

11 MINERALS

11.1 Introduction

- 11.1.1 This chapter sets out policies and proposals to deal with the extraction of minerals in Herefordshire. Given the nature of the mineral resource in the County, most attention is given to aggregates.
- 11.1.2 All building works and some manufacturing processes require minerals in some form. The geological presence of suitable minerals and the commercial costs of working them determine areas where suitable raw materials can be extracted. Nationally, the mineral extraction industry is of considerable economic importance. Local extraction and use of minerals reduces construction costs, increases local employment and spending power, and minimises some strategic environmental impacts such as road traffic, although incurring inevitable impacts on local environments. Mineral working, unless carefully planned and controlled, can also lead to problems for people living in and around the sites. On the positive side, mineral workings can create both ephemeral and permanent habitats, some of which are specifically encouraged in the County Biodiversity Action Plan; and significant new landscapes, some of which, notably rock faces, lakes and reed beds are locally very scarce.
- 11.1.3 For the foreseeable future, there will be a continuing need for new mineral extraction. Like other mineral planning authorities, Herefordshire Council is obliged to identify sufficient land to meet the County's share of regional production, adjusted to the local availability of different types of minerals. Policies are required to balance the need for mineral extraction with social, environmental and agricultural considerations, to guide the extraction and restoration of mineral sites, and to safeguard aggregate resources. The Plan reviews and takes forward mineral planning policies set out in the Hereford and Worcester County Structure Plan and the County of Hereford and Worcester Minerals Local Plan (MLP).
- 11.1.4 The known mineral resources in Herefordshire are relatively limited in range, primarily consisting of aggregates (materials used in construction). Known commercially exploitable minerals include sand, gravel and crushed rock, and comprise:
- silurian limestone, on the western side of the Malvern Hills and Ledbury, the Woolhope dome and in the north west of the County in the Presteigne/Aymestrey areas
 - carboniferous limestone, south west of Ross-on-Wye in the northern flanks of the Forest of Dean
 - igneous and metamorphic rocks, the Malvern Hills
 - sand and gravel, in the river valleys of the Wye, Lugg, and Arrow as river terrace deposits, and in glacial deposits to the north and west of Hereford.
- 11.1.5 Detailed geological surveys cover less than 50% of the County's land area and the information gaps are not expected to be filled within the Plan period unless commercial operators deem it worthwhile. Other minerals exist in Herefordshire but are unlikely to encourage large-scale extraction. Given the dispersed nature of workable clay deposits and the preference of the industry for large-scale working, further clay extraction is expected to be limited. 'Dimension' stone (for uses such as roofing tiles) is abundant and in demand for building restoration, but is generally worked in small quantities. Energy minerals (oil, gas and coal) also exist in the County. Limited oil exploration licences were issued in the 1990s but the explorations failed to identify commercially workable deposits. Coal deposits on the Forest of Dean fringe (Howle Hill) have been worked on a small scale in the past, but there is no current interest.
- 11.1.6 A technical background paper has been produced which forms the basis of the Plan's minerals policies and proposals. It should be read in association with the minerals chapter and other relevant sections of the UDP.

11.2 Aims and objectives

11.2.1 The policies in this chapter aim to:

- ensure the continued supply of aggregates for the local construction industry and to satisfy the wider aggregate needs arising in the region
- ensure that the environmental impact of extraction is minimised in respect of its effects on nearby communities, the landscape, nature conservation and biodiversity
- ensure that land used for mineral extraction is returned to a state suitable for a beneficial afteruse.

11.2.2 The policies have the following more specific objectives:

- to establish criteria against which proposals for aggregate extraction can be assessed
- to provide for appropriate mineral extraction to meet specialist needs
- to safeguard mineral reserves from surface development
- to encourage the use of secondary aggregates and recycling
- to provide criteria for the assessment of proposals associated with minerals exploration.

