DERBY AND DERBYSHIRE

MINERALS LOCAL PLAN

Adopted Edition

April 2000

Incorporating First Alteration: Chapter 13-Coal

November 2002

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Foreword

Purpose of the Plan
This Plan sets out detailed policies and proposals for mineral working in Derbyshire (outside the Peak National Park). Its aim is to provide for the future supply of minerals, whilst ensuring that the environment is satisfactorily protected. The plan indicates those areas where provision will be made for mineral working and areas where working will be restricted. It sets out the detailed criteria which will be applied to applications for mineral working, and the requirements for restoration and aftercare.

Adopted Plan
Initially, preparation of the Minerals Local Plan was undertaken solely by Derbyshire County Council. However, following Local Government re-organisation in 1997 and the establishment of Derby City as a separate Unitary Authority with responsibility for minerals planning, the City and County Councils decided to continue the preparation of the Plan on a joint basis. Consequently the title of the Plan was changed to reflect its joint status (and renamed the Derby and Derbyshire Minerals Local Plan.)

The Plan was first published in draft form for public comment in September 1994. A revised Plan was placed formally "on deposit" in February 1996. A public local inquiry into objections to the Plan was held between January and April 1997. Proposed modifications were published in October 1998 and January 2000. The City and County Councils adopted the Plan on 5 April 2000.

First Alteration
An Alteration to the adopted Plan was prepared to take into account revised Government guidance (MPG3) on Coal Mining and Colliery Spoil Disposal which was published in 1999, too late for its implications to be incorporated in the adopted Plan.

A Consultation Paper covering key issues to be included in the Alteration was published in June 2000. An Initial Deposit Edition of the proposed Alteration was published for public consultation in January 2001, with a Revised Deposit Edition published in September of the same year. A one-day Public Local Inquiry into unresolved objections to the Alteration took place on 14 May 2002, following which the Inspector's Report was published in July 2002. The City and County Councils adopted the Alteration on 11 November 2002.

This Edition
This edition of the Plan is the adopted version incorporating the Alteration. In effect Chapter 13 - Coal, of the adopted Plan, is completely replaced, apart from paragraphs 13.51 to 13.57 (13.26 to 13.32 of the adopted Plan) on Opencast Constraint Areas, which did not form part of the Alteration. Additionally, the Environmental Appraisal for the Alteration has been incorporated in Chapter 16.

Further information
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Additional copies of this Plan can be obtained, at a price of £25 (plus postage and packing), from Tracey Frost at Derbyshire County Council. Phone 01629 580000 ext. 7590 or email tracey.frost@derbyshire.gov.uk

Please contact us if you have any difficulty in reading this Plan. It can be made available in alterative formats, including large print, audio and braille, by contacting Annie Simpson at Derbyshire County Council. Phone 01629 580000 ext. 7110 or email annie.simpson@derbyshire.gov.uk

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Chapter 1 - The Minerals Local Plan

The Purpose of the Plan

1.1 The aim of the Minerals Local Plan is to reconcile mineral working with other competing interests as far as possible. It aims to strike the best balance between the need for minerals and the need to protect the environment and safeguard resources, and as far as possible, to put into practice the principles of sustainability.

1.2 More specifically the plan aims:

- to identify sufficient land to enable Derbyshire to make an appropriate contribution to the likely local, regional and national demand for minerals to 2006, and beyond where appropriate
- to conserve and safeguard minerals as far as possible; to encourage the efficient use of materials, including the appropriate use of high quality materials and, whenever possible, the use of secondary and recycled materials; and to minimise the production of waste
- to protect local communities, natural resources and features of landscape, wildlife and heritage importance from unacceptable damage or disturbance as a result of the working and transporting of minerals
- to provide a detailed policy framework for assessing and controlling mineral working and ancillary operations, which ensures their impact on the environment is acceptable
- to ensure that land used for mineral working is reclaimed at the earliest opportunity, and is restored to acceptable after-uses.

1.3 The plan is needed to provide an up-to-date development plan framework for the control of mineral working, as required by the Town and Country Planning Act 1990, as amended by the Planning and Compensation Act 1991. Section 54A of the Act requires that planning proposals be determined in accordance with the development plan, including the provisions of any Minerals Local Plan, unless material considerations indicate otherwise. Within the broad policy context provided by the Structure Plan, the plan provides the basis for the Mineral Planning Authority to make decisions on planning applications. It also provides the minerals industry, other public bodies and interest groups, and the public at large with a clear statement of the future scale and pattern of mineral working in the county.

The Context of the Plan

1.4 In preparing the Minerals Plan the County and City Councils have had regard to the established framework of policy and advice on minerals matters at the national, regional and local level.

1.5 Government policy and advice on minerals matters is contained in a number of documents, notably "This Common Inheritance" (1990), which sets out a broad

environmental strategy for Britain, and the UK Strategy for Sustainable Development (1994). More detailed government advice is provided in the form of Minerals Planning Guidance Notes (MPGs) and general Planning Policy Guidance notes (PPGs). These form an important basis for the local plan, and provide statements of Government policy which are material considerations in making planning decisions. In particular, MPG1 offers general guidance on minerals local plans; MPG3 provides advice on Coal Mining; and MPG6 sets out national guidelines for the production of construction aggregates, based in part on the work of the Regional Aggregates Working Parties - this establishes the broad scale of sand and gravel and hard rock aggregates production for the East Midlands Region for the period to 2006.

1.6 As indicated in paragraph 1.3, all planning proposals are required to be determined in accordance with the Development Plan which, in Derbyshire, comprises the Structure Plan and Local Plans. Structure plans provide the broad policy framework for local plan preparation and development control, whilst local plans set out detailed policies and specific proposals for the development and use of land. Local plans, including minerals local plans, are required to be in general conformity with the relevant structure plan. The Derbyshire Structure Plan (1990) covers the period up to 2001 has now been jointly reviewed by the County and City Councils. The revised Structure Plan, adopted in 2001, covers the period up to 2011.

1.7 From the 1st April, 1996, the responsibility for the control of landfill sites, some of which have implications for mineral working, was transferred from local authorities. The Waste Collection and Disposal Authorities in Derbyshire have established a joint strategic process to provide a framework for the management of waste in Derbyshire. Within this context a Waste Local Plan, to be jointly prepared by the City and County Councils, will set out detailed policies and proposals covering the land-use aspects of waste management. City and district wide local plans are also being prepared by Derby City and the District Councils in Derbyshire and these set out detailed planning policies for non-minerals issues such as housing and industrial development, shopping and recreation.

1.8 Other agencies, including the Health and Safety Executive and the District Environmental Health Authorities, also have a degree of control of mineral working over such aspects as blasting and safety issues, the control of noise and dust, air pollution and smoke emissions.

The Form and Content of the Plan

1.9 The City Council is the Mineral Planning Authority for the area within the City boundary whereas the County Council is the Mineral Planning Authority with sole responsibility for the remaining part of Derbyshire (outside the Peak National Park). The Minerals Local Plan is a statutory Local Plan prepared in accordance with the Town and Country Planning Act 1990 (as amended) and appropriate government guidance, including PPG12. The form and content of the plan follow the Town and County Planning (Development Plan) Regulations 1991.

1.10 The plan area covers the whole of the City of Derby and the County of Derbyshire outside the Peak National Park as shown on the Proposals Map. (The Peak National

Park is a separate Minerals Planning Authority.) The plan covers the period to the end of 2006.

1.11 The plan sets out detailed **Policies** for the control of mineral working, which apply throughout the plan area and specific **Proposals** for the development or protection of particular areas of land. These policies and proposals are set out in **Bold** type. They are accompanied by a **Proposals Map,** which includes **Inset Maps** showing proposals for particular areas in greater detail.

1.12 Following the first two introductory chapters in Part I, the plan is divided into four main sections. Part II deals in detail with the issues to be taken into account when considering all proposals for mineral working on a day-to-day basis and sets out the policies which will apply. Parts III and IV deal with aggregate minerals and non-aggregate minerals, respectively. They set out the general principles and policies that need to be applied to achieve the best balance between the need for each mineral and the need to protect the environment, and make proposals for new working where appropriate. Part V deals with the circumstances in which the plan itself will be reviewed in future and provides an environmental appraisal of the policies and proposals of the plan. The environmental appraisal of the Alteration to the adopted Plan has also been included within this Part.

1.13 It must be emphasised that, to give a complete picture of the policies and proposals affecting any one area or type of operation, the plan must be read as a whole, because all policies will apply so far as they are relevant. Proposals for mineral development may therefore be affected by policies in different chapters of this plan and the Mineral Planning Authority will have regard to all relevant policies and related considerations when determining planning applications. It should also be noted that development proposals may be affected by the policies of other plans including the Structure Plan and other Local Plans.

Chapter 2 - Mineral Working in Derbyshire

The Significance of the Minerals Industry

2.1 Minerals are important natural resources which make an essential contribution to the nation's prosperity and quality of life. Minerals are needed for construction projects (new homes, roads, workshops, schools), for power generation (coal, oil and gas), and as basic raw materials for industry (in the manufacture of iron and steel, chemicals and cement). Less obviously, minerals play an important role in agriculture, in foodstuffs, in the manufacture of glass, ceramics, paint and paper, in North Sea oil exploration, and in the purification of sugar, water and power station exhaust gases. The minerals industry is an important source of employment both directly and indirectly (with around 8,000 jobs in minerals and related industries in Derbyshire) and makes a substantial contribution to the local economy.

Derbyshire's Mineral Resources

2.2 Derbyshire is one of the richest counties in terms of its range and variety of mineral resources which include limestone, sandstone, sand and gravel, coal and vein minerals, as shown on Map 1. The county has for many years been one of the country's largest mineral producers.

Limestone and Dolomite

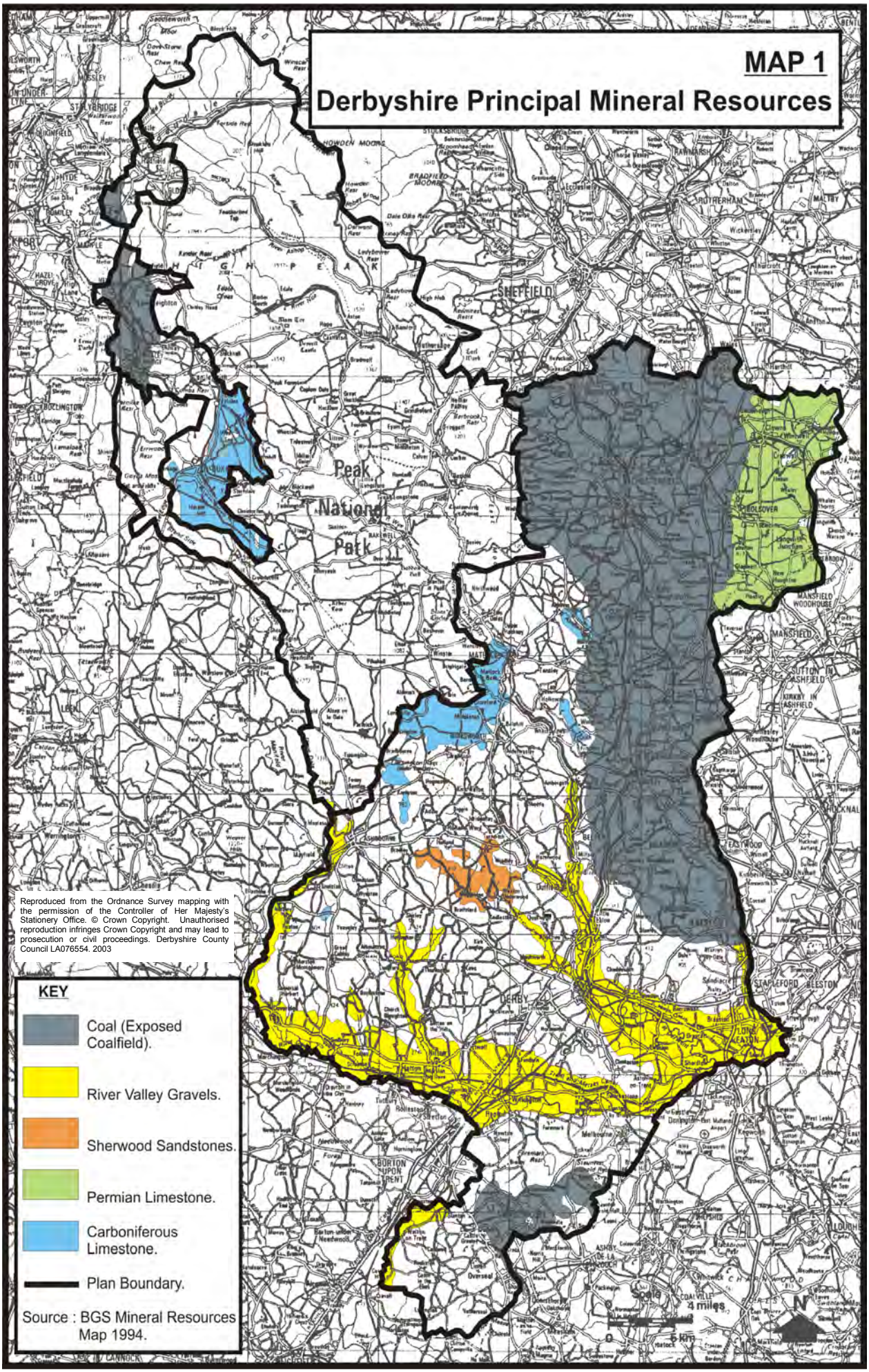
2.3 Derbyshire and the Peak National Park together produce more limestone than any County in the UK from some of the largest quarries in Europe. The combined production from the 15 Derbyshire quarries outside the National Park was about 12 million tonnes in 1997. Workings are mainly concentrated in the Carboniferous Limestone around Buxton and Wirksworth with other sites in the Permian (Magnesian) Limestone in the north east of the county. Limestone is used for both construction and industrial purposes and a large proportion is exported to neighbouring areas, mainly to Greater Manchester and Cheshire.

Sand and Gravel

2.4 Sand and gravel working in Derbyshire is concentrated in the river valley deposits in the Trent Valley, and the adjoining Lower Derwent and Dove valleys, to the south of Derby. A further small group of workings occur in the Sherwood Sandstones around Mercaston. In 1997, production of sand and gravel totalled about 1.6 million tonnes, most of which was used locally in the construction industry.

Coal

2.5 Derbyshire's deep-mined coal industry has undergone a radical contraction in recent years. In 1983 Derbyshire contained a dozen working collieries producing some 10 million tonnes of coal each year. Ten years later the county's long history of large scale coal production ended with the closure of Markham Colliery in June 1993. The opencast coal industry continues to be significant in the exposed coalfield in the east of the county, with an annual output of between 1 and 2 million tonnes in recent years, and there is a small output of coal produced by one or two drift mines.


MAP 1
Derbyshire Principal Mineral Resources
Peak National Park
SHEFFIELD
ROTHERHAM
DERBY
MANSFIELD
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KEY
Coal (Exposed Coalfield).
River Valley Gravels.
Sherwood Sandstones.
Permian Limestone.
Carboniferous Limestone.
Plan Boundary.
Source : BGS Mineral Resources Map 1994.
Scale
4 miles
5 Kms

Other Minerals

2.6 On a more limited scale a variety of other minerals are exploited within the county. Clay and shale have been worked at a number of locations to produce bricks, pottery, stoneware and refractory materials. Vein minerals such as fluorspar and related minerals are worked on a limited basis on the fringes of the National Park. Sandstone and igneous rock are worked on a small scale as a source of building stone and for construction materials. The county also contains deposits of gannister, gypsum and silica sand, although active working of these has virtually ceased. In recent years exploration has taken place for oil and gas but so far no commercially important reserves have been identified. Finally, Derbyshire produces a number of 'secondary' materials such as minestone, blast furnace slag, and ashes from power stations which have the potential to be used as substitutes for primary mineral resources in certain circumstances.

Impact of Mineral Working

2.7 Whilst the provision of minerals is essential to meet national and local needs, their working almost invariably leads to some adverse effects on the environment. The geology which gave rise to the more valuable mineral resources also produced some of the county's finest scenery, as in the limestone areas bordering the Peak National Park; it also produced some of the county's most productive agricultural land, with a concentration of important archaeological sites, as in the Trent Valley gravels. Mineral working can provide opportunities for environmental benefits including landscape enhancement and the creation of sites of nature conservation importance, but they also have the potential to destroy features of conservation, wildlife or heritage significance which have evolved, sometimes over many centuries, and which may be irreplaceable.

2.8 Mineral workings are transient activities but some operations may continue for many years and may have a significant impact on the living conditions of people nearby, particularly where the local road system is unsuitable for heavy goods vehicles. There is therefore potentially a conflict between the need to make more land available for mineral production, the need to protect the best of the county's natural resources and heritage, and the need to protect local communities from the traffic, noise, dust and other problems which are often associated with mineral working.

2.9 In recent years, increasing emphasis has been given to the concern that minerals are a finite resource and that their working should be based on the principles of sustainable development i.e. "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland Commission, 1987). This concern is reflected in Government advice and means making the best and most efficient use of all available resources, and ensuring that the overall quality of the environment is preserved or improved over time.

PART II—GENERAL POLICIES

Chapter 3 - Controlling Mineral Development

Introduction

3.1 This chapter deals with the way in which all proposals for mineral development should be handled. Mineral Planning Authorities are required to prepare development plans for minerals which set out the policies and proposals against which planning applications are determined. MPG1 advises that these plans should provide a clear guide to mineral operators and the public where mineral extraction is likely, in principle, to be acceptable and where it will not be acceptable. Acceptability in principle will be subject to meeting development control criteria, as well as safeguarding sensitive environmental features and providing environmental and resource protection policies. MPG1 indicates that in decision making all the costs and benefits of a development, including the environmental costs and benefits, need to be taken into account.

3.2 There is increasing concern that minerals are a finite resource and that their future development should, as far as possible, be "sustainable". The UK Strategy for Sustainable Development (1994) states that "the issue is one of balance; that is, how to balance society's needs for minerals and mineral based products to contribute to economic growth, ... against the need to conserve resources and protect the environment". How this may be achieved will depend upon almost every aspect of the way in which we live, and the consequences of our way of life for the consumption and use of raw materials. Development plans clearly have no influence over many of these aspects, but planning authorities have a responsibility to work towards the goal of sustainability and to have due regard to Government guidance. Since the publication of this strategy, in January 1994, all mineral planning guidance has emphasised the over-arching importance of sustainability principles, stressing the need to balance economic growth with care for the environment. MPG1 defines the objectives of sustainable development for minerals planning as:

- to conserve minerals as far as possible, whilst ensuring an adequate supply to meet needs
- to ensure that the environmental impacts caused by mineral operations and the transport of minerals are kept, as far as possible, to an acceptable minimum
- to minimise production of waste and to encourage efficient use of materials, including appropriate use of high quality materials, and recycling of wastes
- to encourage sensitive working, restoration and after-care practices so as to preserve or enhance the overall quality of the environment
- to protect areas of designated landscape or nature conservation value from development, other than in exceptional circumstances and where it has been demonstrated that development is in the public interest, and
- to prevent the unnecessary sterilisation of mineral resources.

3.3 It should be emphasised that the policies in this chapter apply generally to all proposals

for mineral development; and that the first two policies (MP1 and MP2 which follow) together give effect to the requirement of balance between concern to protect the environment and the need for the mineral development.

The Environmental Impact of Mineral Development

3.4 Whilst mineral working will be required to meet national and local needs, it can have a considerable impact on the environment. Mineral working in Derbyshire may affect the county's natural resources including areas of fine landscape, areas of agricultural land, and important water resources. It may affect features of heritage or nature conservation importance such as archaeological sites or woodlands which have evolved over many centuries. It could also have a significant impact on individual communities, bringing problems of noise, dust, and heavy lorry traffic. PPG7 establishes, not only the need to protect designated areas, but also that it is the Government's policy that the countryside should be safeguarded for its own sake, and that non renewable and natural resources should be afforded protection.

3.5 PPG12 states that development plans should take environmental considerations comprehensively and consistently into account, and stresses the importance which people place on environmental issues such as clean air and water, nature and landscape conservation, and the built heritage. As emphasised in paragraph 3.3, the first two policies of the plan give effect to the requirement of balance between concern to protect the environment and the need for the development. Policy MP2 provides the context for considering the need for the development in circumstances where there is environmental harm, and it is, therefore, necessary to establish, in Policy MP1, the environmental criteria against which proposals will be considered.

3.6 Proposals for mineral working will therefore be examined in detail to determine their likely environmental impact including such matters as their effect on nearby uses of land by way of noise, dust, or vibration, their effect on farming interests, their visual impact, their effect on woodlands, areas of attractive and valued landscape, and areas of nature conservation importance, their effect on areas of scientific, conservation and heritage significance, their effect on recreational uses and activities, the impact of associated lorry traffic, and their effect on the quality and quantity of water resources. Proposals should be permitted only where these effects are acceptable. Where appropriate, an Environmental Impact Assessment will be sought (see Chapter 4). It should be noted that some proposals may involve associated, non-mineral development which, although they may be determined by other procedures, would be carried out as a consequence of permitting the proposal e.g. the decontamination of land controlled by public health and pollution control regimes. It is important, therefore, that the effects of this associated development are considered as an indirect effect of the mineral development and are fully assessed when considering the acceptability of proposals under Policy MP1.

