach to addressing the question “how will mineral workings be restored?”



12.7 The strategic restoration priorities considered for the areas of search, opportunity area for clay and spatial strategy and the issues to be addressed through the site-specific restoration policies are based on the draft vision and objectives of the Minerals Local Plan.

12.8 We intend to deliver the following objectives through policies that address how mineral workings will be restored:

Table 11. How the draft objectives will be delivered through areas of search and opportunity area restoration profiles and criteria-based restoration policies

Draft objective	How the objective will be considered through	
	area of search and opportunity area restoration profiles	criteria-based restoration policies to apply to individual proposals on a site by site basis
3. Protect and enhance Worcestershire's key economic sectors ²³ .	<ul style="list-style-type: none"> Horticulture and food production Tourism 	<ul style="list-style-type: none"> Horticulture and food production Environmental technology Tourism
4. Ensure mineral operations are resilient to and mitigate the impacts of climate change.		<ul style="list-style-type: none"> Sustainable transport Maximising use of recycled materials and minimisation of waste Design of development Flood risk Subsidence and land stability
5. Utilise mineral restoration to enhance climate change resilience of the county.	<ul style="list-style-type: none"> Habitat quality and fragmentation Flood alleviation 	<ul style="list-style-type: none"> Habitat quality and fragmentation Flood alleviation Soil resources
6. Protect and enhance the natural and historic environment.	<ul style="list-style-type: none"> Water quality and quantity Geodiversity Biodiversity Landscape character International, national and local heritage assets Archaeological features 	<ul style="list-style-type: none"> Water quality and quantity Geodiversity Biodiversity Landscape character International, national and local heritage assets Archaeological features Vernacular or locally important features
7. Protect and enhance health and amenity.	<ul style="list-style-type: none"> Public rights of way Access and informal recreation 	<ul style="list-style-type: none"> Public rights of way Access and informal recreation
8. Involve all those affected as openly and effectively as possible		<ul style="list-style-type: none"> Pre-application discussion with communities and other stakeholders Community liaison groups

²³ Worcestershire's key sectors are outlined in the Worcestershire Local Enterprise Partnership's Business Plan 2012 "The Outlook is Bright in Worcestershire".