11.3 Strategy and general policy

11.3.1 Government policy for aggregates provision is essentially that an adequate and regular supply of minerals must be provided, subject to environment considerations and to the idea of sustainability. A landbank of permitted reserves of sand and gravel sufficient to meet at least 7 years production should be maintained; “more” may be needed for crushed rock. The guidelines are that provision should be made in the West Midlands for the production of 162 million tonnes (mt) of sand and gravel and 93 mt of crushed rock over the period 2001 to 2016. West Midlands Regional Aggregates Working Party (WMRAWP) policies require that appropriate provision should be made in the region for the supply of nationally and regionally significant minerals. In making this provision, account will be taken of:

- the need to secure the best balance of community, social, environmental and economic interests, consistent with the principles of sustainable development
- the need to maintain landbanks of permitted reserves of non-energy minerals
- the contribution that alternative sources of material or imports from outside the region should make
- other national and regional policies
- the provision to be made for aggregates.

11.3.2 The WMRAWP recommends the following sub-regional apportionment for Herefordshire: sand and gravel 2.8% of regional production, i.e. 0.283 mt pa for 2001 to 2016; crushed rock 7.3% of regional production, i.e. 0.424 mt pa for 2001-2016.

11.3.3 Development plans should:

- identify and safeguard mineral resources to ensure that appropriate levels of planned and future supplies can be maintained, including reviewing the allocations in Mineral Local Plans
- indicate sites/areas where future mineral working would or would not be appropriate, having regard to the environmental capacity of the area and the impact on the local community
- include policies to indicate the circumstances under which mineral working might be permitted

- identify and safeguard opportunities for the transportation of minerals by rail or water, including the maintenance of existing, and the provision of new rail facilities
- include policies to safeguard mineral resources from other forms of development
- identify and safeguard sites on the periphery of and within major urban areas for the development of integrated material supply facilities
- include policies requiring the restoration of mineral workings to contribute to local/regional biodiversity targets.

11.3.4 The WMRAWP apportionment for sand and gravel from the County is that provision should be made to supply 2.83 mt in the period 2001-2011 and for a further 1.41mt for the period to 2016. The landbank of permitted reserves of sand and gravel at 1st January 2004 was 5,950,000 tonnes, equivalent to a landbank of 21 years. This means that at 2011 the County would have a landbank of 3,969,000 tonnes, equivalent to 14 years supply. Government guidance is that a landbank equivalent to at least 7 years supply should be maintained. At the end of the Plan period there is expected to be a landbank of permitted reserves of sand and gravel sufficient to accord with Government policy. Mineral planning authorities are required to consider the productive capacity of mineral workings in order to ascertain whether the landbank is capable of ensuring an adequate and regular supply of aggregates. For reasons of confidentiality, only limited information can be made public (Table 11.1)

Table 11.1 Sand and Gravel: Productive Capacity to 2018 (2011 plus 7 years)

Site	Reserves at 31/12/03	Productive Capacity Identified in Original Application	Capacity in Years
Shobdon	Not publicly available	140,000	Expected to continue beyond 2018
Lugg Bridge	Not publicly available	200,000	To March 2005, (condition imposes date).
Wellington	Not publicly available	170,000	Expected to cease before 2011
Portway	2 million tonnes	125,000	To commence, expected to continue beyond 2011
Upper Lyde	210,000 tones	40,000	To commence
Moreton Camp	2,000,000	200,000	To commence, expected to continue beyond 2011
Total permitted reserves	5,950,000		To 2025

At the end of the Plan period (2011), Lugg Bridge, Wellington and Upper Lyde are expected to be virtually exhausted. Shobdon, Portway and Moreton Camp are likely to be operational, easily able to supply 283,000 tonnes pa between them and to provide a choice of operators. This provides an adequate productive capacity for the Plan period.

11.3.5 The WMRAWP apportionment for crushed rock from the County is that provision should be made to supply 4.24 mt in the period 2001-2011 and a further 2.12mt up to 2016. The landbank of permitted reserves of crushed rock at 2004 was 16,962,000 tonnes, equivalent to a landbank of 40 years. This means that at 2011 the County would have a landbank of permitted reserves of crushed rock of 13,990,000 tonnes, equivalent to 33 years supply and of 11,870,000 tonnes, equivalent to 28 years supply in 2016. Government guidance is that a landbank equivalent to at least 7 years extraction should be maintained but that a longer period may be necessary for crushed rock. The forecast reserve will satisfy the national requirements. The productive capacity for crushed rock in the County during the Plan period

is shown below.