Policy MP1 - The Environmental Impact of Mineral Development

3.7 Proposals for mineral development will be permitted provided that their impact on the environment is acceptable having regard to:

1) the effect on local communities and neighbouring land uses by reason of noise, dust, vibration or other pollution or disturbance

2) the effect on agricultural interests including the extent and quality of agricultural land loss and the feasibility of achieving a high standard of restoration

3) the visual effect of the proposals

4) the effect on the character and quality of the landscape including the effects on trees, hedgerows woodland and topographical features

5) the effect on sites and features of wildlife or geological/ geomorphological importance

6) the effect on sites of archaeological importance and their settings

7) the effect on the built environment and especially features of architectural, historical or heritage importance, and their settings

8) the transport implications, and in particular the scale and nature of traffic likely to be generated, and its implications for site access, highway capacity, road safety, and the environment generally

9) the effect on public rights of way and areas of importance for formal or informal recreation and

10) the effect on the quality and quantity of water resources including the ecology of water courses and wetlands, and on water supply and flood protection interests.

The Need for Mineral Development

3.8 Mineral development proposals almost inevitably lead to some adverse effects on the environment. In considering applications for mineral development, where this is the case, the Mineral Planning Authority will therefore require to be satisfied that a need exists for the mineral development, which is sufficient to outweigh its impact on the environment and, where necessary, that the mineral should be worked in the particular location proposed. In assessing whether this need is sufficient, the Mineral Planning Authority will take into account, as appropriate, national, regional and local demand for the mineral, the nature and extent of the deposit, the scale and nature of permitted reserves, any suitable alternative sources of supply of materials in Derbyshire and elsewhere, including those which might have advantages for sustainability, and the

implications for employment and investment and for providing other relevant benefits to the community.

3.9 The way in which need considerations are taken into account in detail varies according to the type of mineral concerned, and other Chapters (8-14) make provision for meeting the needs for different types of minerals. For aggregate minerals there is a national and regional framework for making adequate provision (Chapters 8-11). For energy minerals, government guidance adopts a different approach which gives special emphasis to their importance as a national resource and to the opportunities for providing relevant benefits to the community (see Chapter 13 and 14). Where a site has been allocated for future mineral extraction in this plan, the likely need for that mineral will already have been accepted in principle in the justification for the proposal. However, the Authority will wish to be satisfied that an individual proposal will, in practice, meet the need that is identified in the plan and therefore applications should be accompanied by appropriate supporting information.

Policy MP2 - The Need for Mineral Development

3.10 Proposals for mineral development will be permitted provided that, where there is an adverse environmental impact, there is sufficient need for the development, taking into account, where appropriate:

1) the local, regional and national demand for the mineral

2) the scale and nature of existing permitted reserves

3) the availability of alternative sources of supply or alternative materials

4) the nature and extent of the mineral deposit, and the necessity for the mineral to be worked in that location, and

5) the implications for employment, investment and the economy, and for providing other relevant benefits to the community.

Measures to Reduce Environmental Impact

3.11 It is an aim of sustainable development to preserve or enhance the quality of the environment and to encourage sensitive working practices. Proposals for mineral working will therefore be allowed only where the adverse effects on the environment can be avoided or reduced to an acceptable level. This assessment will be made under the following policy having regard to all the considerations listed in Policy MP1.

3.12 It may for example be possible to moderate the environmental impact of a proposal by adjustments to the area to be worked, by careful attention to landscaping and screening, by measures to reduce noise and dust problems, and by carrying out local highway and access improvements. The implementation of these measures can be

achieved either by conditions attached to planning permissions or by legal agreement (see Chapter 4).

3.13 It will be important to bear in mind the temporary and relatively short-term nature of some (but not all) mineral workings, and the potential for satisfactory reclamation and after-use following working. It will be important not only to examine how the impact of the development can be mitigated, but also how far features which are affected can be reinstated or replaced following working e.g. through new tree and woodland planting, the translocation of wildlife habitats, or the provision of footpaths. It will be especially important to assess how far proposals can contribute to the objectives of sustainable development by maximising the efficient use of materials and minimising the production of waste. This will be assessed by examining factors such as the nature of the resource in relation to the proposed outputs to various markets and the proposed scheme of working. Finally, it will be important to consider any wider benefits to be gained from the development, such as the reclamation of derelict land, the elimination of pollution, or the opportunities for habitat creation and enhancement, which may help to outweigh adverse environmental aspects of the proposals.

Policy MP3 - Measures to Reduce Environmental Impact

3.14 Proposals for mineral development will be permitted provided that any adverse effects on the environment can be eliminated or reduced to an acceptable level, with particular regard to:

1) the measures which are proposed to minimise the environmental impact of proposals

2) the duration of the proposed operations

3) the extent to which proposals maximise the efficient use of materials and minimise the production of waste

4) the proposals for reclamation and after-use

5) the potential for reinstating or making alternative provision for features which are affected and

6) any wider environmental benefits resulting from the proposal which would help to offset adverse environmental impacts.

Safeguarding the Environment

3.15 In some cases the environmental impact of mineral working will be too great particularly where it would result in irreparable or unacceptable damage to interests of acknowledged importance. In Derbyshire there will be a concern to protect environmental interests, according to their importance and relative significance nationally and locally. Many of these interests are acknowledged and defined in District

Local Plans. In the case of Green Belts, because minerals can be worked only where they are found, and because their extraction is a relatively temporary activity, there is no reason, in principle, for there to be a conflict between mineral extraction and Green Belt policy, provided that high environmental standards are maintained and that the site is well restored to an afteruse which accords with the purposes of Green Belts (see paragraph 5.13).

Agricultural Land

3.16 The Government's policy as set out in PPG7 is that the best and most versatile agricultural land (grades 1, 2 and 3a) is a national resource for the longer term and should in general be protected from irreversible development. The feasibility of a high standard of restoration is an important consideration when determining mineral applications affecting farmland.

Landscape

3.17 The Derbyshire Structure Plan establishes Special Landscape Areas (SLAs) to protect the finest landscapes in Derbyshire outside the Peak National Park. Their boundaries are defined in the Special Landscape Areas Local Plan, and increasingly in District Local Plans, together with more detailed policies for the control of development. Within the SLAs mineral proposals will be resisted where they, by virtue of their scale and duration, would be materially damaging to the inherent qualities of those areas, unless there is an overriding need for the mineral which cannot reasonably be met elsewhere. Other areas of attractive landscape, whilst not of special quality in a county wide context, are important and highly valued more locally, and are sometimes defined as such in Unitary or District Local Plans. These areas should also be protected from unacceptable damage.

Nature Conservation

3.18 PPG9 on Nature Conservation emphasises that full account should be taken of nature conservation interests and advises that "plans should be concerned not only with designated areas but also with other land of conservation value". Regard should be had to the relative significance of international, national, local and informal designations in considering the weight to be attached to these interests. Mineral applications affecting Special Protection Areas (SPAs) Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs) should be subject to the most rigorous examination. Other important resources which justify special consideration include sites of county wildlife significance identified on the County Wildlife Sites Register, wildlife sites identified in other statutory local plans, ancient woodlands, Regionally Important Geological sites, and the habitats of locally rare or endangered species.

Heritage Features

3.19 Derbyshire contains a rich heritage of features of architectural, historic or archaeological interest, including Conservation Areas, Listed Buildings, Historic Parks and Gardens, Scheduled Ancient Monuments, and other archaeological sites. It is essential that nationally important heritage features should be protected from the

adverse effects of mineral working. Government guidance (PPG16) reminds authorities that not all nationally important archaeological remains meriting preservation will necessarily be scheduled; such remains and, in appropriate circumstances, other unscheduled remains of more local importance may also be particularly worthy of preservation. There will be a concern that other important heritage features should be protected from mineral working which would cause them significant disturbance.

Water Resources and Drainage

3.20 The Environment Agency is concerned with the possible impact of mineral working on water resources, flood defence and conservation interests and the potential problem of surface and ground water pollution. The Agency is concerned to protect both the quality and quantity of water resources, including the ecological quality and fisheries and recreational value of the water environment. In particular mineral working may reduce ground water levels, disturb natural drainage patterns, reduce the capacity of the flood plain, and pollute local water resources. Mineral working proposals and associated schemes for reclamation and after-use which seriously damage these interests will not normally be acceptable.

Transport Problems

3.21 Where the traffic likely to be generated by a proposed mineral working would create unacceptable environmental problems, having regard to the access arrangements, the capacity of the road network, the implications for road safety and the amenity of neighbouring settlements, and where these problems cannot be satisfactorily overcome by local improvements or traffic management measures, the proposed development will not be permitted.

Cumulative Impact

3.22 Finally, there may be situations where the cumulative environmental impact of proposals is unacceptable. This could arise where there is a concentration of mineral workings in a particular location either concurrently or successively over a period of time, and the local community has experienced more than its fair share of environmental disturbances. These concerns can be particularly relevant in the Derbyshire coalfield where the adverse effects of operations should not be allowed to inhibit efforts to regenerate the local economy. Alternatively, proposals for mineral working may result in a series of environmental impacts which are not individually unacceptable, but which taken collectively and taking account of any impacts of other mineral or non-mineral developments in the same area may create unacceptable damage to the environment.

Policy MP4 - Interests of Acknowledged Environmental Importance

3.23 Proposals for mineral development will not be permitted where irreparable or unacceptable damage would result to interests of acknowledged environmental importance, and in particular where:

Agriculture

1) development would result in the irreversible loss of the best and most versatile agricultural land (grades 1, 2 and 3a)

Landscape

2(i) development would be materially damaging to the inherent qualities of a special landscape area, or to areas prominent from within the Peak National Park, unless there is an overriding need for the mineral which cannot reasonably be met from alternative sources in less environmentally important areas

2(ii) development would cause unacceptable damage to an area of local landscape importance

Nature Conservation

3(i) development would adversely affect nature conservation interests of international or national importance including special protection areas, special areas of conservation, sites of special scientific interest, national nature reserves and the habitats of protected species

3(ii) development would cause significant disturbance to other sites of importance for nature conservation including local nature reserves, county wildlife sites, regionally important geological sites and the habitats of locally rare or endangered species

Heritage

4(i) development would adversely affect sites and features of national heritage importance or particular archaeological importance, including scheduled ancient monuments, unscheduled features of national importance, listed buildings, and nationally important historic parks and gardens, and their settings

4(ii) development would cause significant disturbance to other sites and features of heritage importance including conservation areas, archaeological remains, and historic parks and gardens, and their settings

Water Resources

5) development would adversely affect the quality and quantity of water resources, water supply, land drainage or

flood protection interests, or create water pollution problems

Transport

6) the transportation of materials in connection with the development would have an unacceptable effect on the environment or would create unacceptable road traffic problems with regard to highway capacity or road safety, which could not be satisfactorily resolved by improvement schemes or mitigation measures

Cumulative Impact

7) development would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of mineral developments occurring either concurrently or successively.

Transport

3.24 Derbyshire produces over 15 million tonnes of minerals of various kinds each year, most of which has to be moved appreciable distances to its point of consumption in neighbouring towns, industries and power stations. This could result in substantial environmental problems, particularly if it resulted in heavy lorry traffic in unsuitable locations.

3.25 A large proportion (between 80% and 90%) of the county's output travels by road including beyond the County boundary. Such traffic can have a considerable impact on local amenity, creating problems of public safety and inconvenience, noise and vibration, air pollution and visual intrusion. These problems are potentially most severe where lorries use minor roads unsuited to their weight and size, where they pass through sensitive areas, and at the point of access to the site from the public highway. It would not be desirable to allow proposals which could exacerbate existing problems or create unacceptable new ones. The effects of road transportation might be reduced if the mineral operator is able to implement improvements to the site access and the road system. This may be achieved by way of Section 106 agreements over the routes that lorries in the Company's control should take and the erection of signposts to encourage drivers to follow preferred routes or use a particular entrance or exit from the site, and/or by placing weight restrictions on some roads so that traffic is routed away from residential areas or unsatisfactory roads onto preferred routes. It should be noted that the Department of Environment, Transport and the Regions operates a strict policy of prohibiting direct access from private development onto motorways and restricting new accesses onto All-Purpose Trunk Roads (DoT Circular - Roads 4/88). Local Planning Authorities will, where necessary, be directed by the Highways Agency to refuse planning applications, or to impose conditions on planning permissions, in order to enforce this policy. Where existing or proposed trunk roads or motorways and their junctions cannot cater for forecast traffic generated by a proposed development, improvements to the trunk road network will be required to be funded by the developer.

The Highways Agency would require any improvements to be able to cater for all traffic forecast to occur 15 years after the opening of the development.

3.26 A Transportation Strategy has been adopted which aims to minimise the environmental effects of freight transport. Some of the County's mineral production is transported by rail, notably from the limestone quarries in the Buxton area, and from opencast coal disposal points in the east of the county. There may be environmental advantages in encouraging greater use of rail transport or other transport modes which do not utilise the local road network. Grants are available under Sections 137-140 of the Railways Act 1993 to facilitate the transfer of traffic from road to rail, and to provide for freight facilities to be constructed for the movement of traffic by inland waterways. However, it should be borne in mind that the provision of substantial new rail loading facilities may encourage an expansion of production to serve the wider markets that may be reached as a result of these facilities. It may, therefore, prove a mixed blessing in environmental terms.

3.27 The Mineral Planning Authority will seek the use of rail, waterway, conveyor and pipeline as a means of transporting minerals rather than the use of roads, wherever this would be feasible and of benefit to the environment. In this respect, the Mineral Planning Authority will support applications for grant under Sections 137-140 of the Railways Act 1993, for the construction of new (or the modernisation of) rail and inland waterway facilities which will reduce the amount of minerals transported by road.

Policy MP5 - Transport

3.28 Proposals for mineral development involving the transport of minerals by road will be permitted provided:

1) there is no feasible alternative to road transport which would be environmentally preferable

2) the proposed access arrangements would be satisfactory and the highway network is adequate to accommodate the traffic that would be generated and

3) the impact of the traffic generated would not be detrimental to road safety nor have an unacceptable impact on the environment.

The mineral planning authority will seek to prevent heavy lorries associated with mineral operations from using unsuitable roads by means of traffic management or, where appropriate, other measures which may be secured under Section 106 of the Town and Country Planning Act 1990.

Nature Conservation

3.29 There are over 900 sites on the Derbyshire Wildlife Sites Register and many more locations which provide habitats for protected species. Proposed mineral working in

Derbyshire may adversely affect these sites and features of nature conservation interest, including sites of geological conservation importance, and Policies MP1, MP3 and MP4 ensure that mineral proposals will be permitted only where these effects are acceptable. Wherever possible features should be preserved in situ, but if this proves to be impracticable the emphasis will be on making adequate arrangements for features to be moved to new locations (translocation of habitats) or for the creation of new habitats. It is normally essential that this work be undertaken prior to any other work commencing after permission has been granted.

3.30 It should be emphasised that these provisions can only be assessed after the nature conservation interest of the proposed sites has been evaluated and an appropriate scheme agreed with the Mineral Planning Authority. Therefore, where proposals for mineral working affect sites of known or potential nature conservation importance the Authority will require a field evaluation, impact assessment and appropriate mitigation proposals to be submitted prior to determining the application.

Policy MP6 - Nature Conservation - Mitigation Measures

3.31 Where proposals for mineral development would affect areas of known or potential importance for nature conservation, the mineral planning authority will require the submission of a field evaluation and impact assessment and, where appropriate, mitigation proposals, prior to determining the application. Where such development is permitted, the mineral planning authority will impose conditions or seek planning obligations as appropriate, to minimise the impact of development, and to preserve features in situ as far as practicable, or secure the translocation of habitats or the creation of new habitats prior to, or during, development.

Archaeology

3.32 There is a high probability that mineral working in Derbyshire will affect areas of archaeological importance. Some 8,000 sites are already recorded on the Sites and Monument Record, and many more await discovery and classification. Areas with a concentration of archaeological remains often correspond with areas of important mineral resources e.g. the terrace gravels in the Trent Valley. Also, by comparison with other forms of development, mineral working represents a particular threat to archaeological sites since the areas involved are often large and destruction is usually total. It is appropriate therefore for the local plan to make specific provision for the treatment of archaeological sites affected by mineral working.

3.33 PPG16 emphasises the importance of archaeological resources and the critical role of the planning system in ensuring their conservation and protection. Policies MP1 and MP3 make it clear that proposals for mineral development will be permitted only where the adverse effects on the environment can be eliminated or reduced to an acceptable level. In practice there are likely to be two approaches to be followed where archaeological resources are affected by proposals for mineral working. There will be a presumption against development which adversely affects Scheduled Ancient Monuments and other nationally important archaeological remains. These cases are

covered by Policy MP4 above. Not all archaeological sites are of such significance, however, and it will clearly be impractical to preserve them all. Where in-situ preservation is not feasible the emphasis will, where appropriate, be on making adequate provision for sites to be surveyed, excavated and appropriately recorded.

3.34 These provisions can only be assessed after the archaeological characteristics of proposed sites have been evaluated and an appropriate scheme of treatment agreed with the Mineral Planning Authority. The Authority therefore requires proposals for mineral working affecting sites of known or potential archaeological importance to be accompanied by an archaeological evaluation and an appropriate scheme of treatment.

Policy MP7 - Archaeology - Mitigation Measures

3.35 **Where proposals for mineral development would affect areas of known or potential archaeological importance, the mineral planning authority will require the submission of an archaeological evaluation and impact assessment and, where appropriate, mitigation proposals, prior to determining the application. Where such mineral development is permitted the authority will impose conditions or seek planning obligations to preserve features in situ where this is appropriate, and to secure appropriate archaeological investigation and recording prior to, and during, development.**

Chapter 4—Applications and Conditions

Introduction

4.1 Chapter 3 sets out the general criteria against which proposals for mineral working will be assessed. This chapter looks in more detail at the information that is required in support of planning applications, the need for environmental assessments, the conditions which will normally be attached to planning permissions to minimise their environmental impact, and the need for formal legal agreements to control operations.

Information in Support of Planning Applications

4.2 As indicated previously the implications of mineral development can be wide ranging, and may have a considerable impact on the environment. Applicants are therefore required, under Article 4 of the Town and Country Planning (Applications) Regulations 1988, to submit full details and supporting information describing their proposals as directed by the Mineral Planning Authority to enable the implications of the development to be thoroughly examined before a decision is taken. The information required and the level of detail will vary according to the proposal, but will normally include details of the nature of the development, the nature of the mineral resource including the quantity of material to be worked and the markets served, the proposed methods of extraction, processing and transportation, environmental effects of the proposal, and the proposals for restoration, aftercare and after use.

4.3 The early provision of information will reduce delay and enable a clear understanding of what is proposed. In this connection, all applicants are encouraged to discuss proposals with the Mineral Planning Authority prior to the submission of applications. This will permit the early identification of potential constraints and lead to quicker planning decisions. Information has in the past been collected by the use of a mineral questionnaire attached to the planning application form. Recently a model minerals application form issued by the Department of the Environment, encompassing the requirement to provide this supporting information, has been adapted for use by the Mineral Planning Authority. An outline of the information required to be submitted to the Authority is listed in Table 1.

Table 1: An outline of Information required by the Mineral Planning Authority in support of Planning Applications

General Information

- Applicant, Application Site
- Nature of Application: new extraction/extensions
- Type of Development: surface mineral extraction, mineral processing, mineral exploration
- Plans and Drawings
- Supporting material: statutory environmental statement/ voluntary environmental statement
- Certificates of ownership

Table 1: Continued

Annex 1: Mineral Extraction and Processing

- Mineral extraction: particulars of the mineral resource, quantity to be extracted, duration of working, markets and end uses, quantities of soils and overburden, agricultural land quality
- Mineral processing: type and quantity of the mineral to be processed, plant and equipment to be used
- Other buildings, plant or structures: purpose, size and appearance.
- Traffic and Transport: method of transport, number of vehicles, means of access, routes of vehicles, methods to control transport impacts
- Environmental effects of development: effects on statutory designations, hours of working, noise levels and controls, dust and treatment, blasting, hazardous materials, water resources, public rights of way, visual impact and stability
- Landfilling of mineral extraction: volume and nature of material, monitoring and control of landfill gas and leachates
- Restoration, aftercare and after use: intended after use, use of soil materials in restoration, aftercare scheme, long term management, funding of restoration
- Benefits of the development

Annex 2: Mineral Exploration

- Mineral sought, nature and duration of exploration, use of explosives, restoration proposals

Annex 3: Underground Mining

- Depth of extraction, number of seams/veins, method of mining, measures to prevent subsidence, waste disposal, proposed treatment of mine openings

Annex 4: Major Surface Disposal of Mine or Quarry Wastes

- Area of proposed deposit, number and construction method of proposed tips, nature of wastes

Annex 5: Oil and Gas Operations

- Exploration: area of exploration, route of seismic surveys, use of explosives, location/quantity/depth of well sites, disposal of drilling wastes, duration of operation

Table 1: Continued

- Appraisal: area of appraisal, method of appraisal, location/ quantity/depth of well sites
- Production: volume of gas/oil production, reserves/life of field, equipment and plant used, proposed method of transport to gathering, processing and storage facilities
- Environmental effects of proposals: oil spillage contingency plans, measures to minimise atmospheric and noise emissions, disposal of drilling wastes, restoration proposals.