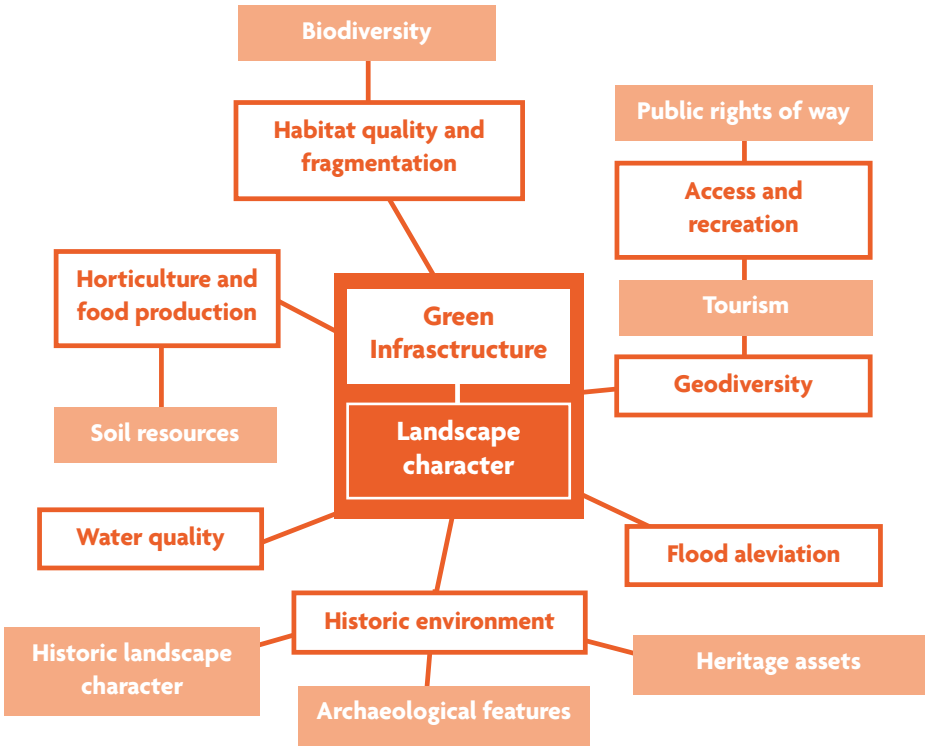
Fish Hill Quarry

High-level strategic restoration priorities for the areas of search, opportunity area and Spatial Strategy

12.9 The draft vision and the draft objectives of the Minerals Local Plan and the relevant issues they should address have been used to identify eight high-level strategic restoration priorities (shown in bold on Figure 24) and several relevant issues (shown in the shaded boxes) to be considered for each area of search, the opportunity area for clay and in developing the restoration priorities in the Spatial Strategy.

12.10 Profiles for each area of search are given in **Appendix 2** and a profile for the opportunity area for clay is given in **Appendix 3** of the main consultation document.

Figure 24. High-level strategic restoration priorities



A summary of the priority levels given to the high-level strategic priorities in each area of search is set out in Table 12 and maps showing the distribution of these priorities are given in **Appendix 4** of the main consultation document.

Table 12. Summary of the level of priority to be given to high-level restoration priorities in each area of search and the opportunity area for clay

Area of Search	Flood alleviation	Habitat quality and fragmentation	Water quality	Geodiversity	Horticulture and food production	Historic environment	Access and recreation
Terrace and glacial sand and gravel							
Avon Corridor: Central	2	2	1	-	1	2	2
Avon Corridor: East	2	2	1	-	2	2	2
Avon Corridor: Lenches	2	1	1	-	2	3	2
Avon Corridor: West	2	2	1	3	1	1	2
Bow Brook to Wadborough	2	1	2	-	2	2	2
Carrant Brook Corridor	2	2	2	1	1	1	2
Lower Severn Corridor: Central	3	1	2	1	1	1	1
Lower Severn Corridor: North	3	1	2	1	2	1	3
Lower Severn Corridor: South East	3	1	2	1	1	1	3
Lower Severn Corridor: South West	3	1	1	1	2	1	3
Upper Severn	2	1	2	1	2	1	1
Solid sand							
Junction 4a: Central	1	1	2	3	3	1	1
Junction 4a: North	1	1	2	-	2	1	2
Junction 4a: South	1	1	2	2	2	1	1
Stour Corridor Sandstone: Central	1	2	1	3	2	1	3
Stour Corridor Sandstone: South	1	1	1	1	2	1	3
Stour Corridor Sandstone: West	1	1	1	1	3	1	1
Crushed rock							
Bredon Hill	2	1	-	1	-	1	2
Malvern Hills	2	1	-	1	-	1	3
Clay							
Opportunity area for clay	1	2	1	1	3	1	1

Key to priority levels:

- 1 = Determining factor
- 2 = Significant component
- 3 = Integrate wherever possible
- = Not likely to be significant in this area of search

Site-specific restoration policies

12.11 We propose to develop site-specific location criteria policies to address the following issues:



Consultation Questions

Section 12 of the main consultation document sets out how Green Infrastructure has underpinned our proposed approach to restoration and how Green Infrastructure principles have been used as a driver for identifying where minerals should be worked and how they should be restored, how we have identified the importance of each of these issues for each area of search and the opportunity area for clay, and how this has informed the spatial strategy. It also sets out alternatives for how we could drive forward the delivery of restoration priorities through the policy framework as well as the advantages and disadvantages of the proposed alternatives.

We have also set out some cross-cutting site-specific issues which policies on the restoration of mineral working should consider and how they might be addressed.

If you would like to answer the consultation questions relating to these issues (questions 26-31), please refer to Section 12 of the main consultation document.