11.2 Crushed Rock: Productive Capacity to 2018 (2011 plus 7 years)

Site	Reserves at 31/12/03	Productive capacity identified in original application	Capacity in years
Leinthal Earls	Not publicly available	350,000	Applicants estimate to 2028
Perton	Not publicly available	135,000	Applicants estimate to 2031
Nash Scar	Not publicly available	Not identified	Available subject to assessment of schemes required in conditions. Unlikely to be commenced for some years and then to extend far beyond Plan period.

11.3.6 By the end of the Plan period, reserves are expected to exist in all three sites. In view of these assessments the Plan does not identify further areas for sand and gravel or crushed rock extraction. At current rates of extraction the presently identified reserves are sufficient to supply an adequate landbank over the Plan period (calculated in accordance with current Government policy). Should national or regional policy guidance or the balance of local supply and demand change, this position will be reviewed. In all cases minerals development should be sustainable and environmentally acceptable both during and after extraction, balanced with the economic need for the mineral and the fact that minerals can only be worked where they exist. Although the impact of minerals extraction has the potential to be severe, many of its more damaging effects are temporary and can be mitigated by careful planning and operational management.

Part I policy

S9 Minerals

The sustainable and efficient use and management of minerals will be promoted by:

- 1. conserving minerals as far as possible, whilst ensuring an adequate supply to meet identified needs;**
- 2. aiming to maintain the County's share of the regional production of aggregates and a landbank of permitted reserves, subject to environmental considerations;**
- 3. ensuring that the impact of proposals for the winning, working, storage and transportation of minerals are kept to an acceptable minimum and can be mitigated to an acceptable extent;**
- 4. ensuring the sensitive working, reclamation and after care of sites so as to protect or enhance the quality of the environment;**
- 5. protecting areas of landscape or nature conservation value from minerals development, other than in exceptional circumstances;**
- 6. preventing the unnecessary sterilisation of mineral resources; and**
- 7. minimising the production of waste and encouraging the efficient use of minerals by promoting design solutions and construction methods which minimise mineral use, including the appropriate use of high quality materials and recycling of waste materials.**

11.4 Aggregate extraction

11.4.1 Mineral extraction is an uncertain science and significant difficulties, such as geological faults, unexpected ground or surface water characteristics or problems with the mineral itself, are sometimes only detected after permission has been granted. In the event of exceptional circumstances, notably where the permitted reserves prove incapable of meeting the requirements of Herefordshire's regional apportionment, alternative sites will be considered. In addition to areas of known deposits, there are substantial parts of the County outside the geologically mapped areas that could be potentially mineral bearing. Minerals planning applications will be considered against the guidance set out in policy M3, in addition to other relevant policies of the Plan.

Borrow pits

11.4.2 In the course of large scale civil engineering construction projects, there is often a need to develop off-site extraction for a variety of reasons. Following extraction, such excavations, known as borrow pits, are typically infilled with unusable materials from the construction project. It is often only possible to consider the suitability of areas for use as borrow pits once the nature, scale and timing of a project is known. Such uncertainties may extend into the construction phase itself; road building for instance often encounters unexpected problems. It is essential that borrow pits are controlled and subject to the same environmental considerations as other mineral workings. If permission is granted such sites will be conditioned to ensure that their reclamation is achieved as part of the main construction project, and that their after care and after use are properly controlled.

M2 Borrow pits

Proposals for the development of borrow pits will be favourably considered if:

- 1. granting planning permission would create significant environmental benefits which outweigh any material planning objections;**
- 2. the borrow pit lies on or adjacent to the proposed construction scheme; and**
- 3. the site can be restored to a state capable of beneficial afteruse without the use of imported material, other than that generated on the adjoining construction scheme.**

11.5 Other mineral policies

Criteria for new aggregate mineral workings

11.5.1 The following policy sets out the criteria that will be used to assess planning applications for mineral extraction. In applying the criteria, many considerations will fall to be taken into account. The following will be taken as primary constraints to minerals development:

- Areas of Outstanding Natural Beauty
- sites and species of international and national importance to nature conservation
- Scheduled Ancient Monuments and other sites of national or regional archaeological importance.

11.5.2 Planning applications for aggregate extraction affected by any one of the above constraints will not be permitted whilst there is still other lesser-constrained mineral bearing land elsewhere in the County, unless the specialised nature of the mineral constitutes a material consideration sufficient to override the constraints.