Environmental Assessment

4.4 In addition to the supporting information outlined above, proposals which are likely to have a significant environmental impact must be accompanied by an environmental statement, in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 1999. The regulations require that an Environmental Impact Assessment will be needed for major development projects listed under Schedule 1 including quarries and opencast mining, where the surface of the site exceeds 25 ha or peat extraction, where the surface of the site exceeds 150 hectares. Projects listed in Schedule 2, including mineral development, will only be subject to Environmental Impact Assessment if they are likely to have significant effects on the environment by virtue of factors such as their nature, size or location. Under the Regulations a project is regarded as being of such significance where the local planning authority and the applicant agree that this is the case, where the applicant volunteers an environmental statement which is expressed to be for the purposes of the Regulations, or where the Secretary of State directs.

4.5 In assessing whether Schedule 2 projects would have significant effects on the environment the Regulations require that aspects of the characteristics and location of the development are considered together with the characteristics of the potential impact. It should be emphasised that the basic test of the need for environmental assessment is the likelihood of significant environmental effects, and not the amount of opposition to the proposal.

4.6 Where an environmental statement is required it should include a description of the aspects of the environment likely to be significantly affected by the proposed project, including in particular human beings, flora, fauna, soil, water, air, climate, landscape, material assets, the cultural heritage and the interrelationship between such factors, together with a description of the measures envisaged to prevent, reduce and, where possible, offset any significant adverse effect on the environment.

Planning Conditions

4.7 Mineral working will almost invariably cause some disturbance to the environment. This impact may however be reduced by the use of appropriate planning conditions to ensure the effective control of operations. Such conditions may indeed enable

development to take place where it would otherwise be necessary to refuse permission. The power to impose conditions is contained in Section 72 of the 1990 Town and Country Planning Act.

4.8 Conditions will therefore be attached to planning permissions to control how development takes place, to minimise disturbance to the environment, and to ensure the satisfactory working and reclamation of the site. Circular 11/95 indicates that such conditions must be necessary, relevant to planning, relevant to the development, enforceable, precise, and reasonable in all other respects. The Mineral Planning Authority will enforce compliance with planning conditions where appropriate.

4.9 Conditions may relate to such matters as the method and duration of working; the design and location of plant and buildings; the measures such as signposts to encourage drivers to follow preferred routes, or use a particular entrance or exit from the site; the measures to reduce the impact of noise, dust, vibration and land contamination; the measures to protect features of natural history or heritage importance; the measures to protect public rights of way from the environmental impact of working; and the arrangements for landscaping and screening, and for the progressive reclamation of the site to an acceptable after-use. In certain circumstances, where it is considered that development that would normally be permitted under the General Permitted Development Order (GPDO) would be particularly intrusive, conditions will be imposed to restrict permitted development rights under the GPDO in order to protect these sensitive locations from such development. Planning conditions will be imposed wherever possible in preference to seeking planning obligations. When imposing conditions on planning permissions for mineral working and related matters, the Mineral Planning Authority will have regard to the planning issues arising from the advice and requirements of other relevant bodies including the Highway Authority, the Environment Agency, English Nature, the Countryside Agency, the Ministry of Agriculture, and Environmental Health Officers.

Policy MP8 - Planning Conditions

4.10 In granting planning permission for mineral working and related operations, conditions will be imposed to minimise the impact of development on the environment, to ensure the progressive working and reclamation of the site to an acceptable after-use and to take advantage of opportunities for environmental improvement and enhancement. In particular, conditions will be imposed, where appropriate, in respect of the following matters:

Working /Related operations

1) the commencement and duration of the permission

2) the carrying out of development in accordance with an approved scheme of working, including phasing

3) the regulation of the maximum rate of output where

necessary in the interests of the local environment or the local highway network

4) **the regulation of the hours and days during which working and other related operations may take place**

5) **the siting, design and appearance of buildings, plant and machinery**

6) **the arrangements for site drainage and fencing**

7) **the location and treatment of stockpiles of materials including the storage of over-burden and waste materials**

8) **the arrangements for the stripping, storage and treatment of top soils, sub soils and soil making material for use in the restoration of the site**

9) **the arrangements for landscaping and screening the site**

10) **the establishment of a buffer zone, within which activities will be restricted, to protect residential development and other sensitive areas from the effects of surface mineral development**

Transport

11) **access to and from the site and the provision of on-site parking and loading areas**

12) **the means of transporting material within the site, such that within a given mineral working the use of the public highway is normally excluded**

13) **the means of transporting minerals from the site**

14) **measures to encourage the satisfactory routing of traffic**

15) **the prevention of transference of mud and dirt onto the public highway**

Local Amenity

16) **measures to minimise the effects of dust, noise, vibration and land contamination**

17) **measures to minimise illumination from the site**

18) **measures to avoid damage in the form of subsidence or**

landslips, and to protect surface development from the effects of land instability

Environmental Protection

19) the retention, protection and enhancement of trees, woodlands, hedgerows and other landscape features

20) the retention, protection, translocation and enhancement of features of wildlife or scientific importance

21) the protection or recording of features of archaeological or heritage importance

22) the protection of public rights of way and features of recreational importance

23) the protection and enhancement of water courses, land drainage systems, the effectiveness of the floodplain, and ground water resources

24) the restriction of permitted development rights in locally sensitive areas

Reclamation

25) the progressive reclamation of the site in accordance with a detailed scheme to an acceptable after-use.

4.11 Issues relating to the reclamation of mineral sites are dealt with in more detail in Chapter 5.

Planning Obligations

4.12 Planning Obligations offer a mechanism by which development proposals may sometimes be made acceptable by legally committing interested parties to matters which cannot properly be dealt with by conditions attached to a planning permission. They are a way of allowing development to proceed with safeguards, environmental improvements or other commitments. In these circumstances the Mineral Planning Authority will seek to conclude legal agreements to secure planning obligations, with the applicant and, where appropriate, other interested parties to restrict or regulate the development or use of land using the powers contained in Section 106 of the Town and Country Planning Act 1990 (as substituted by Section 12 of the Planning and Compensation Act 1991). Advice on the proper use of planning obligations can be found in circular 16/91.

4.13 The matters which may be covered by legal agreements, where appropriate, include:

- the relinquishment of existing planning permissions

- arrangements to assist in the satisfactory regulation of lorry traffic
- the funding of off site highway and footpath improvements, and traffic management measures
- the funding and management of off-site or advance tree planting and screening measures
- the provision of funds for archaeological investigations
- the provision of alternative water supply should the development affect any existing legal water interests in the area
- the long term funding for the management of sites for nature conservation or other amenity uses following restoration
- the provision of a restoration bond, in exceptional circumstances, to ensure satisfactory restoration. (SAGA, now amalgamated into the Quarry Products Association, operates a Restoration Guarantee Fund and other organisations representing the industry may adopt similar schemes).

Policy MP9 - Planning Obligations

4.14 **The mineral planning authority will seek to conclude legal agreements, where appropriate, through Section 106 of the Town and Country Planning Act 1990, in order to secure planning obligations in respect of relevant matters which cannot be achieved by the use of planning conditions.**

Chapter 5—Reclamation and After-Use

Introduction

5.1 Mineral workings can have a substantial impact on the landscape, topography, soils and wildlife of an area and may last for long periods. Nevertheless they are a temporary use of land and it is essential that, when mineral working ceases, the area affected is reclaimed at the earliest opportunity, either to its former use, or to an acceptable new use. In recent years standards of reclamation have improved. However, MPG7 advises that, if there is serious doubt about the practicability of satisfactory reclamation, planning permission should not be granted. It also offers further advice on the reclamation of mineral workings.

Reclamation

5.2 At the planning application stage it is essential for applicants to demonstrate that the site can be reclaimed to an acceptable after use and the submission of a reclamation scheme integrated with the extraction programme will be expected to accompany an application. For short term workings it will normally be appropriate to submit full reclamation details with the application. For longer term workings it may be preferable to submit an outline of the reclamation plan covering the main stages of reclamation and after-use, followed by the phased submission of detailed schemes as extraction proceeds.

5.3 The reclamation and after-use of a site will depend on the characteristics of the mineral deposit, the nature of extraction, and the availability of fill material as well as the general characteristics and planning policies for the area. However, there are a number of important issues such as phasing, soil handling, and landscaping which are common to most reclamation schemes regardless of after-use, as discussed below.

5.4 It is important that sites are progressively reclaimed to an acceptable after-use, therefore, wherever practicable, reclamation should be phased to minimise the area taken out of its former use at any one time and to ensure reclamation is achieved as quickly as possible.

5.5 Soils are an important and valuable reclamation material and the working and reclamation scheme should make provision for their handling and management. If soils are mishandled, damaged or lost, the standard of reclamation is likely to be prejudiced and difficult to rectify.

5.6 The reclamation scheme should include landscape proposals which ensure that the site can be assimilated back into the surrounding landscape and which are compatible with the proposed after-use. Screening and landscaping measures designed to reduce visual impact during the operational stages of the site may also contribute to the final reclamation scheme.

5.7 The reclamation of mineral workings may involve the filling of voids left by extraction up to or above original ground levels, and the approach to be taken depends on the availability of suitable fill material and site characteristics. Where the ratio of overburden to mineral volume is high there is likely to be sufficient material to backfill and reclaim most of the void without the need to import fill, for example in opencast coal

operations. Where quantities of fill are not available on site, waste materials such as pulverised fuel ash, builders' rubble or domestic waste may be imported. A particular concern in filling such sites is the need to protect water resources from contamination and the need to avoid disturbance to flood control and drainage regimes, having regard to the requirements of the Environment Agency. This implies a restriction on the use of many sites for the disposal of waste material, especially in the Carboniferous and Permian Limestones, Sherwood Sandstones and the Trent Valley gravels.

5.8 It may not always be practical to restore sites to pre-existing levels; this applies where the ratio of overburden to mineral is very low e.g. at limestone quarries, where adequate quantities of suitable filling material are unlikely to be available. This type of quarry presents a different challenge for reclamation. The scale and extent of modern quarries and current methods of excavation produce relatively straight faces which, if untreated, are likely to remain as conspicuous engineered features in the landscape. This is a particular concern because limestone areas often coincide with attractive scenery, sometimes designated as a Special Landscape Area. In the past, sites have generally been left to revegetate with some reclamation of the quarry floor. However, innovative 'Restoration Blasting' techniques can produce varied slope sequences consisting of rock screes, buttresses and headwalls which can be selectively vegetated to replicate natural limestone valley sides.

5.9 The river valley gravel workings are relatively shallow and do not generate large quantities of overburden for use as fill. However, the shallow nature of working does facilitate restoration. An important concern in filling sites within the river valley gravels is the need to protect water resources and prevent flooding, as previously discussed. Further limitations on the scope for refilling sand and gravel workings in the Trent Valley and adjoining area are the declining availability of pulverised fuel ash as the traditional coal-fired power stations such as Willington and Drakelow are phased out, and that an increasing amount of waste material, in general, is recycled for use as secondary aggregates.

5.10 Where infilling is accepted as a means of restoring sites, the Mineral Planning Authority will need to be satisfied that the infilling programme is realistic. It will be especially important to ensure that sufficient supplies of suitable waste material are available so that reclamation is likely to proceed broadly at the same rate as extraction, and for the whole operation to be completed within a reasonable timescale.

5.11 Where reclamation is to agriculture, forestry or amenity uses the 1981 Town and Country Planning (Minerals) Act introduced the concept of 'After-Care Conditions'. The purpose of the after-care requirement is to help ensure that newly restored land is properly treated during the first few critical years to ensure it is reclaimed to a satisfactory standard. An operator will usually submit an after-care scheme for approval by the Mineral Planning Authority or, more rarely, the planning permission may contain conditions specifying the steps to be taken following restoration. An after care scheme should cover the management of the land (including planting, cultivation, treatment with fertilizers, irrigation and drainage) for a period of up to 5 years. In order for the Authority to give full consideration to proposals for restoration, applicants may wish to call attention to any evidence about how a similar scheme is currently being managed, or how restoration and aftercare have been achieved on a similar site.

5.12 Finally, after the completion of operations all plant, buildings, structures, machinery, roads and hardstandings will need to be removed.

After-use

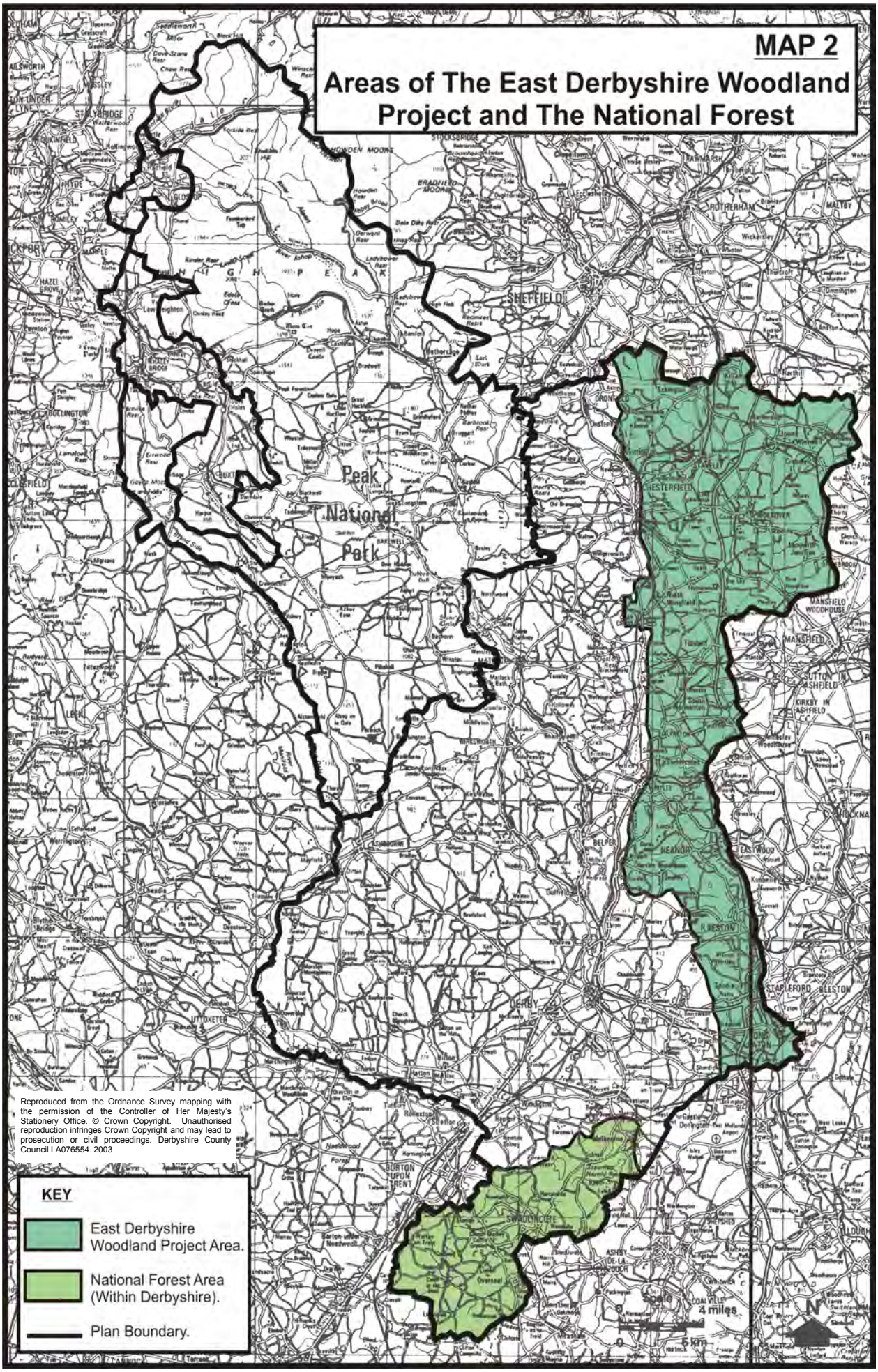
5.13 There are several after-use options for worked out mineral sites including agriculture, woodland, nature conservation, recreation and, less commonly, built development. It is essential that the proposed after-use is considered at the planning application stage because, firstly, each use will have its own physical requirements which must be assessed before extraction commences and secondly, there must be clear evidence that the proposed after-use will be properly implemented and managed in the long term, and will be compatible with other planning policies and objectives, including the policies of other local plans.

5.14 Most mineral workings occur on agricultural land and restoration to agriculture will remain the most appropriate after-use for some sites, especially those affecting the best and most versatile agricultural land where a high standard of restoration will be required. Bearing in mind the reduced national need for food production and the introduction of measures for "set aside" and farm diversification, there is likely in the future to be an increased emphasis on alternative after-uses, at least on the lower quality farmland.

5.15 The landscape and environmental value of woodland and forestry after-uses has been increasingly recognised. Encouragement will be given to such uses within the new National Forest in South Derbyshire and areas affected by the Eastern Derbyshire Woodland Project, as shown on Map 2, to be linked to the provision of new opportunities for access, recreation and nature conservation.

5.16 Mineral working can provide good opportunities to create new nature reserves and wildlife habitats, particularly water areas, which are valuable for nature conservation. Nature conservation schemes will be encouraged provided that the site is suitable for habitat creation with particular regard to potential conflicts with other nearby land uses. Schemes should make provision for securing the long term management of the site because nature conservation sites are rarely self supporting. Where appropriate, this may be achieved through the use of legal agreements. (See Chapter 4).

5.17 Reclaimed mineral sites can provide new opportunities for increasing recreational facilities. Recreational options include Country Parks, public open space, golf courses, dry ski slopes etc. Water based recreational after-uses have mainly been associated with gravel pits. Due to restrictions on filling worked out mineral sites, as previously discussed, it is likely that an increasing number of worked out gravel pits will be left in water presenting further opportunities for increasing water based recreation facilities particularly within the Trent Valley and adjoining area, as welcomed by Structure Plan (Deposit Edition – April 1998) Leisure and Tourism Policy 2. Recreation Schemes will be generally encouraged but only where the impact of development upon other land uses and local communities is acceptable and where the volume of traffic likely to be generated is in keeping with the capacity of the local transport network. Specific requirements for recreation facilities may be included in other Local Plans and any


MAP 2
Areas of The East Derbyshire Woodland Project and The National Forest
Peak National Park
SHEFFIELD
CHESTERFIELD
DERBY
BURTON UPON TRENT
SWADLINCOTE
Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Derbyshire County Council LA076554. 2003
KEY
East Derbyshire Woodland Project Area.
National Forest Area (Within Derbyshire).
Plan Boundary.
4 miles
6 km
N

proposals for recreational after-use should be consistent with Local or Unitary Plan Policies.

5.18 Reference has been made to the increasing limitations on filling worked out sand and gravel sites and the inevitable consequence that many will remain in water. Therefore, in view of all these concerns, supplementary planning guidance will be prepared on the after-use of worked out sand and gravel sites within the Trent Valley and adjoining area. This will provide guidance on those areas most suitable to be filled, bearing in mind the limited amount of fill material available and the most appropriate after-uses for these sites, for example, agriculture, woodland, nature conservation, recreation. Where sites are to be left in water, the guidance will address the most suitable after-use, for example nature conservation or recreation. A distinction will be made between informal and formal recreation facilities, the latter being more likely to require built development, attract large numbers of people or involve motorised water sports.

5.19 Mineral workings can occasionally be reclaimed to a condition suitable for built development. Such opportunities are only likely to arise in urban or urban fringe situations, where such development may be compatible with other planning policies in the area. Where filling is involved proposals should demonstrate that the site can be restored to a suitable condition to facilitate built development.

5.20 Finally, it should be stressed that reclamation is more than simply a matter of returning land to a satisfactory condition. It provides opportunities to achieve a high level of wider public and environmental benefits including landscape enhancement, the creation of a greater diversity of wildlife habitats and the provision of new opportunities for recreation and public access.

5.21 All proposals for mineral development will be considered against the general policies and proposals for controlling development set out in the plan together with Policy MP10 which seeks to ensure that sites can be satisfactorily reclaimed to an acceptable after-use.

Policy MP10 - Reclamation and After-Use

5.22 Proposals for mineral development will be permitted only where satisfactory provision has been made for the reclamation and after-use of the site as soon as practicable.