Fish Hill Quarry

13. How will we safeguard minerals for future use?



In the previous consultation...

- 13.1 In the previous consultation we did not ask you any questions about safeguarding minerals. This is your first chance to comment on mineral safeguarding.



Our approach now...

- 13.2 Minerals can only be worked where they are found. If built development, such as roads, housing estates or business parks, takes place on top of mineral resources this can effectively “sterilise” them by inhibiting future extraction.
- 13.3 It is national policy²⁴ that Mineral Local Plans should identify specific mineral resources of local and national importance and set out policies to ensure that they are not needlessly sterilised by non-mineral development. This is usually referred to as a “safeguarding” policy. Safeguarding a resource does not mean that it would necessarily be appropriate to work minerals in these areas, or that they would ever be worked but it allows them to be assessed and protected if this is appropriate.

- 13.4 The draft vision says:

“To enable sustainable supply in the long-term, reserves of aggregates will meet minimum landbank targets by halfway through the plan-period; nationally and locally important mineral resources will be safeguarded for future use; and the use of secondary and recycled materials will be encouraged”

- 13.5 Draft objective 2 is: Ensure the long term sustainability of supply of mineral resources.

- 13.6 In the policy framework we intend to:
- identify mineral resources of local and national importance and use these to define Mineral Safeguarding Areas;
 - develop policies to protect Mineral Safeguarding Areas from needless sterilisation;
 - set out the circumstances when non-mineral development in Mineral Safeguarding Areas might be appropriate; and
 - identify other appropriate mineral infrastructure that should be safeguarded, setting out how this should be done.

Consultation Questions

Section 13 of the main consultation document sets out our proposed approaches to defining Mineral Safeguarding Areas for each type of mineral in the county, including alternative approaches to safeguarding aggregate resources. It also sets out how we propose to ensure that mineral resources are not needlessly sterilised through the

use of Mineral Consultation Areas, the prior extraction of minerals, and how we propose to safeguard minerals infrastructure assets.

If you would like to answer the consultation questions relating to these issues (questions 32-43), please refer to Section 13 of the main consultation document.

Beckford Nature Reserve



14. Next steps



Following this consultation

- 14.1 Following this consultation we will produce a response document and publish it on our website to tell you how we intend to address the comments you make. We will take the comments into account as we develop the Minerals Local Plan.
- 14.2 We will continue to co-operate with neighbouring authorities and other bodies to ensure that we take into account developments in other areas or strategies emerging from other organisations, and to ensure that we meet the requirements of the “Duty to Cooperate”. Depending on the approach you prefer for driving the delivery of restoration priorities, we will seek commitment from partners to work together to develop policies or spatial master-plans for the areas of search.
- 14.3 We will continue to monitor changes in national policy and ensure that the Minerals Local Plan meets current requirements. We will continue to develop the Habitats Regulations Assessment and Sustainability Appraisal and take into account their findings and recommendations. We will also develop a Strategic Flood Risk Assessment to inform the development of the Minerals Local Plan.



The next consultation

- 14.4 The next consultation on the Minerals Local Plan will be a “draft plan”, which will be as close as possible to the final document which we intend to submit to the Secretary of State. It will still include consultation questions, but these will be narrower in focus to refine our ideas, as your responses to this consultation will have helped to set the direction we take. The document will include a refined vision, objectives and spatial strategy, as well as precise policy wording and supporting text for you to comment on.
- 14.5 We also intend to include a commentary on the deliverability of the plan, and set out milestones and a schedule of monitoring indicators which we will use to monitor the achievement of the plan and whether the policies are effective. We will include trigger points for when action might be needed if we are failing to meet targets or if individual policies need reviewing.

Consultation Question

Q44. Are there any other matters you think we need to address in the next consultation?

Please contact us if you need this document in another format, or if you have any questions.

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Email: **minerals@worcestershire.gov.uk**

Write to: **FREEPOST SWC-1253**
Minerals and Waste Planning Policy
Worcestershire County Council
County Hall
Worcester
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