11.5.3 The following will be taken as secondary constraints:

- sites and species of local importance to nature conservation
- Groundwater Source Protection Zone 3 and Zones of Special Interest
- land within or abutting a conservation area.
- archaeological sites of lesser regional or local importance
- where the site does not have direct access to an 'A' or 'B' class road
- any adverse visual impact of the development on the landscape character of the area
- best and most versatile agricultural land
- ancient semi-natural woodland.

11.5.4 Other than in exceptional circumstances, planning applications for aggregate extraction affected by two or more of these secondary constraints will not be permitted unless any adverse environmental, economic or social effects can be wholly mitigated.

11.5.5 Other factors to be considered include the stability of adjoining land, any geological interest in the deposit, ground and surface water information requirements and assessments. Methods of working will also be assessed including dust and noise control issues, haul routes, and in the case of crushed rock proposals, blasting. Those preparing planning applications should take account of these criteria.

11.5.6 A particular concern arises where peat is present as surface or sub-surface deposits. Peat holds a record of past environments in the form of pollen and plant and insect remains. This record can be dated and is highly valued in the study of environmental change. Peat buried by alluvium or hill wash is particularly important because it is uncontaminated. This type of peat, found in river valleys and glacial lakes, such as at Letton, in the County, is a finite and non-renewable resource. The main threat to below ground peat is gravel extraction and drainage. Where peat deposits are identified, planning permission will be conditional on the submission of a full assessment of the archaeological and ecological importance and may lead to the retention of all or part of the peat deposit.

11.5.7 Finally, consideration should also be given to the after use of the land concerned. Minerals extraction is a temporary land use and can lead to changed landscapes, offering scope for uses such as nature conservation and recreation in the longer term after reclamation, as an alternative to a return to agriculture. Such after uses could offer significant benefits to the wider community in some locations, and should be considered at the time of making a planning application as part of the supporting information. Specific requirements in terms of reclamation are set out below (policy M7).

M3 Criteria for new aggregate mineral workings

Planning applications for aggregate extraction will only be granted in exceptional circumstances, notably where the permitted aggregate reserves in the County prove insufficient to meet the County's sub-regional apportionment. In such cases planning permission for extraction will only be granted where the site is not affected by one or more primary constraints or two or more secondary constraints unless the adverse effects on the secondary constraints can be satisfactorily mitigated, or where the specialised nature of the mineral constitutes a material consideration sufficient to override the constraints, or there is no lesser constrained minerals bearing land elsewhere in the County.

Primary Constraints

- 1. Areas of Outstanding Natural Beauty;**
- 2. sites and species of international and national importance to nature conservation;**

3. Scheduled Ancient Monuments and other sites of national or regional archaeological importance.

Secondary Constraints

1. sites and species of local importance to nature conservation;
2. Groundwater Source Protection Zone 3 and Zones of Special Interest;
3. Land within or abutting a conservation area;
4. archaeological sites of lesser regional or local importance;
5. where the site does not have direct access to an 'A' or 'B' class road;
6. the development would have an adverse visual impact on the landscape character of the area;
7. best and most versatile agricultural land; and
8. ancient semi-natural woodland.

Where a proposal satisfies the above constraints process, applicants will also be required to submit evidence to demonstrate the extent to which the development impacts on:

- people and local communities;
- natural and cultural assets;
- the highway network and other public rights of way;
- land stability;
- public open space, and
- air, soil and water resources.

Unless such impacts can be satisfactorily mitigated, planning permission will be refused.