In granting planning permission for mineral development conditions will be imposed, as appropriate, in respect of the following matters:

1) the submission and adherence to a practicable reclamation scheme

2) the progressive reclamation of the site, where possible

3) the submission of details of phasing, filling and landforms, drainage, management of soils and landscaping prior to the commencement of the working of the site or, in the case of longer-term workings, before the commencement of a particular phase or phases

4) the after-care of sites

5) the removal of all plant, buildings, structures, machinery, roads and hard standings

6) the reclamation of areas of the best and most versatile agricultural land to a high standard for agricultural use in order to return land to a state at, or as near as possible to, its original quality and the restoration of other areas to a condition suitable for their acceptable after-use and

7) measures designed to enhance the natural environment such as the provision of additional trees and woodland cover, the creation of new wildlife habitats and geological exposures, the improvement of water courses, and the improvement of public access.

Chapter 6—Other Mineral Developments

Introduction

6.1 This chapter deals with a number of general policy issues related to mineral developments including the question of borrow pits, industrial development associated with mineral working, mineral exploration, the disposal and reworking of mineral and other wastes and the re-working of tips. With the exception of borrow pits, these types of development may, under certain circumstances, be permitted by the Town and Country Planning (General Permitted Development) Order 1995 (GPDO). This chapter deals with all these types of development, both where the permissions in the GPDO apply and where they do not.

The General Permitted Development Order

6.2 Article 3 of the GPDO grants planning permission for certain classes of development without an application for planning permission having to be made (Article 3 and Schedule 2 of the Order). In the case of the minerals industry there are permissions for:

- mineral related development ('Development ancillary to mining operations')
- coal mining development by the Coal Authority and licensed operators
- waste tipping at a mine
- mineral exploration and
- mineral-working deposits

In each case the permission is defined as to its limitations, and is subject to conditions which appear in the Order. In some cases the permission is subject to the approval of the Mineral Planning Authority.

6.3 The permissions in the GPDO will apply unless withdrawn either by a condition of a planning permission or by the making of directions. For some proposals for mineral exploration or reworking of tips the Mineral Planning Authority must be offered the opportunity to make a Direction (an 'Article 7 Direction' that a planning application is required). For the other classes of development, an authority may make a Direction that the permission shall not apply in respect of a specific development or a class of development in an area (an 'Article 4 Direction', which is subject to confirmation by the Secretary of State).

6.4 In all the cases where the authority has the opportunity to 'approve' development permitted by the GPDO, or to withdraw such permissions, its actions are limited because the permission is granted by the Order as of right. For example, the Mineral Planning Authority's approval may only be withheld where improvements could be made to reduce adverse effects on amenity, or the development could and should be sited elsewhere. Furthermore, where a GPDO permission has been taken away by

Direction, the authority is liable to pay compensation if, within a certain period, it refuses to grant permission, or grants it subject to more onerous conditions. The GPDO permissions are referred to in more detail later in this chapter at paragraphs 6.11-13, 6.15-16, 6.20 and 6.28. MPG2 'Applications, Permissions and Conditions' also gives advice on this subject.

Borrow Pits

6.5 "Borrow pits" are temporary operations serving major building or civil engineering projects, such as road schemes or reservoirs, which are used solely to supply materials for these projects, and which are sometimes used for the disposal of surplus materials from the site. They normally involve the excavation of large quantities of material, mainly bulk fill, over a short period. Examples in the county include the borrow pits approved in connection with the construction of the A50 Stoke-Derby link.

6.6 Borrow pits can have advantages over established quarries in certain circumstances. From the developers point of view material can often be delivered more cheaply and borrow pits can meet peaks in demand which cannot be met by established sites. Being close to the construction site they can also reduce or eliminate heavy and concentrated lorry movements on public roads. Finally they may help to conserve resources of high quality aggregates by permitting the use of locally occurring materials of lower quality, thereby reducing the need to make additional provision elsewhere. The extent to which the proposal maximises the efficient use of materials and minimises waste will be taken into account (See Chapter 3, Policy MP3).

6.7 Against this, proposals for borrow pits will often involve the development of greenfield sites in areas where mineral working would not normally be acceptable. In the past, the Mineral Planning Authority has maintained a generally restrictive attitude towards such proposals because of the problems which have been experienced over the control of operations and securing the satisfactory reclamation of sites. Where the principle of development is accepted, planning conditions will be imposed to control the working and reclamation of the site.

6.8 Proposals for borrow pits will be examined in the same way as other mineral development to determine the balance between the need for the mineral to be worked and the environmental and other interests which may be affected, and will only be accepted where they offer net environmental gains over alternative sources of supply. For proposals to be acceptable it will be important to demonstrate that the demand cannot reasonably be supplied from established sources (including waste materials such as colliery spoil or power station ash); or that the use of such sources would be seriously detrimental to local amenities and that the development would not cause irreparable or unacceptable damage to interests of acknowledged environmental importance. The extent to which a proposal would help to conserve high quality minerals, by ensuring that lower quality borrow pit minerals are used in substitution, will be a material consideration in assessing whether net environmental benefits would result. It will be necessary to ensure that the site can be satisfactorily reclaimed to an acceptable after use, using waste materials generated by the construction project, where possible.

Policy MP11 - Borrow Pits

6.9 **Proposals for temporary mineral workings related to specific construction projects (borrow pits) will be permitted only where there are net environmental benefits compared with supplying the project from established sources, and, in particular, where:**

1) there is a need for the development to supply major construction works, which cannot reasonably be met from established sources, or the supply of material from such sources would be seriously detrimental to local amenities because of the scale, location and timing of the operations

2) the site is adjacent to the proposed construction project so that use of the public highway for the transport of materials is minimised

3) the proposal would not cause irreparable or unacceptable damage to interests of acknowledged environmental importance and

4) satisfactory provision is made to reclaim the site, as far as possible without the use of imported materials.

Where permission is granted a condition will be imposed to ensure that the mineral operation and all material removed is limited solely to that necessary for the related construction project.

Mineral Related Development

6.10 Mines and quarries usually need ancillary developments close by for the treatment, preparation and use of minerals produced at the site. In addition to development directly associated with the working of the mineral, there are often a number of industrial activities related to the processing of minerals such as ready-mixed concrete plants, concrete products works, asphalt plants, limeworks and brickworks, which may be proposed in close proximity to the mine or quarry. However, whilst there may be good operational reasons for these activities to take place close to the site where the mineral is worked, the industrial nature of the development may have a significant environmental impact, for example, in terms of visual intrusion, noise and traffic generation. Therefore the need for a countryside location for such development must be justified in terms of net environmental benefits.

6.11 Such developments may be permitted by the GPDO, which grants permission for:

a) development of plant and machinery connected with the mine or quarry on "land at a mine", provided it deals only with the mineral from the site and does not materially affect the appearance of the site, subject to limits on size and

b) processing and industrial activities, plant and buildings dealing principally with the mineral from the site, both on "land at a mine" and "ancillary mining land"; this permission is subject to the approval of the Mineral Planning Authority.

Other developments not so permitted will need a specific planning permission granted on an application.

6.12 Where a specific planning permission or other planning approval is needed for mineral related development at a mine or quarry, or on ancillary mining land, applications will be determined by the Mineral Planning Authority. For most such proposals elsewhere, applications will be determined by the appropriate District Planning Authority.

6.13 Where development is permitted by the GPDO subject to the Mineral Planning Authority's approval, such approval will depend on whether it has been demonstrated that the proposal would not injure the amenity of the neighbourhood and that it could not and should not be sited elsewhere. Where the development is subject to an application for planning permission, the proposal will have to demonstrate net environmental benefits in a close link between the industrial and mineral development, having regard in particular to its likely implications for traffic generation and its impact on the environment. In order to prevent the establishment of unacceptable industrial sites in the open countryside, conditions will normally be imposed to link the development to the mine or quarry e.g. through a requirement to use minerals principally from that site, and requiring the removal of the industrial development when the mineral working ceases.

Policy MP12 - Mineral Related Development

6.14 Proposals for mineral related development which require planning permission will be permitted where there are net environmental benefits in a close link between the industrial and the mineral developments, and provided that:

1) the development is located, designed and landscaped to minimise any adverse effect on the environment and

2) the development will not create unacceptable traffic problems.

Where permission is granted, conditions will be imposed to ensure that:

1) the mineral to be used is produced mainly on site and

2) on completion of mineral working, all plant and machinery is removed, and the site is satisfactorily reclaimed.

Mineral Exploration

6.15 Many proposals for mineral exploration are small in scale, involve quite short time

periods, and have a limited effect on their surroundings. Most such activities, including the drilling of boreholes, the carrying out of seismic surveys and minor excavations, are permitted development, under the Town and Country Planning General Permitted Development Order 1995, although the Environment Agency must be consulted on the drilling of boreholes greater than 15 metres in depth. Operations lasting more than 28 days must be referred to the Mineral Planning Authority who can make an Article 7 Direction requiring a planning application to be submitted. Larger proposals including exploration for oil and gas, and proposals involving large buildings or excavations, and operations affecting sites of archaeological or special scientific interest will normally require specific planning permission.

6.16 Explorations not permitted by the GPDO require a specific planning permission. Where planning permission is necessary the Mineral Planning Authority will apply the normal environmental safeguards that would be applied to other forms of mineral development as set out in the general policies for controlling mineral development. These may include measures to control the duration and hours of working, the visual impact, noise, pollution and traffic effects of the proposal, and to ensure the satisfactory reclamation of the site. Furthermore, whilst mineral exploration is a temporary use of land which normally has little lasting impact, there are interests of acknowledged environmental importance that require particular protection. In these areas mineral exploration will not be permitted where it would result in irreparable or unacceptable damage to these interests.

6.17 Exploration for oil and gas is a special case usually involving substantial operations including deep drilling. The general policy set out below will apply to such proposals, but in addition more specific proposals for controlling the exploration, appraisal and commercial exploration of hydrocarbons are set out in chapter 14.

Policy MP 13 - Mineral Exploration

6.18 Proposals for mineral exploration which require planning permission will be permitted provided that their impact on the environment is acceptable and they would not cause irreparable or unacceptable damage to interests of acknowledged environmental importance.

Where permission is granted it will be for a temporary period only, and conditions will be imposed to ensure that:

1) operations are regulated to minimise the effect of the development on the environment and

2) any land disturbed as a result of the operations is satisfactorily reclaimed to an acceptable after-use.

Disposal of Mineral Waste

6.19 Mineral workings produce waste, but such waste can often be turned to positive use. In

some quarries it can be disposed of on the site in such a way as to screen the quarrying operations or as a reclamation material. Some mineral waste can also be used as bulk fill in construction projects as a substitute for primary aggregates (see Chapter 11).

6.20 Disposal of mine or quarry waste will normally require planning permission. However, there is a permission in the GPDO for the disposal of mineral waste on the site or on ancillary land (subject to certain limitations on the size and height of tips) and, in some circumstances, the Mineral Planning Authority can request a 'waste management scheme' dealing with the manner of disposal and the reclamation of the tip which is subject to approval.

6.21 In all cases the land for tipping will have to be carefully selected having regard to the current and future use of the land and whether a positive use of the waste is being made. Particular regard will be had to its impact on residential or other sensitive developments, on interests of acknowledged environmental importance, including natural resources, high quality agricultural land, water resources and land drainage. There will also be a concern to ensure that important mineral resources are safeguarded from tipping. Waste tips will need to be satisfactorily designed and treated to ensure that they do not disfigure the landscape. In considering proposals for the disposal of mineral waste the general policies for controlling mineral development, set out in the Local Plan, will apply.

Disposal of Non-Mineral Waste

6.22 Where there are insufficient quantities of waste generated by mineral operations to provide for the restoration of sites the disposal of domestic, commercial and non-toxic industrial waste can often make up the shortfall and become an integral part of the restoration process. Such schemes can serve the dual purpose of restoring mineral sites while satisfying a need to provide suitable sites for waste disposal. Some waste materials, however, are potential pollutants and this requires careful consideration with regard to the type of waste material, the permeability of the ground and the effects on groundwater. If wastes other than from a mine or quarry are brought in, their disposal on site will require a licence under Section 35 of the Environmental Protection Act, 1990 (EPA). The waste management licence will control the detailed operation of the site in order to ensure the secure disposal of the waste without causing pollution of the environment or harm to human health. Moreover, whether a site is suitable for waste disposal will depend not just upon the characteristics of the site, but also upon wider considerations including the location of the site in relation to the pattern of waste arisings and the land use implications having regard to the “proximity principle” (under which waste should be disposed of close to the point at which it is generated - PPG23, paragraph 2.3). Consideration should also be given to waste management priorities such as the preference for the re-use or recovery of waste materials and to whether the proposal would frustrate such objectives.

6.23 The question of which aspects of proposed developments are to be considered by the planning rather than the pollution control system is addressed by PPG23. The role of planning focuses not on the control of pollution itself, but on normal planning considerations such as amenity and impact on traffic flows. The possibility that development could cause pollution or create waste may be a material consideration in

determining planning applications, but it must not duplicate controls which are the responsibility of other agencies.

6.24 Under the provisions of the 1995 Environment Act, the waste regulation functions of local authorities were transferred to the Environment Agency and the duty of waste regulation authorities to prepare waste disposal (management) plans was repealed. These plans will be replaced by regional waste strategies within the framework of a national waste strategy. A waste management strategy for Derbyshire is being jointly prepared by Derbyshire County Council (waste disposal and planning authority), Derby City Council (waste collection, disposal and planning authority) and the Derbyshire District councils (waste collection authorities). Through this joint working a strategic process has been established which will provide a policy context for achieving more sustainable waste management. It will also provide the context for preparing the Derby and Derbyshire Waste Local Plan (a separate, statutory document introduced by the Planning and Compensation Act, 1991) which will deal with the land-use planning implications of the strategy.

6.25 Meanwhile, Policy MP14 sets out guidance on mineral working and waste disposal pending the preparation of the Waste Local Plan. In implementing this policy the Mineral Planning Authority will apply the normal environmental safeguards that would be applied to other forms of mineral development as set out in the general policies of the plan, but will give particular consideration to those factors set out in Table 2.

Table 2: Matters to be Taken into Account when Considering Proposals for the Disposal of Non-mineral Waste in Conjunction with Mineral Operations

- The need for the waste disposal facility in that location
- The nature and character of the site, the proposed after-use, and the alternative landforms and after-uses possible if landfill were not to take place
- The nature of the material to be tipped
- The effect on local water supplies or ground and surface water quality
- The desirability of using more hydro-geologically secure sites for the disposal of non-inert waste so as to release inert filling material for use in more sensitive areas
- The compatibility of the monitoring and control processes, structures and equipment for leachate and landfill gas with the proposed after-use

Table 2: Continued

- The effect on, and relationship to, residential properties and the need to reduce environmental disturbance to acceptable levels
- The avoidance of danger to aircraft movements from bird-strikes
- The effect on the highway network and the local environment of additional traffic movements which would be involved due to the importation of fill material
- The feasibility of restoring the site within a reasonable period of time.

Policy MP14 - Disposal Of Non-Mineral Waste In Association With Mineral Development

6.26 **Proposals for the disposal of non-mineral waste in association with the working and reclamation of mineral operations will be permitted only where:**

1) there is a need for a disposal facility in that location and

2) their impact on the environment is acceptable and they would not cause irreparable damage to interests of acknowledged environmental importance.

Where permission is granted conditions will be imposed to ensure that:

1) operations are regulated to minimise the effect of development on the environment and

2) the site is satisfactorily reclaimed to an acceptable after-use within a reasonable time period.

Re-Working of Tips

6.27 Chapter 11 examines the potential for re-using mineral wastes such as colliery spoil and power station ash as a substitute for primary aggregate resources. These paragraphs deal with proposals for the removal of material from old tips such as coal

and vein and other minerals which, although they might have been discarded when they were originally worked, now have sufficient value to be economically recoverable.

6.28 The removal of material from tips ('mineral working deposits') is another category of development for which there is a permission in the GPDO. The Order permits the removal of material from any stockpile and, subject to the 'article 6' procedure, from tips up to a certain size and age. Otherwise the reworking of tips will always require a specific planning permission.

6.29 In Derbyshire the removal of material from tips has applied particularly to old colliery spoil heaps to recover coal, and to schemes to recover fluorspar and barytes from old lead mine tips. In considering proposals for the re-working of tips the general policies for controlling mineral development, as set out in the local plan, will apply. Particular attention will be given to:

- the need for and importance of the mineral which justifies its removal
- the arrangements for working, processing, transportation and waste disposal to minimise the impact of the operations on the environment; and
- the measures proposed to ensure that the site is reclaimed to an acceptable after use when the material has been removed.

The removal of material from old tips which have been reclaimed or have naturally regenerated to an acceptable after-use will be considered as a new proposal on a greenfield site, having particular regard to the cumulative impact of disturbing the site for a second time including, in the case of a reclaimed site, the effects of the double disturbance of soils.

Policy MP15 - Working Of Former Tips (For Purposes Other Than Secondary Aggregate Production)

6.30 Proposals for the working of former tips, which require planning permission, where the land concerned has been satisfactorily reclaimed or has naturally re-generated to an acceptable after use will be considered as a new proposal on a greenfield site.

Chapter 7—Landbanks, Resources and Sites

Maintenance of Landbanks

7.1 In addition to the general requirement to ensure an adequate supply of minerals to meet forecast demands, the Government in MPG1 requires local authorities to include policies in their development plans for the maintenance of landbanks for non-energy minerals. A landbank is a stock of planning permissions for the winning and working of minerals, and should be of a sufficient size to allow for continuity of production. The period of the landbank for each mineral reflects the lead times which may be involved in obtaining planning permission and bringing a site into production. Because of their size and the level of capital investment involved it often takes a considerable time for new mineral sites to become fully productive. By ensuring that at any one time there is sufficient land to meet both immediate needs and the needs of the following few years, Mineral Planning Authorities can help to secure continuity of supply by enabling industry to respond speedily to fluctuations in demand.

7.2 For aggregate minerals government guidance in MPG6 recommends the maintenance of a land bank sufficient for a specific minimum period of extraction. For sand and gravel the Government recommends a land bank sufficient for at least 7 years extraction, and states that a longer period may be appropriate for crushed rock; for the purposes of this plan, a figure of 15 years has been adopted. The actual land bank at any time is the sum of all the estimated quantities of permitted reserves, including those at dormant or non-working sites, irrespective of the size of the reserves and production capacity at particular sites. It does not include estimated quantities at sites which are allocated in the plan but which do not have planning permission, nor does it include any estimate of the contribution that could be made by imported or secondary material. In this plan, the landbank for each mineral will relate to the whole plan area, which is of sufficient size to permit an adequate range of sites and resources. The size of the landbank which is required to be maintained throughout and at the end of the plan period will, in the case of aggregate minerals, be calculated from the average annual provision which is set out in this plan and based on the local apportionment of the Regional Guidelines in MPG6. In the case of other minerals the size of the landbank will be based on average production levels over the previous 3 years.

7.3 Government guidance emphasises that there should also be a commitment included in plans to ensure that a landbank can be maintained at the end of the plan period, although it will not be necessary for resources to be identified, at the time of plan preparation, for this purpose. It also recognises that landbanks can only be maintained in practice if the industry comes forward with planning applications in the right place at the right time. The stock of permitted reserves will, therefore, be kept under review and, if necessary, further provision will be made through formal review of the Minerals Local Plan.

Policy MP16 - Maintenance Of Landbanks

7.4 A landbank of permitted reserves for the county's non-energy minerals will be maintained at appropriate levels throughout and at the end of the plan period. For sand and gravel the landbank will

be sufficient for at least 7 years production. For crushed rock the landbank will be sufficient for at least 15 years production.

Mineral Resources
Safeguarding Resources

7.5 Mineral resources are finite and it is an aim of sustainable development to conserve minerals as far as possible and encourage the efficient use of materials. As MPG1 indicates, the planning system has an important role to play in safeguarding deposits which are, or may become, of economic importance from unnecessary sterilisation by surface development. The conflict between mineral working and other development interests for housing, industry, schools and roads, is greatest around the existing built-up areas. Mineral resources may be sterilised directly, or indirectly where other forms of development are allowed to encroach so closely as to inhibit the working of adjoining areas. In addition, it will be important to ensure that mineral operations, including tipping, do not themselves prejudice the future working of important mineral resources e.g. opencast coal proposals should be designed so as to avoid the sterilisation of any important clay resources.

7.6 Where there is an overriding need for development to take place on land containing a workable mineral deposit, the mineral should, wherever possible, be extracted in advance of the development unless this would give rise to unacceptable impacts or lead to excessive delays for the development. This is most likely to apply to opencast coal where the relatively short-term nature of some schemes may permit advance extraction and restoration within a reasonable time-scale.

7.7 Whilst the Mineral Planning Authority is not normally the determining authority for non-mineral development proposals, it is consulted on applications which could have the effect of sterilising mineral deposits. In exceptional cases the Authority could request the Secretary of State to exercise a power under Article 14 of the Town & Country Planning (General Development Procedure) Order 1995 to direct the local planning authority to deal with an application in a particular manner.

Policy MP17 - Safeguarding Resources

7.8 The mineral planning authority will resist proposals for any development which would sterilise or prejudice the future working of important economically workable mineral deposits except where:

1) there is an overriding need for the development and

2) where prior extraction of the mineral cannot reasonably be undertaken, or is unlikely to be practicable or environmentally acceptable.

Where the development of land for non-mineral purposes is considered essential and proven mineral deposits would be permanently sterilised, planning permission for prior extraction will

be granted provided this does not prejudice the timing and viability of the proposed development and does not lead to unacceptable environmental effects.

Minerals Consultation Procedures

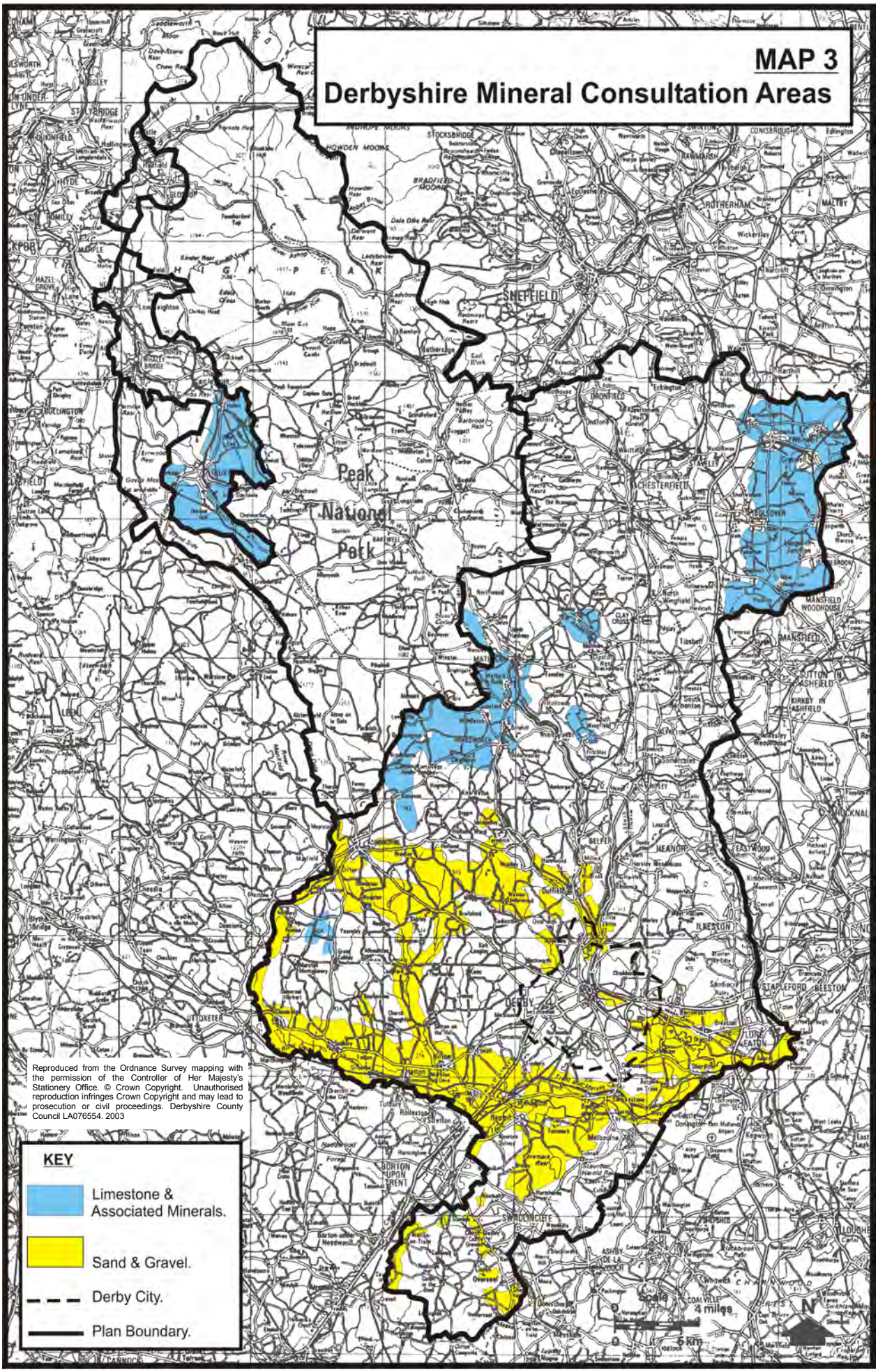
7.9 Under the provisions of the Town and Country Planning Act 1990, the Mineral Planning Authority is empowered to establish Minerals Consultation Areas within which the District Council Planning Authorities are required to consult the County on applications for development which could have the effect of sterilising mineral deposits. Following local government re-organisation, and the establishment of Derby City as a Unitary Authority handling applications for both mineral and non-mineral development within the City, there is no longer a requirement to establish Mineral Consultation Areas within the City boundary. Resources within the City will be safeguarded through internal consultation procedures and are shown on Map 3 for information purposes. The inclusion of land within a Consultation Area does not imply a presumption for or against mineral working. It does, however, help to ensure that important deposits are not sterilised, that development within these areas takes into account the existence of mineral resources and workings, and that the siting of other development in close proximity to mineral workings is avoided.

7.10 The Mineral Planning Authority has notified the District Councils of two main Minerals Consultation Areas relating to Limestone and Associated Minerals, and Sand and Gravel resources (Map 3). These areas cover the resources where the pressure for future working is greatest, (sand and gravel, and limestone). They also cover the vein mineral and high purity limestone and dolomite resources which are of national significance by virtue of their relative scarcity and commercial importance. Steps are being taken to define a Consultation Area for high alumina clay through the usual procedures. Other mineral resources such as brick clay are less in demand, or relatively abundant so that it is not considered necessary to define further Consultation Areas at this stage. Development affecting coal resources is covered by a separate system of consultation operated by the Coal Authority.

7.11 Where applications for non-mineral development are within established Minerals Consultation Areas, the Mineral Planning Authority will continue to require that it is consulted by the District Council Planning Authorities in accordance with the Town and Country Planning Act, 1990, Schedule I, para 7(3)(c). Where mineral reserves are believed to exist within a Consultation Area, but are not proven, the Mineral Planning Authority (through the District Council) may require the prospective developer to establish whether or not the mineral deposit is present before any application for development is determined. Where allocations of land for non-mineral development are being considered in the preparation of District Local Plans, normal consultation procedures enable the need to safeguard important mineral resources to be taken fully into account before proposals are finalised.

Extensions to sites

7.12 MPG6 indicates that it may be generally preferable to allow extensions to existing


MAP 3
Derbyshire Mineral Consultation Areas
Peak
National
Park
SHEFFIELD
CHESTERFIELD
DERBY
MANSFIELD
ROTHERHAM
Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Derbyshire County Council LA076554. 2003
KEY
Limestone & Associated Minerals.
Sand & Gravel.
Derby City.
Plan Boundary.
Scale
4 miles
0
6 km

mineral workings rather than allowing mineral workings at new greenfield sites. This approach has a number of advantages:

- it avoids the proliferation of sites and confines future working to areas where some degree of environmental disturbance has already taken place

- it permits greater control over the release of resources. Extending an established site can be carried out progressively in a number of carefully designed phases. A new site by contrast is likely to require the release of substantial resources at the outset to ensure an adequate return on capital investment, and

- it may help to safeguard existing jobs and investment, and make the best use of improvements already carried out to protect the local environment, eg, screening, access improvements, etc.

7.13 However, there may be some cases where established mineral workings are unsuitably located, or cannot reasonably be extended to meet demands or where the cumulative effect of extensions would be unacceptable, as is often the case for opencast coal sites (see paragraph 3.22), and it will do less environmental harm to open a new site rather than grant permission for an extension. There may be other circumstances where a new location is justified particularly if the mineral deposit has special characteristics not otherwise available locally, or related to special demand circumstances. "Borrow Pits" to provide material for specific major construction projects are a particular example, considered in more detail in Chapter 6.

7.14 Finally it should be stressed that a general preference for extensions is based on land-use planning reasons and does not represent a policy for the protection of existing suppliers or the constraint of competition; the Mineral Planning Authority will not automatically release reserves simply in order to maintain the continuity of production at established mineral working sites.

Policy MP18 - Extensions To Sites

7.15 Proposals for extensions to established mineral working sites will be permitted in preference to new sites provided they can be accommodated in an environmentally acceptable manner.

Additional Sites

7.16 MPG1 advises that plans should indicate areas for possible future working. How precisely this can be done will depend on the extent of knowledge of mineral resources within the plan area, the availability of demand forecasts, and the urgency with which new permissions are needed.

7.17 In this plan two different approaches have been adopted. For bulk minerals - sand and

gravel, limestone, igneous rock and sandstone resources serving the aggregates and industrial markets - the plan, where necessary, identifies specific preferred areas - allocations - where there is a strong accompanying presumption in favour of extraction. This approach is appropriate for these minerals because there is a large body of information about these resources and information is available via MPG6 which provides a firm framework for forecasting demand. Chapters 9 and 10 set out in more detail the factors affecting the selection of these preferred areas.

7.18 New proposals for the working of these minerals outside the allocated sites will be generally resisted except in cases where:

- there is a need for a particular mineral which cannot be met e.g. because an allocated site cannot be worked, or because the need is not anticipated in the plan, or

- minor variations to established workings would result in net environmental benefits; these benefits could include improvements in efficiency in the use of materials, or minimising the production of waste, in line with sustainability objectives.

Policy MP19 - Additional Sites

7.19 Proposals for the working of aggregates or industrial limestone outside permitted and allocated sites will not be permitted, except where:

1) they are required to meet a proven need which would not otherwise be met and their impact on the environment is acceptable, or

2) they involve amending the boundaries of existing operations, and would result in significant net environmental benefits without significantly increasing the level of permitted reserves.

7.20 For other minerals, including opencast coal, clay and vein minerals a different approach has been adopted. Information on resources is more limited and there is no agreed framework for determining demand. For these minerals therefore the preferred approach is to define the criteria against which applications will be judged, rather than identifying specific areas for working. In the case of opencast coal however, the plan (Chapter 13) also identifies areas where future working will be generally resisted having regard to their environmental importance.

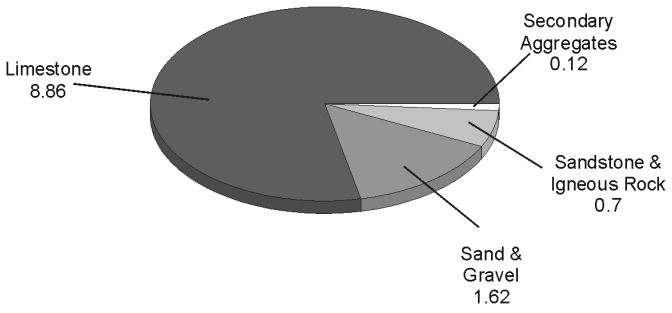
PART III—AGGREGATE MINERALS

Chapter 8—General Issues of Supply and Demand

8.1 Minerals can only be worked where they occur, and MPG1 requires each Mineral Planning Authority to make a contribution to meeting local, regional and national needs which reflects the nature and extent of minerals in its area and other relevant planning considerations. This chapter deals with the basic question of demand for, and supply of, aggregate minerals. Aggregates are minerals employed in the construction industry; roads, houses, schools and commercial and industrial buildings all depend on the supply of these materials for concreting, filling and surfacing purposes. The principal aggregate minerals are sand and gravel and crushed rock, mainly limestone in Derbyshire. Other aggregates produced in the county include igneous rock and sandstone as well as secondary materials from power station ash and colliery minestone. In total Derbyshire produced over 11 million tonnes of aggregates in 1997 as shown in Figure 1.

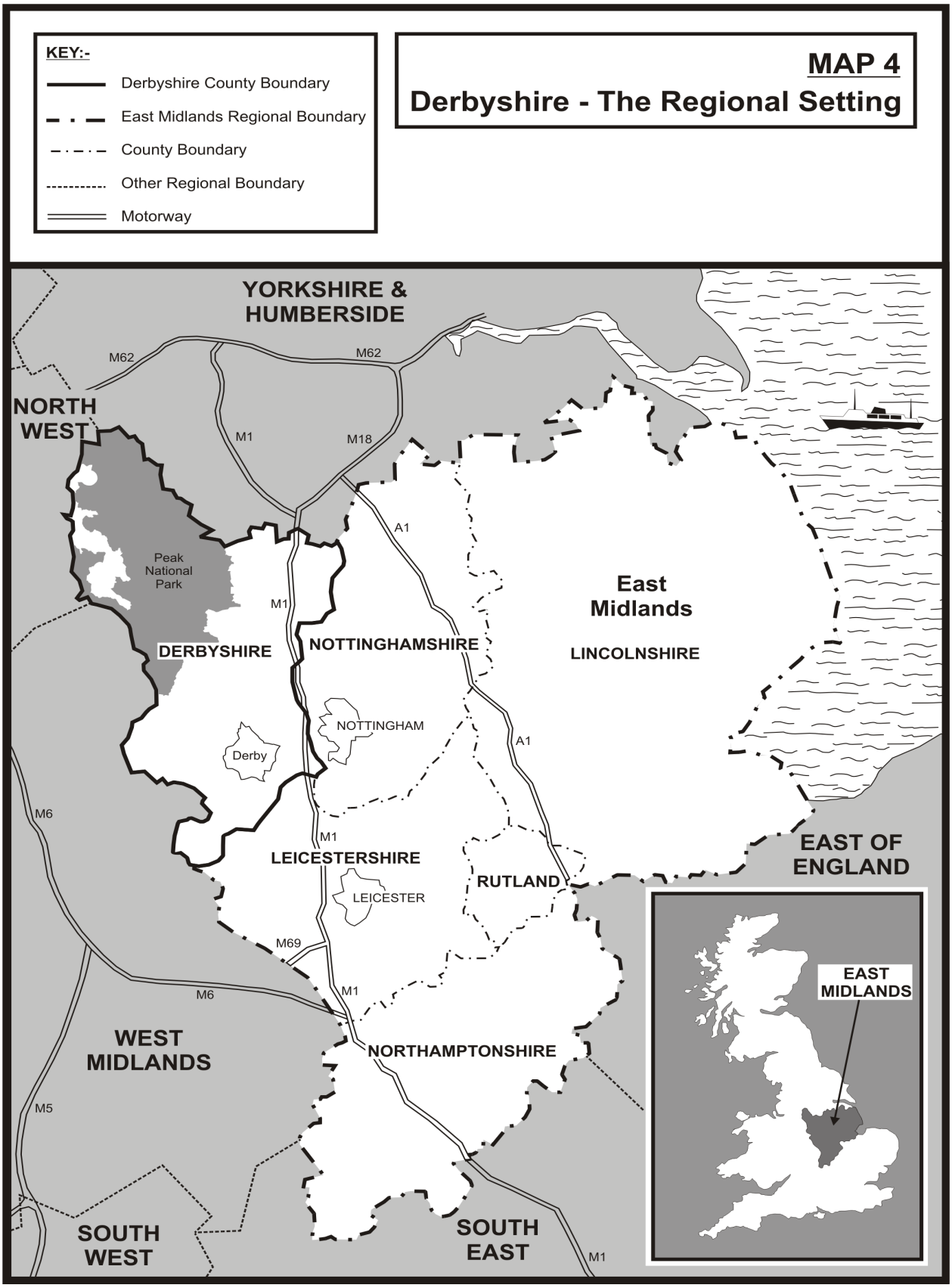
8.2 Government guidance on the provision of aggregate minerals is set out in MPG6, published in 1994. This guidance stresses the need for an adequate and steady supply of aggregates to meet the needs of the construction industry, whilst ensuring that extraction and development are consistent with the principles of sustainable development. MPG6 sets out Regional guidelines which indicate how provision for the supply of aggregates should be made to meet anticipated needs to 2006, taking into account regional imbalances between supply and demand, and drawing on the work of the Regional Aggregates Working Parties which were established in the 1970's to co-ordinate information on the provision of aggregate minerals. They include representatives of the minerals industry, the mineral planning authorities, and central government. Derbyshire is located within the East Midlands Region as shown on Map 4.

Figure 1: Derbyshire (excluding P.N.P.)
Total Aggregates Production 1997



Total 11.3 Million Tonnes

Notes: Figures in Million Tonnes
Source : E.M.W.P.A. Minerals Survey 1997


KEY:-
Derbyshire County Boundary
East Midlands Regional Boundary
County Boundary
Other Regional Boundary
Motorway
MAP 4
Derbyshire - The Regional Setting
YORKSHIRE & HUMBERSIDE
M62
M62
NORTH WEST
M1
M18
A1
Peak National Park
M1
East Midlands
DERBYSHIRE
NOTTINGHAMSHIRE
LINCOLNSHIRE
NOTTINGHAM
Derby
A1
M6
M1
LEICESTERSHIRE
EAST OF ENGLAND
RUTLAND
LEICESTER
M69
M6
M1
WEST MIDLANDS
NORTHAMPTONSHIRE
M5
SOUTH WEST
SOUTH EAST
M1
EAST MIDLANDS

8.3 MPG6 identifies that provision should be made in England for some 3,100 million tonnes (mt) of primary land-won aggregates between 1992 and 2006 comprising 1,200 mt of sand and gravel and 1,900 mt of crushed rock. It is estimated that a further 1,165 mt of aggregates supply will come from other sources such as marine dredged sources, imports and secondary and recycled material. At the regional level, over the same period, the planning authorities in the East Midlands Region are required to make provision for aggregates production as shown in Table 3.

8.4 These figures represent an overall increase in levels of production during the plan period by comparison with the late 1980s and early 1990s. More specifically, they reflect an anticipated increase in the level of crushed rock and secondary aggregates production whilst the level of sand and gravel production is expected to remain broadly constant. There is an increased emphasis in Government guidance on the use of secondary materials such as colliery waste, blast furnace slag, and power station ashes and recycled material such as demolition rubble, with the aim of reducing the proportion of demand to be met from primary aggregates.

8.5 Within the East Midlands Region the Regional Aggregates Working Party determines the breakdown of this regional share of provision for each Mineral Planning Authority's area based on production levels in recent years. The figures for Derbyshire's share of this provision were agreed by the Regional Planning Forum in October 1994, and are set out in Table 4.

Table 3: East Midlands Region - Total Aggregates Production A Comparison of actual production 1987-1991 and anticipated production 1992-2006

	Actual Production 1987-1991	Anticipated Production 1992-2006 (MPG6 Guidelines)	
		Total	5 Yearly Average
Sand & Gravel	73	210	70
Crushed Rock	155	505	168
Secondary Aggregates	16	70	23
Total	244	785	261

Figures in Million Tonnes
Sources: EMWPA Minerals Surveys and MPG6

Table 4: Derbyshire (excluding Peak National Park) Anticipated Aggregate Production 1992 - 2006 (Local Apportionment)

	Anticipated Production (1992-2006) (Local Apportionment)
Sand and Gravel	36
Crushed Rock	137
Total	173

Figures in Million Tonnes

8.6 MPG6 advises that Mineral Planning Authorities should make provision in their development plans for the appropriate local apportionment of the Regional Guidelines. This will give an indication of the production of aggregates that needs to be provided for in the county up to 2006. However, the apportionment figures should not be regarded as inflexible, indeed, it is for the local plan to test their practicality and environmental acceptability. In practice, most of the pressure for new areas of working will occur in the county's sand and gravel resources in the Trent Valley and adjoining areas as discussed in Chapter 9. The implications of meeting the anticipated production for crushed rock are discussed in Chapter 10.

Chapter 9—Sand and Gravel

Background

9.1 Sand and gravel deposits in the Trent Valley river system in Derbyshire and neighbouring counties form the second most important source of sand and gravel in the country, after the Thames Valley. The formation of these "drift" deposits occurred following the last ice age when considerable areas of sand, gravel, silt and clay in the form of glacial and weathered rock deposits were rapidly eroded and deposited in wide tracts alongside the major rivers. The thickness of the river valley deposits can vary considerably ranging from less than 1 metre to 8 or 9 metres thick, but typically averages 3 to 5 metres. The gravel content of deposits is usually high (over 50% and often around 70%) the remainder being sand and fines.

9.2 The other major source of sand and gravel in the county is the Sherwood Sandstones. These 'solid' deposits, having been laid down before the last ice age are much older than the 'drift' deposits of the river valleys; they can thin out completely or occur up to 100 metres thick. The ratio between sand and gravel also varies greatly but the proportion of gravel is usually less than found in the river valley deposits. The Sherwood Sandstones form an important source of 'soft' or building sand within the county, although there is currently only one active operation in this area. Map 5 shows the location of the deposits and the existing permissions for sand and gravel extraction in the County.

9.3 Sand and gravel is primarily used in the manufacture of ready mixed concrete, pre-cast concrete products and as bulk filling material for foundations and embankments. Sand is used for mortars and in asphalting. In Derbyshire a high percentage of sand and gravel production is used for concrete purposes. This is mainly due to the historical concentration of pre-cast concrete product plants within the County. Derbyshire's pre-cast concrete plants serve both a regional and national market producing a whole range of concrete products including blocks, floors, kerbs, pipes and street furniture. Most of the active sand and gravel pits in the county have ready-mixed concrete plants on site.