Non-aggregate building stone and small scale clay production

- 11.5.8 The main source of non-aggregate minerals, building or dimension stone, is both locally abundant and aesthetically important for the conservation of historic structures. Traditionally, sources of stone were often very local and chosen for particular qualities, such as ease of sawing or carving. For conservation reasons it is highly desirable to use the same or very similar sources of material when repairing or matching existing stone. Reserves of such material may be very localised, particularly if special qualities such as colour or ease of lamination are sought. The demand for building stone generally is high and has often been supplied in the past by stripping other buildings; this can be undesirable. It is very difficult however to predict exactly what kind and volume of stone is needed. The need for further sources must be acknowledged and it is Government policy that small operations may be needed in very specific locations.
- 11.5.9 There is a strong case for encouraging the development of small scale dimension stone quarries and clay pits in order to maintain local distinctiveness. Appropriate materials are, however, very dependent on the nature of local geology and the workings are potentially injurious to local amenities.
- 11.5.10 Material considerations could include whether a need for the material can be demonstrated, whether the scale of the site is sufficiently small, e.g. 0.1 of a hectare in size, to have a limited environmental effect, whether the methods of working would not adversely affect local amenities, notably from noise or other nuisance, or whether the traffic generated would be intrusive, and if these matters can be satisfactorily controlled. An important related issue could also be whether sufficient space exists to store soils, over-burden, or waste materials and if the site can be restored to an environmentally acceptable landform on completion. Because of the likely possibility that exposed faces will be left, the final landform in such cases may need to be directed towards a specifically ecological or geological purpose and permission may be conditional on the achievement of such purposes.

M4 Non-aggregate building stone and small scale clay production

Proposals for the extraction of non-aggregate building stone or clay will be permitted where:

- 1. the need for the material for the preservation of local distinctiveness, particularly features of local historic or architectural interest, listed and vernacular buildings or archaeological sites, outweighs any material harm extraction might cause to matters of acknowledged importance;**
- 2. the proposed workings are small scale; and**
- 3. the proposal is limited to the production of non-aggregate materials.**

Safeguarding mineral reserves

11.5.11 The long term requirement for aggregate and other mineral resources to be worked is recognised, with a concomitant need to safeguard deposits which are or could be important in the future from unnecessary sterilisation by surface development. In some circumstances a buffer strip at least 200 metres wide around a known and significant mineral reserve may need to be protected from development. Where the mineral reserve is deemed to be sufficiently important, permission for surface development may be refused. The policy also seeks to ensure that permission is not obtained for extraction where it would not usually be given by requiring that the need for the mineral to be extracted must significantly outweigh other material considerations. In all such cases the applicant will have to demonstrate that after extraction the site could be reclaimed to a high standard. Mapped mineral deposits are shown on the proposals map.

M5 Safeguarding mineral reserves

Proposals which could sterilise potential future mineral workings will be resisted in order to safeguard identified mineral resources. Where such development is proposed, the applicant may be required:

- 1. to undertake a geological assessment of the site; and/or**
- 2. to protect the minerals in question; and/or**
- 3. to extract all or part of the mineral reserves as part of or before the other development is permitted.**

In such cases mineral extraction will only be required when the need for the other development significantly outweighs the harm which extraction might cause to other matters of acknowledged importance.

Secondary aggregates and recycling

11.5.12 Secondary aggregates and recycled materials have a useful role to play in overall aggregate supply, serving to reduce the call on primary aggregate production, the take of greenfield land and the volumes of waste which would otherwise arise. Such alternatives to primary aggregates include construction and demolition wastes and asphalt road planings, as well as other sources away from the County such as colliery spoil and china clay waste. The constraints to their use include the environmental implications of working and recycling operations, cost of transportation to areas of demand, and variable quality. Government guidance is to encourage their use in construction instead of primary aggregates wherever

this is technically, economically and environmentally acceptable. Environmental factors will include noise and dust arising from their working, transport and stockpiling.

M6 Secondary aggregates and recycling

The use of alternatives to naturally occurring aggregates or other minerals, including demolition and construction wastes, will be encouraged. Proposals for the production, processing, treatment and storage of such alternatives will be permitted as follows:

- 1. for temporary periods where the development is ancillary to principal activities at a site, including the use of demolition waste arising from the redevelopment of previously developed land and buildings, or longer periods when the development will be limited to the life of a mineral working; or**
- 2. permanently at a properly designed and permitted waste transfer station.**

In all cases proposals must not have an unacceptably adverse effect on the environment or residential amenity.