9.4 Most Derbyshire sand and gravel is used within 10-15 miles of the pits mainly because of the high proportion of the cost attributable to transport, and also because of competition from other sources of aggregates in the area. The most recent information on sand and gravel destinations (East Midlands Working Party on Aggregates survey, 1997) (Fig 2) shows that sales of material won and sold within Derbyshire amounted to 0.79 million tonnes, or about 49% of total output with the remainder exported from the county. Most of this is exported to nearby counties within the East Midlands region, while the most significant destination elsewhere is the West Midlands region.

MAP 5
Sand and Gravel Resources and Sites

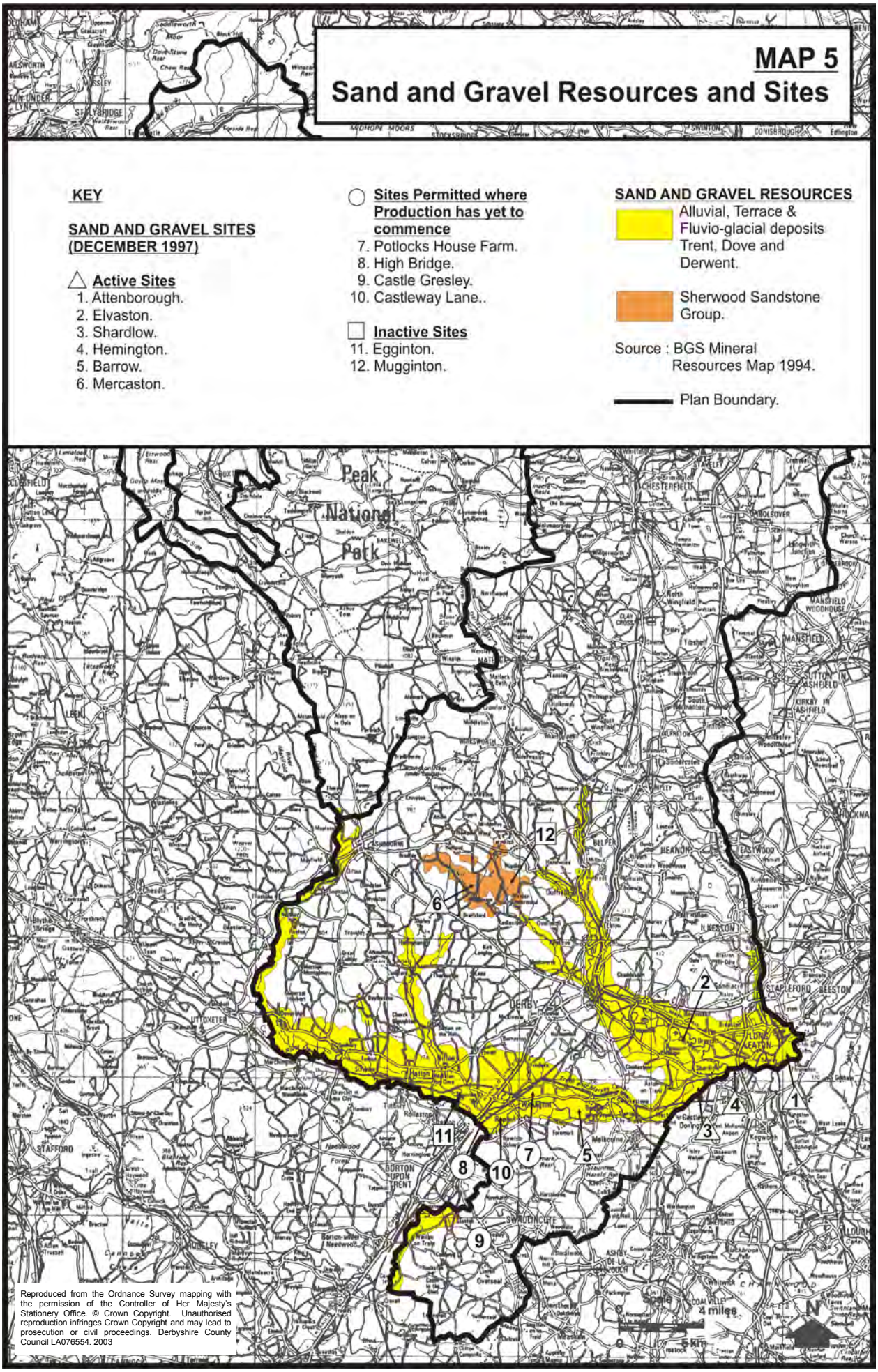
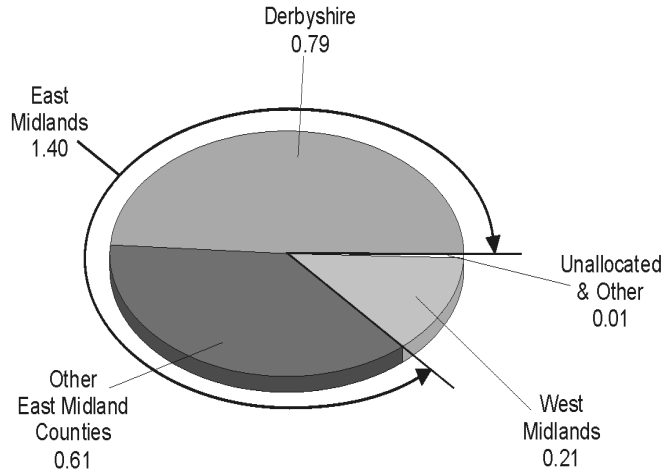


Figure 2: The Distribution of Sand and Gravel Aggregates from Derbyshire 1997



Total 1.62 Million Tonnes

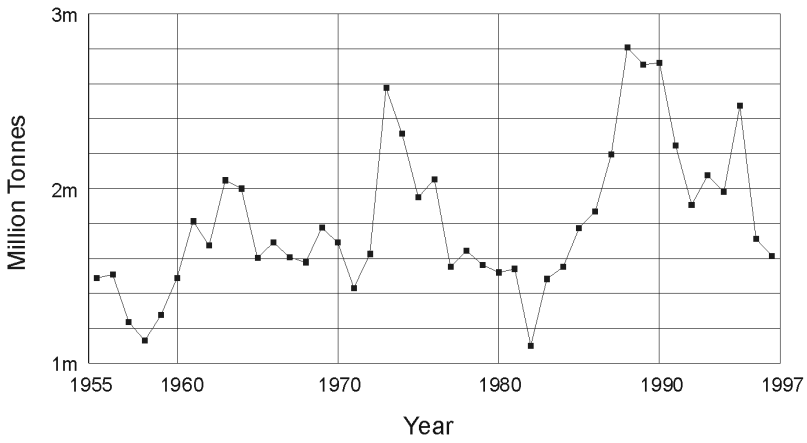
Notes: Figures in Million Tonnes
Source : E.M.W.P.A. Minerals Survey 1997

Production Trends

9.5 Derbyshire's annual production of sand and gravel reached 2.6 million tonnes in 1973 in line with a national construction boom. A period of intense local construction activity continued to sustain production at relatively high levels until the late 1970s, compared to national production which sharply declined. A construction boom in the late 1980s accounted for a new peak of 2.8 million tonnes in 1988. Production remained at around this level for the following two years but fell sharply in 1991 and 1992 as a result of the national recession. These trends are shown in Figure 3. It can be seen that, although fluctuations in the economy have meant that the level of production has followed a very erratic course, in general there has been a steady increase in production levels over this period.

9.6 In the regional context, the East Midlands is the second largest producer of sand and gravel after the South East, producing 11 million tonnes in 1997, which represented around 13% of national sand and gravel production. Results from the East Midlands Regional Aggregates Working Party surveys which began in 1973 show that the East Midlands region has generally increased its share of national production, reflecting the region's above average economic prosperity and some increase in exports to adjacent regions. This trend is unlikely to continue as sand and gravel resources in the East Midlands region become more depleted and pressure increases on the more environmentally sensitive areas for future working.

Figure 3: Derbyshire Production of Sand and Gravel 1955—1997



Note: Figures for 1989 & 1990 exclude production from Barton Pit (since transfered in to Staffordshire)

Sources : E.M.W.P.A. / D.C.C. Minerals Surveys

Working and Reclamation

9.7 There are three main stages in the winning and working of sand and gravel -extraction, processing and reclamation. Extraction initially involves the removal of topsoil, subsoil and overburden. These materials are either used immediately in progressive restoration or stored for replacement at a later stage of the reclamation programme. Extraction is usually carried out in a de-watered working by dragline. The excavated material is then loaded into a hopper feeding a conveyor at ground level, or into dump trucks or barges for transportation to the processing plant.

9.8 At the plant a series of washing, crushing and screening operations grade and sort the minerals into the different sizes of sand and gravel to meet the specifications of the construction industry (for example: grain size, shape and crushing strength). The production capacity of a plant is a measure of the amount in tonnes of material that can be processed and in Derbyshire ranges from about 0.25 to 1 million tonnes per annum. Energy is conserved at the plants by making full use of gravity flow for moving material, hence the height of some of the structures. The final processed material is stored in bins or stockpiles according to size before being used on site or transported to the customer. The large fixed processing plant and stockpile areas can be visually intrusive.

9.9 Although they may continue for a number of years, sand and gravel operations are, in planning terms, considered to be a temporary use of land after which the land can be progressively reclaimed to an acceptable after-use, such as agriculture, forestry, recreation or nature conservation. The shallow nature of sand and gravel workings whilst resulting in high land-take does facilitate restoration. However, working does not

generate large quantities of waste, requiring the importation of fill in many cases, to restore land to original levels. Alternatively, due to the working of sand and gravel below the water table excavated areas will naturally return to the existing water level presenting opportunities for water based after-uses.

9.10 Most of the currently permitted workings in Derbyshire have conditions requiring that they be progressively filled and reclaimed to agriculture although other after-uses have been permitted, such as recreation and nature conservation. The retention of sites in water for recreation or nature conservation may become more common in the future, for a combination of reasons. Firstly, the government now places less of an emphasis on the need to retain land in agricultural use, which accords with the introduction of other policies for "set-aside" and farm diversification. Secondly, suitable fill materials, which include pulverised fuel ash from power stations and construction and demolition wastes are becoming increasingly scarce with the progressive closure of coal-fired power stations and the recycling of materials. Thirdly, there are concerns associated with infilling including the production of landfill gas, the generation of polluting leachates and the disruption of groundwater and surface water flows which may cause flooding. As a consequence of the latter two points the Environment Agency has increasingly imposed stringent controls on the disposal of waste materials in the Trent Valley and adjoining areas reflecting their concern for the quality and flow of ground and surface water.

The Future Extraction of Sand and Gravel

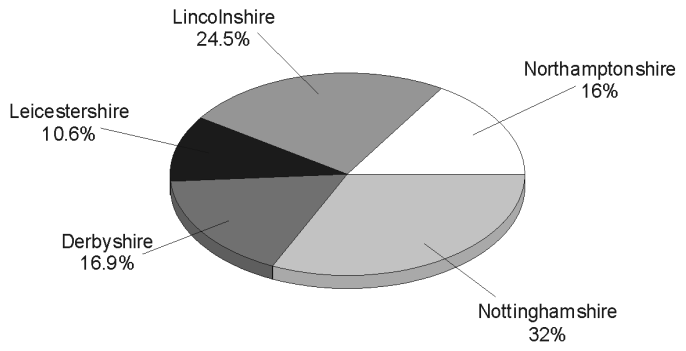
Future Provision

9.11 As outlined in Chapter 8, MPG6 sets out how provision for the supply of sand and gravel for the period 1992-2006 should be met, and, drawing on the work of the Regional Aggregates Working Parties, determines the share of anticipated production that each region is expected to contribute. It is then the responsibility of the Working Parties to determine the breakdown of this regional share for each Mineral Planning Authority within their region. The breakdown for the East Midlands Region as endorsed by the Regional Forum in 1994 is shown in Figure 4.

9.12 The breakdown of anticipated Regional production into local apportionments for the counties in the East Midlands is based on the assumption that each county will maintain its broad share of regional output experienced during the 1989 - 1993 period. On this basis, it is anticipated that production for sand and gravel in Derbyshire will stabilise at an average of about 2.4 million tonnes a year, marginally lower than production levels in the 1987-91 period, with a total production of some 36 million tonnes over the 15 year period from 1992 to 2006, as shown in Table 5.

9.13 In order to ensure that the scale of provision in the plan is sufficient to meet this level of anticipated production consideration needs to be given to the level of permitted reserves and the contribution they are likely to make towards the plan's provision, and any additional requirements that need to be made. Table 6a sets out the reserves and requirements based on information available in December 1997 including the results of the EMRAWP Annual Minerals Survey 1996, and information regarding the commencement of individual operations.

Figure 4: East Midlands Region—Sand and Gravel Production for Aggregate—Regional Apportionment



Source : E.M.W.P.A. Minerals Survey 1994

Table 5: Sand and Gravel Anticipated Production 1992-2006

	Actual Production 1987-1991		Anticipated Production 1992-2006		
	Total (5 yrs)	Annual Average	Total (15 yrs)	5 yearly Average	Annual Average
East Midlands	73	14.6	210*	70	14
Derbyshire (Excl.PNP)	12.7	2.5	36**	12	2.4

Figures in Million Tonnes Sources: EMWPA Minerals Surveys/MPG6

* MPG6 Guidelines
** Local Apportionment

Existing Reserves

9.14 Permitted reserves at the beginning of 1992 totalled 34mt. This comprised 26mt at 7 active sites, 3mt at 2 inactive sites and 5mt at 4 sites where production has not yet commenced. In practice, however, this figure needs to be adjusted to allow for:

(a) planning permissions granted since January 1992,

(b) actual sales since January 1992 and

(c) reserves which are unlikely to be worked during the plan period.

Between the beginning of 1992 and the end of 1996, 8mt of reserves were permitted including a new permission at Barrow-on-Trent, a small extension to Acre Lane Pit (Shardlow) and Borrow Pits in connection with the construction of By-passes at Hatton-Hilton-Foston, Doveridge and to the south of Derby. There has also been a re-assessment of reserves remaining at Repton Pit. During this same period actual sales totalled 10mt.

9.15 In order to ensure that the provision made in the local plan is realistic (in accordance with MPG6 para 60) some 12mt of permissions have been identified as reserves unlikely to be worked during the plan period. The majority of this figure (8.5mt) is at existing operations where reserves exceed what is likely to be required during the plan period. A further proportion is attributable to reserves on sites which it is envisaged may be worked for individual specific construction projects, and in view of the unpredictable nature of such working, a notional 50% of these reserves (1mt) is assumed to remain unworked at 2006. The remaining 2.5mt are unlikely to be worked at all during the plan period; the majority of this is located at a site that is part of the long term development programme of an operator.

Additional Requirements

9.16 These calculations are summarised in Table 6a which concludes that there is a net additional requirement of 6mt; ie 26-20 = 6. However, as indicated in paragraph 9.12 in order to ensure that provision remains at a similar level throughout the plan period, the plan will need to ensure that an average annual production of 2.4mt can be achieved. An important consideration therefore is the contribution that individual units will be able to make towards annual county production.

9.17 During the 5 year period from 1989 to 1993 the annual average production at 8 pits in Derbyshire produced 2.33mt of sand and gravel. These pits were Elvaston, Acre Lane Shardlow, Attenborough, Mercaston, Swarkestone, Repton, Etwall and Chaddesden. Reserves at the latter 4 sites were worked out by 1996 (apart from a small re-assessment of reserves at Repton) and these sites will not therefore contribute towards production in the future. In 1996 a new plant site at Barrow (an extension to Redland's operation at Swarkestone) became operational. New production units at Castleway Lane and Egginton are assumed to come on stream during the plan period acting as replacement capacity for the loss of the Etwall and Repton pits at the western end of the Trent Valley. Furthermore, restrictions on the annual output of Acre Lane Pit, Shardlow

(to 650,000 tpa) will be lifted following construction of a direct access onto the A564 Derby Southern Bypass completed in 1997.

9.18 Existing permissions should enable operations at Mercaston, Castleway Lane and Barrow to remain operational throughout the plan period to 2006. However, in order to ensure that the level of production capacity in the plan area can be maintained in accordance with the guidelines it will be necessary to release additional land particularly towards the end of the plan period. Bearing in mind the unequal distribution of reserves between operators, and the need to allocate sites of a sufficient size to permit comprehensive working and reclamation, it is considered necessary to release a further 6 million tonnes of reserves to allow for continued operations in the period immediately preceding and following 2006. Some of this land will not be worked during the plan period, but failure to identify suitable sites for longer term working would result in a hiatus in production towards the end of the period.

9.19 In total, therefore, it is considered that there is a need to identify an additional 12 million tonnes of reserves during the plan period, having regard to the level of provision to be made for sand and gravel production to 2006, the level and availability of existing permitted reserves at December 1996, and the need to maintain continuity of production at the end of the period.

9.20 As well as ensuring that sufficient provision is made in local plans in relation to local apportionments, Mineral Planning Authorities are also required to make provision for the maintenance of landbanks for non-energy minerals. A landbank is a stock of planning permissions for the winning and working of minerals. MPG6 paragraph 63 advises that Mineral Planning Authorities should include policies in their development plans which provide for the maintenance of a landbank. In the case of sand and gravel Mineral Planning Authorities should aim to maintain a landbank for at least 7 years extraction, unless exceptional circumstances prevail. The landbank requirement is calculated by multiplying the annual provision included in the local plan by the appropriate number of years i.e. 7 years for sand and gravel. This landbank requirement applies to the whole of the local plan area. Although sand and gravel resources in Derbyshire can be divided into two different areas - the Trent Valley Gravels and Sherwood Sandstones - the end uses of both types of sand and gravel are very similar and therefore it would not be appropriate to have a separate landbank for each.

9.21 In preparing development plans, Mineral Planning Authorities should be able to demonstrate that sufficient resources have been identified or can be identified to ensure that the landbank can be maintained at the requisite level throughout the plan period. There should also be a commitment included in plans to ensure that a landbank can be maintained at the end of the plan period in line with the landbank requirements. This commitment is provided in Policy MP16. However there is no requirement at the start of the plan period for full provision to be made for the maintenance of a landbank for the period beyond the end of the plan period. Consequently it will not be necessary for resources to be identified at the time of plan preparation for this purpose although Mineral Planning Authorities will need to be able to demonstrate that such resources can be brought forward should this be necessary. Government guidance recognises, however, that landbanks can only be maintained in practice if the industry come forward with planning applications in the right place at the right time. Table 6b demonstrates that

sufficient provision has been made in the plan to enable the landbank to be maintained at the requisite level throughout the plan period to 2006.

Meeting the Production Requirement

9.22 Having established the additional requirement of sand and gravel reserves needed to satisfy overall provision, consideration needs to be given as to whether the County can meet the level of anticipated production bearing in mind the availability of resources and the impact on the environment.

Table 6: Sand and Gravel– Provision and Requirements
Table 6a: Sand and Gravel Provision

Sand and Gravel Provision	Million Tonnes
Production Requirement 1992-2006 (Local Apportionment)	36
less Actual Sales 1992 - 1996	10
Net production requirement at 31/12/96	26
Permitted Reserves 1/1/92 **plus** Reserves permitted 1992 - 1996 **less** Actual Sales 1992 - 1996 **less** Permitted Reserves unlikely to be worked during plan period ie. to 2006	34 8 10 12
Net Permitted Reserves at 31/12/96	20
Net Requirement 1992 - 2006 **plus** Additional Requirement to maintain continuity of production to 2006	6 6
Total Additional Requirement (Allocations)	12

Table 6b: Sand and Gravel—Landbank Requirement

Landbank Requirement At 2006	
Total Allocations and Total Permitted Reserves not worked at 31/12/96	43
less Net Production Requirement at 31/12/96	26
Remaining Allocations and Permitted Reserves at the end of 2006	17
Landbank Requirement 2007 - 2013	16.8
Anticipated Landbank at the end of 2006	7 years

9.23 In the past the Mineral Planning Authority has expressed concern about the environmental implications of an increase in the scale of sand and gravel working in the Trent Valley, which would create traffic and reclamation problems and have a major impact on the quality of life of those living in the area. In addition an expansion of working into adjoining areas such as the Upper Dove and Upper Derwent Valleys and in the Sherwood Sandstones has been consistently resisted because of their higher landscape quality, relatively low-yielding resources, and poor communications.

9.24 At the same time it is recognised that there is a need to maintain a significant sand and gravel industry in the county to meet the continuing demand for construction materials. As indicated in the previous chapter, MPG1 requires each Mineral Planning Authority to meet its appropriate share of regional and national production, bearing in mind the availability of resources and the impact on the environment. Derbyshire has substantial resources of sand and gravel in the Trent Valley and adjoining areas and whilst the area contains a number of settlements and a variety of natural resources which need to be protected from the impact of mineral working as far as possible, it is considered, following detailed investigation, as described below, that these constraints are not so extensive or of such significance as to preclude continuing mineral working on the scale envisaged in MPG6. It is considered therefore that provision should be made for continuing sand and gravel production in the Trent Valley and adjoining areas in accordance with national and regional guidance.

Policy MP20 Sand and Gravel Provision

9.25 Having regard to national and regional guidance on aggregates, provision will be made for the supply of sand and gravel totalling 36 million tonnes, in the period 1992-2006.

Having regard to the level and availability of permitted reserves at December 1996, and the need to maintain continuity of production, land is allocated to provide for 12 million tonnes of sand and gravel production, in addition to permitted reserves.

The Identification of Additional Sites

9.26 There are currently four active sand and gravel workings within the Trent Valley and adjoining area; three within the County at Attenborough, Shardlow and Elvaston and one, Hemington Quarry adjoining the county boundary in Leicestershire. A further active quarry, Mercaston Pit, lies within the Sherwood Sandstones. Another three sites with planning permission at Barrow-on-Trent, Egginton and Castleway Lane, Willington, all within the Trent Valley and adjoining area, are likely to begin production during the plan period. It is estimated that the new permitted sites together with the existing active sites should be capable of meeting anticipated production until around the turn of the century; after this time, further areas of workable reserves will need to be made available.

General Assessment

9.27 In seeking to allocate additional land for mineral working a general assessment of

locational issues was carried out before focusing on more detailed site investigation. The first consideration was the quality and quantity of sand and gravel deposits. Information available from the mineral companies and other sources indicates that the Trent, Lower Dove and Lower Derwent Valleys contain the most commercially viable deposits. Whilst parts of these valleys have already been worked out and contain areas with existing planning permission for working, indications are that there are more than sufficient workable deposits remaining to meet the additional land requirement.

9.28 An assessment was also carried out of the comparative landscape quality of different areas. It was found that in the Upper Dove and Upper Derwent Valleys and in the Sherwood Sandstones the undulating topography, woodland and watercourses combine to create a generally attractive landscape. Indeed a small part of the Sherwood Sandstone deposit lies within the Derbyshire Special Landscape Area - a designation which includes the finest landscape in the county, outside the National Park. In contrast the river valleys of the Lower Dove, Trent and Lower Derwent are flatter with fewer features that contribute to attractive landscape.

9.29 A further consideration both environmentally and economically is the importance of good communication links to the major markets in order to minimise the impact of traffic on local communities, and because a high percentage of the delivered cost of aggregate is attributable to transport. The Lower Dove, Trent and Lower Derwent areas already have relatively good accessibility to the major road network and this has improved even further with the completion of the A50 Stoke-Derby link road. By comparison the Upper Dove and Sherwood Sandstone areas are more remote and have relatively poor communication links to the major markets.

9.30 Lastly, following advice in MPG6, and in line with Policy MP18, there is a general preference for extensions to existing mineral workings rather than proposals for mineral working on new greenfield sites, provided that they can be carried out in an environmentally acceptable manner. The opportunities for realising this preference are, of course, to be found in the areas where the majority of active and permitted sites are located i.e. mainly within the Trent, Lower Derwent and Lower Dove Valleys.

9.31 The general assessment showed that the areas of the Sherwood Sandstones, Upper Dove Valley and Upper Derwent Valley are particularly constrained in terms of the quantity and quality of the mineral deposit, the quality of the landscape, and the relatively poor communication links with the major markets. The preferred area of search for additional sand and gravel provision is therefore the Lower Dove, Lower Derwent and Trent Valley area.

Detailed Assessment

9.32 The detailed search for specific sites, therefore, has focused on the area identified above. Government guidance in MPG6 advises that, to ensure as far as possible that the areas identified in the development plan can be translated into workable reserves, mineral planning authorities should make reasonable efforts to satisfy themselves that the land is underlain by economically workable deposits of mineral and likely to become available to the minerals industry within the plan period. As part of the evaluation of potential sand and gravel sites, therefore, mineral operators were asked to provide

information in respect of sites within the Lower Dove, Lower Derwent and Trent Valley areas in which they had an interest.

9.33 Approximately 30 potential sites have been investigated in detail, of which about two thirds involved extensions to existing or permitted operations. Examination of the potential sites has taken place with due regard to national planning policy guidance, policies in the Approved Derbyshire Structure Plan and in consultation with the Ministry of Agriculture Fisheries and Food, the Environment Agency, and the Highway Authority. Specialist advice has been sought on matters such as archaeology and nature conservation. Particular consideration has been given to the potential impact of sand and gravel working on the environment and whether measures could be taken to eliminate or reduce such impact to an acceptable level. The main factors taken into account are outlined below.

Disturbance to Local Communities

9.34 Within the river valleys, deposits often extend up to and beneath towns and villages and the working and processing of minerals may give rise to visual intrusion, noise, dust, vibration and heavy lorry traffic on local roads. In assessing potential sites and locations, a major objective has been to ensure that the effects of mineral working on settlements can be reduced to an acceptable level, bearing in mind the measures available to mitigate these effects e.g. landscaping and screening, buffer zones, traffic mounds, lorry sheeting, water spraying, wheel washing etc.

Landscape Quality

9.35 Sand and gravel working, being relatively shallow, has a relatively high land-take, leading to the loss of fields, hedgerows, trees, etc. No special landscape policies apply in the Trent Valley and adjoining areas, but in assessing potential sites, consideration has been given to the visual impact of working on the surrounding landscape and the opportunities for minimising this impact, for example, through measures to protect key features and by the imposition of screening requirements.

Water Resources

9.36 There is a close relationship between sand and gravel deposits and water resources. Extraction, reclamation and other operations can interfere with surface and groundwater supplies and can interrupt drainage and flood flow. The extraction of sand and gravel is essentially the removal of an aquifer. During periods of dry weather sand and gravel deposits provide important base flow support to water courses, removal of such deposits and infilling with impermeable material can cause some disruption to ground water flows. Advice from the Environment Agency has been sought on the suitability of potential sand and gravel sites with regard to hydrogeological issues.

Agricultural Land

9.37 Most mineral workings affect agricultural land. Government advice is that the best and most versatile agricultural land (Grades 1, 2 and 3a of the MAFF classification) is a national resource for the future and should in general be protected from irreversible

development. Therefore, although the feasibility of restoring sites to a high standard has been taken into account, preventing development on high quality land remains an important objective. Advice from MAFF has been sought on the suitability of potential sand and gravel sites with regard to agricultural issues.

Conservation Features

9.38 The impact of sand and gravel workings on conservation interests, both man-made and natural, has been an important consideration in the assessment of sites. These include Conservation Areas, Listed Buildings, Scheduled Ancient Monuments, Historic Parks and Gardens, Sites of Special Scientific Interest, buildings of historic and architectural interest, archaeological sites and wildlife and geological sites. There is a large number of archaeological remains in the Trent Valley which is also very important as a wildlife 'corridor' within the county.

Transport

9.39 The transport of sand and gravel to customers and the carrying of fill material to sites for reclamation schemes, is most likely to be by road. The Trent Valley and adjoining areas are well served by major roads capable of accommodating heavy road traffic with good links to the national road network. Communications have improved further with the completion of the A50 Stoke-Derby link road providing by-passes for some settlements. In many cases, however, local roads linking potential sites with the main road network are not designed for heavy lorry traffic and may pass through village centres. Account has therefore been taken of the potential environmental impact of lorry traffic.

Land Ownership

9.40 Although not strictly a planning matter, the ownership or control of land has a significant bearing on the availability of mineral resources for extraction. It would be unrealistic to propose areas of future working in which mineral operators have not or would not be able to obtain an interest. The pattern of ownerships within the industry inevitably influences the order and timescale in which extraction is likely to take place; it is known that a considerable proportion of the resource area is either owned or controlled by the sand and gravel industry. Therefore, whilst land ownership has not been a major factor in assessing the availability of potential sites, it has been taken into account.

Extensions

9.41 The extension of existing sites may have benefits such as avoiding additional disturbance that would be caused by the development of new plant and opening up of greenfield sites. Moreover, they may involve working in areas where measures to deal with the impact of operations have to some extent already been carried out. On the other hand there may be circumstances where established mineral workings are unsuitably located or where they cannot reasonably be extended to meet demand or where the cumulative effect of extensions would be unacceptable. These issues are considered further - Chapter 7, paragraphs 12-14 and Chapter 3 paragraph 22.

9.42 In assessing potential sites for future working, therefore, there has been a presumption

in favour of extending existing sites and using existing processing plants before establishing new operations on greenfield sites, provided that this could be achieved in an environmentally acceptable manner.

Proposed Allocations

9.43 The detailed site assessment showed that there is sufficient land available, without overriding environmental constraints, lying adjacent to active or currently permitted sites, to meet the anticipated production during the plan period. In view of these findings, the sites selected for allocation all comprise extensions to existing operations or to sites with planning permission for future working. No new greenfield site identified during the assessment offered a better balance of advantages than the preferred sites which have been allocated.

9.44 Extensions are proposed to the existing active sites at Attenborough Pit, Elvaston Quarry, Shardlow Pit and Heminton Quarry. An extension is also proposed at Egginton Pit which is a partly worked but currently inactive site. It is the intention that all the proposed extraction areas will be worked via established plant and access arrangements, and will follow on after the cessation of extraction of existing permitted areas, unless significant environmental benefits would result in alternative arrangements.

9.45 The proposed allocations are shown on the 1:25,000 scale Inset Maps 1-5. These maps also show the extent of currently permitted sites on adjoining land. The boundaries of the allocations have been drawn along physical features wherever possible. It is important to note that the identification of an area as an allocation does not imply that the whole of this area is considered suitable to be worked. The precise boundaries of the working areas and features to be retained such as buffer zones, wildlife sites and areas for additional landscaping and screening etc. and other detailed matters, will be determined at the planning application stage. Not all the land proposed will be worked during the period to 2006. Planning applications for working the allocated sites will be subject to all the relevant policies in the Plan. The Mineral Planning Authority will require the submission of satisfactory working and reclamation schemes which seek to ameliorate the impact of mineral working on the environment and ensure reclamation to an acceptable after-use; in particular, proposals will need to address the principal planning requirements identified in Appendix A.

Policy MP21 : Sand and Gravel Sites

9.46 Land is allocated for sand and gravel extraction as shown on the proposals map, at:
Attenborough Pit, Long Eaton
Elvaston Quarry
Shardlow Pit
Egginton Pit
Hemington Quarry

Proposals for sand and gravel working at these sites will be

permitted provided:

1) the processing and distribution of the material produced at the site will be carried out via the established and permitted plant areas and access arrangements, unless there are significant environmental benefits in alternative arrangements and

2) the proposed extraction will follow on after the cessation of sand and gravel extraction from the existing permitted areas, unless there are significant environmental benefits in alternative phasing.

9.47 It is estimated that the proposed sites will yield in the order of 12 million tonnes of sand and gravel, from approximately 300 ha of land, as set out in Table 7. The estimated yield takes into account anticipated areas of sterilisation and the area measured is the site area defined on the Proposals Map. A description of the allocated sites is set out in Appendix A including a brief planning history, the environmental consequences of working sites and the principal requirements to be taken into account at the planning application stage.

Table 7: Proposed Sand and Gravel Sites

Site	Area (Hectares)	Estimated Yield (Million Tonnes)
Attenborough Pit, Long Eaton	49	1.6
Elvaston Quarry	68	1.7
Shardlow Pit	93	5.0
Egginton Pit	40	1.6
Hemington Quarry	35	2.1
Total	285	12.0

Sherwood Sandstones

9.48 The Sherwood Sandstone deposits lie within more attractive landscape areas than the River Valley deposits. They are more remote in terms of their links to the main highway network and they are more variable with regard to the quality and quantity of the deposit. They do, however, provide a source of material for nearby concrete works and they form the most important source of building sand within the county. In view of these factors it is considered that the Sherwood Sandstones should continue to contribute towards the county's anticipated production of sand and gravel in accordance with national and regional guidance. At present, there are sufficient

reserves to last to 2006 and, therefore, it is considered inappropriate to allocate additional land within the Sherwood Sandstones and any proposals for sand and gravel working or new sites will be generally resisted. However, in view of the scale and nature of existing permissions, proposals for extensions or variations to their boundaries may provide opportunities for achieving significant environmental benefits including those relating to sustainability objectives, for example by encouraging the efficient use of materials or avoiding the sterilisation of resources, and may involve the relinquishment of permissions or part-permissions. There may be cases where these benefits would outweigh the disturbance created by the development without significantly increasing the level of permitted reserves, and some proposals may be justified on this basis.

Policy MP22 - Sherwood Sandstones

9.49 **Having regard to national and regional guidance on aggregates and the level and availability of permitted reserves, proposals for the extraction of sand and gravel in the Sherwood Sandstones from new sites will not be permitted except where they are required to meet a proven need which would not otherwise be met and their impact on the environment is acceptable. Proposals for extensions or variations to boundaries of existing operations will be permitted only where they would result in significant net environmental benefits without significantly increasing the level of permitted reserves.**

Chapter 10—Crushed Rock Policies

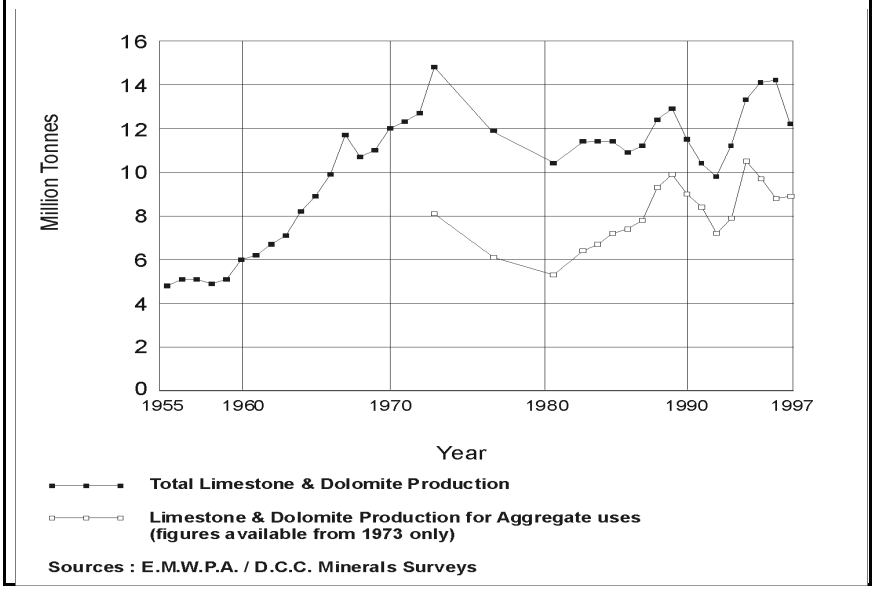
Limestone

10.1 Derbyshire has long been one of the two most important limestone producing areas in the country. The County of Derbyshire, excluding the Peak National Park, produces the second highest annual output of limestone nationally and this limestone is produced in three main areas (see Map 6):

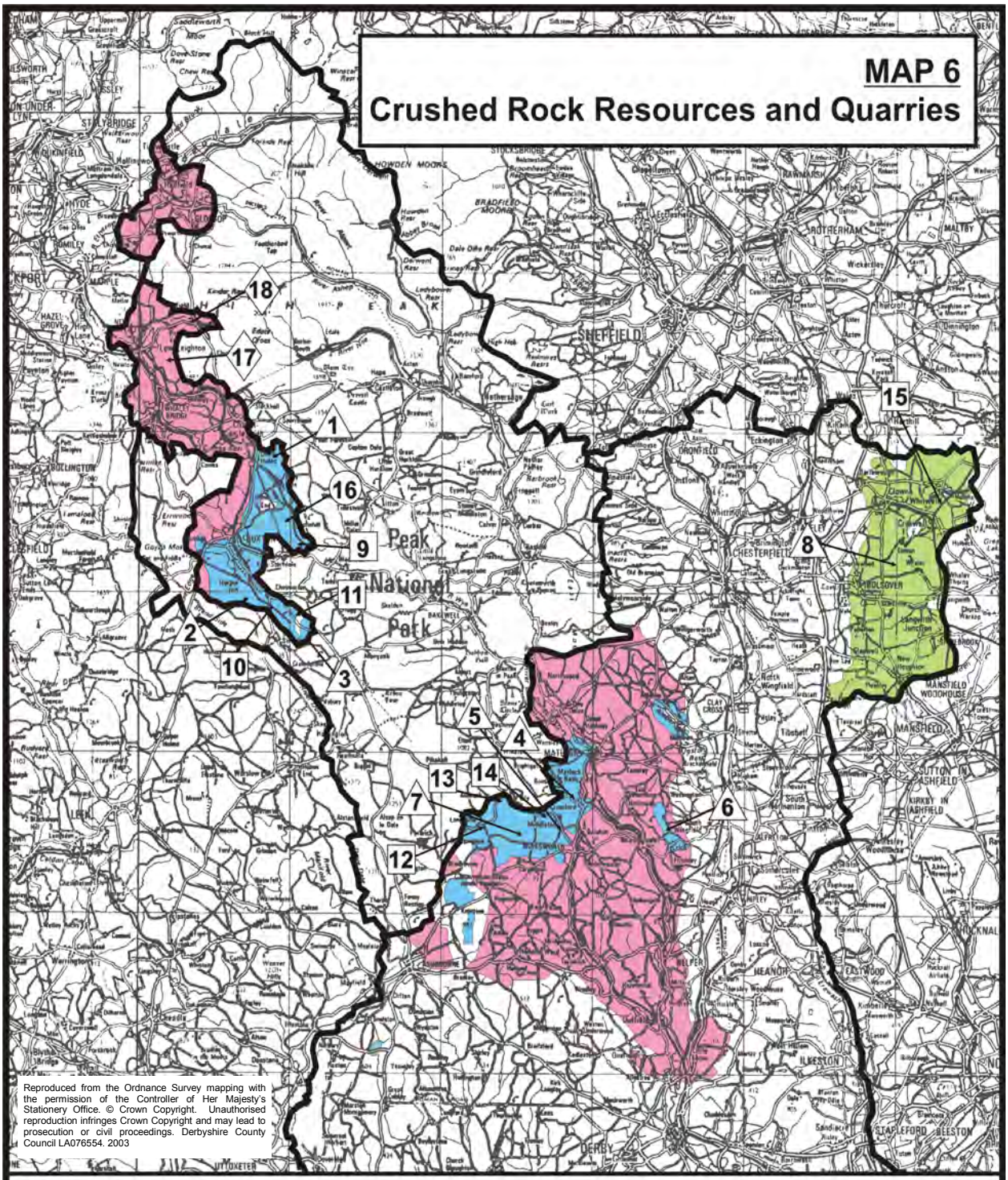
- **the Buxton area** of Carboniferous Limestone, from Dove Holes to Earl Sterndale
- **the Wirksworth area** of Carboniferous Limestone, from Longcliffe to Crich
- **the Whitwell/Bolsover** area of Permian Limestone, east of Barlborough to Hardwick Hall.

10.2 All three of these areas produce limestone for both the aggregates and the non-aggregates/industrial markets. The use of limestone for aggregates depends primarily on the physical properties of the rock and is a basic ingredient in the construction industry, providing concrete aggregates, filling materials and a major source of roadstone. Limestone produced for industrial purposes depends primarily on the chemical properties of the stone, and this is discussed in detail in Chapter 12.

Figure 5 : Derbyshire (excluding P.N.P.) Limestone & Dolomite Production Total/Aggregate Uses 1955-1997



MAP 6
Crushed Rock Resources and Quarries



KEY

CRUSHED ROCK QUARRIES (DECEMBER 1997)

△ **Limestone Primarily Aggregate Use**

1. Dove Holes.
2. Hillhead.
3. Dowlow.
4. Dene Quarry.
5. Middle Peak.
6. Crich Quarry.
7. Bone Mill.
8. Bolsover Moor.

□ **Limestone Primarily Industrial Use**

9. Tunstead / Old Moor.
10. Brierlow.
11. Hindlow.
12. Longcliffe.
13. Grangemill.
14. Middleton Mine.
15. Whitwell.

○ **Igneous Rock**

16. Waterswallows.

◇ **Sandstone**

17. Birch Vale.
18. Hayfield.

CRUSHED ROCK RESOURCES

- Millstone Grit.
- Permian Limestone.
- Carboniferous Limestone.

Source : BGS Mineral Resources Map 1994.

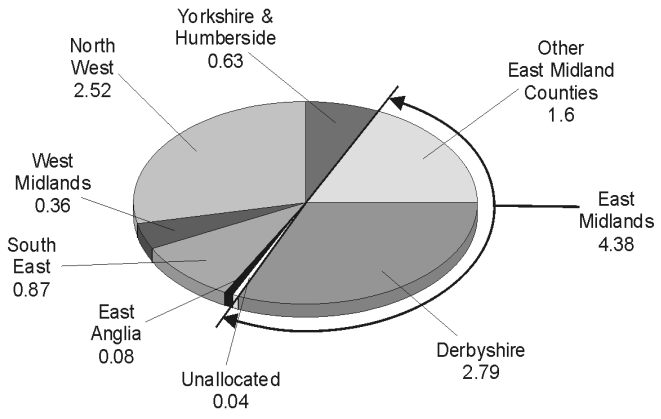
Plan Boundary.