Reclamation of mineral workings

11.5.13 Mineral working has the potential to be both unsustainable and disruptive and can affect both the immediate and wider environment. It is essential that its long-term effects be minimised. The potential for significant environmental and ecological gain, particularly in terms of the new landscapes and habitats, which can be created is, however, considerable. Planning permission will be conditioned or otherwise controlled to ensure that such gains can be secured. In particular, reclamation schemes will be required to be sufficiently detailed to comply with MPG7 and to demonstrate that proposals are realistic to achieve the specified aims. For example, proposals for reclamation to agriculture will need to specify reclamation to as high a quality of agricultural land classification as possible and to show how this is to be achieved. In the same way, proposals for amenity or nature conservation use will need to specify the uses, habitats to be created and species to be fostered as appropriate, and how these will be achieved and maintained. These proposals will also need to include management plans to show how these will be achieved. In all cases a habitat creation masterplan will be necessary to accord with policy NC8 and should:

- specify the Biodiversity Action Plan (BAP) species or groups of species which are to be fostered and the provision to be made for them (e.g. winter feeding habitat for teal, nectar sources for butterflies, logpiles for reptiles etc) and to identify other non priority species which might benefit and any special provision necessary for them
- include brief quantified descriptions and plans of the habitat required and relevant issues addressed e.g. weather conditions (especially aspect and exposure), land or water form, water depths including seasonal variation, water table levels, drainage, sub-soil and top-soil requirements, planting composition, vegetation structure and any other relevant factors
- incorporate aftercare and long term management proposals.

11.5.14 The aim of the habitat creation masterplan must be (a) to achieve the greatest wildlife return for the proposed reclamation, (b) to clarify the management implications of the aims, (c) a means of objectively monitoring the end product against the original proposals, and (d) to clarify management issues for the future. When mineral extraction sites can be conveniently divided into phases, extraction will be made progressively dependant on the satisfactory reclamation of phases worked out earlier, unless this is physically impossible because of the nature of the site or method of working.

M7 Reclamation of mineral workings

Mineral extraction proposals will only be permitted where the proposed site can be restored to an agreed and beneficial after use. Permission will only be granted where the proposed reclamation would be:

- 1. in scale and character with the adjoining landscape and would make a positive contribution to meeting BAP targets;**
- 2. capable of being completed within a reasonable timescale; and**
- 3. sufficiently detailed to achieve the proposed after use and its after care for an appropriate period. Proposals for the long term management of the site may also be necessary.**

Malvern Hills

11.5.15 The protection of the Malvern Hills has been an important consideration for very many years. Historic quarry workings have caused considerable damage to the appearance of the Malvern Hills and the limestone ridges adjoining them, and any proposals for mineral working in these areas will continue to be strongly opposed in order to protect the character and appearance of the Hills. The only exception to this policy will be applications for the small scale extraction of building stone which are specifically intended to meet needs arising from the repair of historic and vernacular buildings and features in the Malvern/Colwall locality, and which cannot be met via recycled stone. These will be considered under policy M4.

M8 Malvern Hills

No further planning permissions will be granted for the extraction for aggregate purposes of granite from the Malvern Hills.

Minerals exploration

11.5.16 Given the restricted coverage of geological mapping in the County, it is recognised that there may be a commercial interest in undertaking further geological exploration for surface and sub-surface minerals. Much can be undertaken within permitted development rights under Part 22 of the Town and Country Planning (General Permitted Development) Order 1995. However, situations may arise where the extent of such activities exceed these rights and in these cases policy M9 will apply.

11.5.17 There are currently no oil or gas exploration licences extant in the County. Should additional licences be granted in the future, development proposals arising will be considered under policy M10.

M9 Minerals exploration

Mineral exploration which is not permitted by Part 22 of the Town and Country Planning (General Permitted Development) Order 1995 (or any order revoking and re-enacting that Order, with or without modification) will only be permitted where it does not have an unacceptably adverse effect on the environment or local amenities. Where planning permission is granted conditions will be imposed to control the development in the interests of amenity and to ensure the reinstatement of the site to a state capable of beneficial after use, including the removal of all temporary and permanent works associated with the exploration.

M10 Oil and gas exploration and development

Proposals for development associated with oil and gas exploration will only be permitted where:

- 1. the proposed location is shown to be the most suitable having regard to geological, technical and environmental considerations in accordance with policy M3;**
- 2. there are satisfactory arrangements for the disposal of waste materials and the avoidance of pollution;**
- 3. the proposals are limited to a restricted and specified time period; and**
- 4. there is a satisfactory scheme for landscaping and reclamation.**

Proposals for the further evaluation and development of oil or gas fields will be expected to conform to all of the above and to demonstrate the development is part of a planned programme for the whole oil or gas field.