10.3 "Limestone" is the name given to the group of sedimentary rocks, in which the calcium carbonate ($CaCO_3$) content exceeds 50%. Sometimes there is a significant content of the double carbonate mineral, calcium magnesium carbonate, ($CaMg(CO_3)_2$). Where this occurs and where it is accompanied by a significant quantity of magnesium carbonate ($MgCO_3$) the mineral is known as "dolomite", and this is a characteristic of the Permian Limestone area in the north east of the county.

10.4 The total output of limestone from quarries in Derbyshire outside the Peak National Park (See Figure 5) increased significantly from 1981 to a peak of nearly 13 million tonnes in 1989 as a result of a boom in construction, although this was less than the previous peak output of 14.7 million tonnes in 1973. Output fell sharply in 1990 and 1991 before recovering to about 12 million tonnes in 1997. This increase may be partly due to a shift in production by operators from their reserves within the National Park to reserves outside, and partly due to a reduction in the number of alternative points of supply in adjoining areas such as the North West. These overall figures also disguise a difference in trends between aggregate and non aggregate limestone. Whilst there was a decline in the output of industrial limestone in Derbyshire from 1973 to 1991, aggregate limestone production rose steadily throughout the 1980s. As a result, aggregates production, as a proportion of total limestone production, has now increased to over three quarters compared with a little over half in 1981.

10.5 In recent years, Derbyshire as a whole, including the Peak National Park, has contributed about 15 or 16% of total UK production of limestone and dolomite, though the share of national output from the County outside the Peak National Park

Figure 6: The Distribution of Limestone & Dolomite Aggregates from Derbyshire 1997



Total 8.86 Million Tonnes

Notes: Figures in Million Tonnes
Source : E.M.W.P.A. Minerals Survey 1997

decreased from nearly 11% in 1986 to about 8% in 1991. The distribution of sales of limestone and dolomite aggregates from Derbyshire is shown in Figure 6. Around three quarters of Derbyshire's limestone aggregates production is sold outside the County - one of the highest levels of county exports in the country. The largest share of these exports is to Greater Manchester with Nottinghamshire being the second most important export destination. Smaller volumes are exported to more distant markets including Yorkshire and Humberside, West Midlands and South East England.

Sandstone

10.6 Sandstone occurs in Derbyshire in the High Peak area north of Buxton and down the centre of the county in the Derwent Valley from Hathersage to Little Eaton (see Map 6). It is a rock formed from an accumulation of grains of sand, predominantly quartz from the weathering of rock. When the rock is coarse-grained, with angular particles, as occurs in Derbyshire, it is known as gritstone. Sandstone is extracted and crushed for use as aggregates at Birch Vale, near New Mills; it is also extracted intermittently at Hayfield and on a small scale from several other places throughout the area, for use as building stone (see Chapter 14). It should be noted, of course, that the Sherwood Sandstones are different in that they contain sand and gravel deposits and are therefore considered in Chapter 9 (paragraph 9.43).

10.7 Production levels of aggregates from sandstone are very small compared with limestone and dolomite. Whilst total resources within the county are large, sandstone deposits of acceptable quality for use as aggregates are much more scarce and this substantially restricts the demand for their exploitation.

Igneous Rock

10.8 Igneous rock is an "intrusion" of molten material that has solidified. In Derbyshire the only operational site is near Buxton where a deposit of basalt is worked to produce roadstone aggregate. This operation fulfils a limited but special need for high specification hard-wearing surfacing for roads; permitted reserves, which extend to its geological limits, may become exhausted during the plan period, but there are no known alternative workable resources of igneous rock in the county that could supply this market. Other intrusive deposits may be found elsewhere in the county and any proposals to exploit these will be considered in the light of Policy MP23 and the general policies in this plan.

Working and Reclamation

10.9 The extraction of hard rock has, by its nature, the potential for substantial impact on the environment. Because of the scale of the operations and the relatively small quantities of waste material involved it is not generally possible to restore land to its original levels following the completion of working. This means that the configuration of the land is changed permanently, although where the operation can be designed so as to be visually contained by the existing form of the land or by landscape features established in advance of working, visual impact can be limited. However, it is difficult

to achieve progressive restoration of crushed rock quarries, although an early start can often be made in treatment of the final face or, sometimes, parts of the quarry floor.

10.10 When the working of the mineral has ceased the reclamation and after-use of quarries will depend to a large extent on the depth of the quarry in relation to the level of the surrounding land and of the water table. Where the working depth of operations is not too great the quarry floor can sometimes be restored to agricultural use or to accommodate built development, if appropriate. In remoter locations, or where there is little development pressure, natural regeneration is more likely, and some former quarries have developed into sites of natural history importance. The existing crushed rock operations in Derbyshire are shown on Map 6.

The Future Extraction of Crushed Rock Aggregate

10.11 As outlined in Chapter 8, MPG6 sets out how provision for the supply of crushed rock for the period 1992-2006 should be met, and, drawing on the work of the Regional Aggregates Working Parties, determines the share of anticipated production that each region is expected to contribute. It is then the responsibility of the Working Parties to determine the breakdown of this regional share for each Mineral Planning Authority within their region (the local apportionment). The local apportionment figures for the East Midlands were endorsed by the Regional Planning Forum in October 1994.

10.12 The local apportionment for Derbyshire is based on the assumption that the County's share of regional crushed rock production during the 1989-1993 period will be broadly maintained during the plan period, as shown in Table 8.

10.13 This table shows that production of crushed rock - limestone, sandstone and igneous rock - for aggregates purposes, is forecast to decrease slightly from recent production

Table 8: Crushed Rock for Aggregates (Limestone, Sandstone and Igneous Rock) Anticipated Production 1992—2006

	Actual Production 1987-1991		**Anticipated Production 1992-2006**		
	Total (5 yrs)	Annual Average	Total (15 yrs)	5 yearly Average	Annual Average
East Midlands	155	31	505*	168	34
Derbyshire (Excl.PNP)	49	9.4	137**	46	9

Figures in Million Tonnes Sources: EMWPA Minerals Surveys/MPG6

*MPG6 Guidelines **Local Apportionment

levels. This will result in a total production of some 137 million tonnes over the 15 year period to 2006. The total amount of permitted reserves at the beginning of the plan period is 1078 mt, of which 300 mt are estimated to be reserves of "industrial" limestone (see Chapter 12) and around 5 mt are estimated to be sandstone and igneous rock reserves. There are a further 41 mt of permitted reserves at inactive sites which can be identified now as reserves which are unlikely to be worked during the plan period. It is therefore appropriate to take into account that these reserves are unlikely to contribute towards the County's provision. The remaining permitted reserves, which are mostly located at active sites, therefore, amount to over 700 mt (see Table 9). Therefore in view of the level of permitted reserves and the anticipated scale of production there will be no overall need to release any new reserves during the plan period.

10.14 Workings will continue to be concentrated in the Buxton and Wirksworth areas in line with the pattern of existing permissions with smaller operations in the Permian Limestone and elsewhere; the main emphasis of further working will be on the rationalisation and improvement of the existing pattern of operations.

Table 9: Crushed Rock - Reserves and Requirements

	Million Tonnes
Production Requirement (1992-2006) Local Apportionment	137
Total permitted Limestone reserves as at 1 January 1992 **Plus** reserves permitted during 1992/3/4/5	1078
Less permitted reserves during 1992-2006 at sites likely to remain unproductive	41
Less estimate of permitted reserves of "industrial" limestone	300
Net permitted reserves of Aggregate Limestone	737
Plus permitted reserves of Sandstone/Igneous rock	5
Net permitted reserves of crushed rock	742

10.15 This Chapter has established that there is no overall need to release new areas of land for the production of crushed rock for aggregates. Because of the diversity of the markets for crushed rock aggregates and the variety and distribution of existing permitted reserves, an assessment was carried out of all the existing operations individually to determine how far specific market demands could be met from existing reserves during the plan period. Mineral operators were asked to provide information on the future prospects of sites in which they had an interest. The assessment of operations concluded that there should be no difficulty in existing permitted reserves meeting specific market demands for crushed rock during the plan period and beyond. The assessment, which included all crushed rock operations in the county, including those with reserves of industrial quality limestone, is summarised in Appendix B.

10.16 There is therefore no need to allocate any additional land for the extraction of crushed rock for aggregates, and proposals for new sites for this purpose should be generally resisted. However, in view of the scale and nature of many existing permissions, proposals for extensions or variations to their boundaries may provide opportunities for achieving significant environmental benefits including those relating to sustainability objectives, for example by encouraging the efficient use of materials or avoiding the sterilisation of resources, and may involve the relinquishment of permissions or part-permissions. There may be cases where these benefits would outweigh the disturbance created by the development without significantly increasing the level of permitted reserves, and some proposals may be justified on this basis.

Policy MP23 : Crushed Rock For Aggregates

10.17 Having regard to national and regional guidance on aggregates and the level and availability of permitted reserves, proposals for the extraction of crushed rock for aggregates from new sites will not be permitted except where they are required to meet a proven need which would not otherwise be met and their impact on the environment is acceptable. Proposals for extensions or variations to the boundaries of existing operations will be permitted only where they would result in significant net environmental benefits without significantly increasing the level of permitted reserves.

Chapter 11—Secondary Aggregates

Introduction

11.1 The UK Strategy for Sustainable Development, and MPG6, have given an increased emphasis to the objectives of sustainable development and have defined how they should apply to minerals planning. One of the main reasons for caring about environmental quality is a need "to conserve those common natural resources that have an economic value and which are in finite or potentially finite supply". The aim is to conserve minerals as far as possible, whilst ensuring an adequate supply to meet the needs of society; and to minimise production of waste and encourage the efficient use of materials.

11.2 In keeping with this commitment the government advises that it is in the national interest that aggregates, and products manufactured from aggregates, should be recycled wherever possible, and that secondary materials, such as mineral and construction waste, should be used as a substitute for primary, 'land-won' aggregates wherever this is feasible and environmentally acceptable. Other suggestions in MPG6 include the use of super-quarries in Scotland to supply large amounts of aggregates to south-east England by sea, and, possibly, the importing of aggregates from Scandinavia. The effects of this changed approach will be to reduce the demand for primary aggregates in England and reduce the area of land required for their extraction, particularly for sand and gravel and limestone; it will help to conserve high quality minerals which might otherwise be used for low grade purposes; it will encourage the putting of waste materials to good use, remove unsightly waste tips, and reduce the amount of waste requiring disposal by other means.

11.3 The government is therefore committed to a significant increase in the use of secondary and recycled material in the construction industry. The main sources of secondary aggregates are:

- materials produced as waste from other mineral operations, or as industrial by-products such as colliery spoil, quarry waste, power station ash and blast furnace slag, and

- construction and demolition wastes which can be recycled for use as aggregates, including builders rubble and road planings.

These commodities can be used to provide bulk fill for construction projects, for cement manufacture, for road surfacing, and for the manufacture of light-weight aggregate blocks.

Future Production of Secondary Aggregates

11.4 In Derbyshire the main sources of secondary aggregates are power station ash from the Trent Valley Power Stations, colliery spoil or minestone, and demolition waste. Production from these sources is thought to total about 0.5 million tonnes per annum, but information is very limited. Output of ash and colliery spoil is falling with the decline of the coal industry and the run down of coal-fired power stations, but there

are still significant quantities of colliery waste.

11.5 Nationally it is estimated that perhaps 10% of aggregates consumption comprises secondary materials. MPG6 envisages that production of secondary aggregates will almost double by 2006. In Derbyshire, this would mean an increase in production to an average of around 700,000 tonnes per annum during the plan period, producing a total of some 11 million tonnes between 1992 and 2006. How far these forecasts can be achieved will depend on a number of factors which lie largely outside the influence of minerals local plans. Transport costs are a major disincentive to the widespread use of secondary materials. There is also a need to modify standards and specifications which at present restrict the use of recycled materials. The Government is encouraging a greater use of waste and recycled materials in road construction projects and has commissioned research on how to increase their use in practice which is likely to lead to further policy initiatives in the future. The effects of all these factors will be assessed at the first review of the Minerals Plan. In the longer term, as primary aggregates become scarcer and as landfill becomes more expensive, (as a consequence of the Environmental Protection Act 1990) the recycling of waste materials is likely to become steadily more economic.

11.6 The Mineral Planning Authority generally supports initiatives for the use of secondary and recycled materials where they can be carried out in an environmentally acceptable manner. Existing mineral sites, landfill or waste management sites might be suitable locations for secondary aggregates recycling in view of the functional links between quarrying and inert waste recycling. It should be appreciated, however, that the extraction and processing of waste materials may cause environmental problems in certain circumstances, eg, dust, noise and traffic problems associated with recycling plant, or the slow, piecemeal working of waste tips which might otherwise be subject to comprehensive reclamation schemes. It will be important to ensure that such damaging effects are acceptable and this will be assessed in the light of other policies in the plan, including Policy MP1; they will also need to be balanced against the benefits to be achieved through a greater use of secondary materials.

Policy MP24 - Secondary And Recycled Materials

11.7 Proposals for the production of secondary aggregates from mineral wastes and other low-grade resources, where the materials to be produced will be used as substitutes for primary aggregates, will be permitted provided:

1) they can be carried out without unacceptable damage to the environment and

2) they do not involve the re-working of tips where the land has been satisfactorily reclaimed, or has naturally regenerated, to an acceptable after-use.

11.8 Where a proposal involves the erection of plant or machinery for the re-cycling or reprocessing of mineral waste, there will be a particular concern to minimise any

adverse effects on local amenity; these concerns are dealt with in more detail in Chapter 6 which considers mineral-related development generally. The re-working of old tips to recover economically important minerals such as fluorspars, barytes and coal is also covered separately in Chapter 6.

PART IV—NON-AGGREGATE MINERALS

Chapter 12—Industrial Limestone

Background

12.1 Derbyshire is one of the most important limestone-producing areas in the country. Chapter 10 provides a brief outline of the geological aspects, production trends and sales distribution patterns for limestone generally, before concentrating on the issues concerning the use of limestone for aggregates. This chapter is concerned with the use of "industrial" limestone for non-aggregates purposes, ie limestone that is supplied to industrial markets because of its chemical properties.

12.2 Therefore, whilst the use of limestone for aggregates depends primarily on the physical properties of the rock, the supply of "industrial" limestone depends primarily on its chemical properties. These properties make it a valuable mineral for a very wide range of uses. It is used in the agricultural and steel industries, in cement manufacturing, sugar refining and glass making and is used as a filler in a range of manufactured products such as paints, plastics, rubber, sealants, toothpaste, etc.

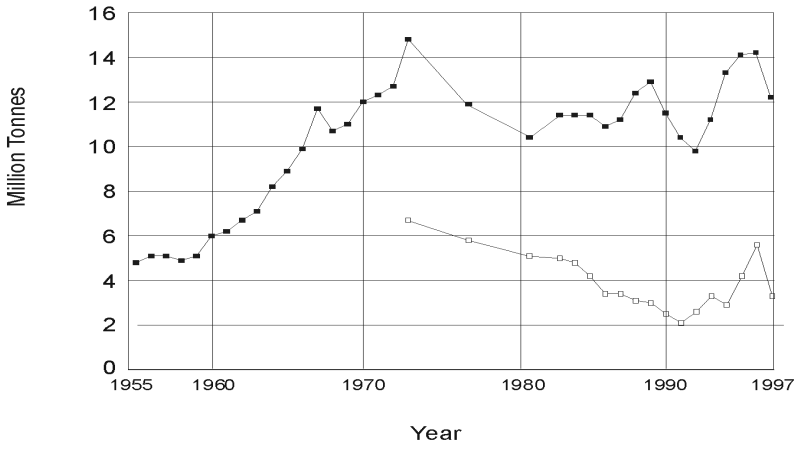
12.3 Chapter 10 describes the three main areas of limestone production as: **the Buxton area** of Carboniferous Limestone, from Dove Holes to Earl Sterndale; **the Wirksworth area** of Carboniferous Limestone, from Longcliffe to Crich; and **the Whitwell/Bolsover area** of Permian Limestone, east of a line from Barlborough to Hardwick Hall. The limestone resources in these areas include a variety of qualities of stone supplying a very wide range of markets. All three areas produce limestone for the industrial markets. Some of the purest limestones in Britain are found in the Carboniferous Limestone areas - over 99% $CaCo_3$ content in places. However, even within some deposits the quality can vary significantly; the geology is often complicated by igneous rocks, faults, mineral veins and, in places, severe chemical alteration (dolomitisation or silicification). When the market for some limestone depends on very precise specifications these variations can be critical.

12.4 Where there is a significant content of calcium magnesium carbonate, or magnesium carbonate, the mineral is known as "dolomite". The Permian Limestone has particular importance as a source of high grade dolomite which is important in steel manufacturing. It is worked for these purposes in the Permian Limestone area of north east Derbyshire.

12.5 Chapter 10 (paragraphs 10.4 and 10.5) describes the recent production levels and sales distribution patterns for all limestone produced in Derbyshire (excluding the Peak National Park). In this description it is indicated that since the early 1980s there has been a general decline in the output of industrial limestone in Derbyshire. However, the extent of this decline is partly due to the production at one major quarry near Buxton which lies partly inside and partly outside the National Park and where there has been a gradual shift in the emphasis of working into the area within the National Park. It is noted that industrial limestone production as a proportion of total limestone production in Derbyshire has fallen to less than a quarter compared with nearly half in 1981 (See Figure 7).

12.6 The importance of Derbyshire as a national source of industrial limestone is reflected in the fact that the East Midlands region produces the largest output of non-aggregate limestone and dolomite of any region (around 40% of national output),

Figure 7: Derbyshire (excluding P.N.P.) Limestone & Dolomite Production Total/Industrial Uses 1955-1997



Sources : E.M.W.P.A. / D.C.C. Minerals Surveys

and the output from Derbyshire and the Peak National Park together contribute around 30% of national output. An outline of the issues arising from the working and reclamation of limestone sites generally is given in Chapter 10.

The Future Extraction of Industrial Limestone

12.7 Whilst there is no national or regional framework for demand forecasts for industrial limestone it is nevertheless important to address issues of supply and demand, including the characteristics of the market and the nature of the mineral resource. Whilst rock chemistry is nearly always the most important factor for industrial limestone, certain physical characteristics may also be required. In addition, it is not always the high calcium carbonate content that is critical; e.g. use for cement and some insulating products may permit an appreciable content of silica and aluminium but may not tolerate a high magnesium or fluorine content. On the other hand, for many industrial uses such as glass making, sugar refining and metallurgical fluxes, a high chemical purity of the limestone is imperative.

12.8 Because limestone can often be used for either aggregates or non-aggregates purposes, the aggregates uses of limestone can make calls upon permitted reserves of limestone which could be used for "industrial" purposes. Bearing in mind the relatively limited occurrence nationally of industrial limestone and dolomite of particular qualities and the frequent problem of non-availability of alternative source materials, there is a strategic need to minimise the use of this material for aggregate purposes. In recent years it has been the Mineral Planning Authority's policy that planning permission for the working of industrial limestone will be permitted only where the mineral produced is intended primarily for non-aggregate uses.

12.9 In recognition of these concerns, the East Midlands Regional Aggregates Working Party decided in 1988 that 600 million tonnes of permitted reserves of limestone and dolomite should be "set aside" to meet the long-term regional demands for non-aggregate purposes. Some mineral planning authorities have sought to define this non-aggregate limestone in terms of its purity; ie, its percentage of calcium carbonate content. However, there are considered to be a number of difficulties with this approach, including: the difficulty of deciding on the precise percentage figure to be used; taking account of the nature of the non-limestone content which is critical for many industrial uses; and the variability of the chemical composition of the mineral within deposits, leading to difficulties of monitoring. On balance, it is considered preferable to frame local plan policies in terms of the nature of the market that the output is primarily intended to supply.

12.10 Taking into account the proportion of output from individual Derbyshire quarries which is sold for non-aggregate purposes and the scale of permitted reserves at these quarries, it is estimated that some 300 million tonnes of reserves can be assumed to be available for these purposes within Derbyshire (outside the Peak National Park) as Derbyshire's contribution towards long term regional demand. It is noted that the average output of industrial limestone from Derbyshire over the last 5 years has been less than 3 million tonnes per annum - equivalent to less than 45 million tonnes over 15 years. Given that it is not anticipated that levels of output will increase greatly in the future, there is clearly no need in overall numerical terms to release additional areas of land to allow for further extraction during the plan period. However, because of the wide diversity of these markets and the chemical variability within some deposits, shortages in the availability of some particular qualities of mineral may occur, giving rise to needs which may not have been predicted and for which provision is made in Policy MP25. At the same time, because the need for very particular chemical specifications may require selective working of the mineral, this can result in an increase in the production of non-industrial stone or an increase in the production of waste. The policy, therefore, also guards, as far as possible, against the use of high specification materials for uses that do not require those specifications, in line with the principles of sustainable development and the need to make efficient use of mineral resources.

Policy MP25 Industrial Limestone

12.11 Proposals to extract "industrial" limestone will not be permitted unless:

1) they are required to meet a proven need for materials with particular specifications which would not otherwise be met, and the development is designed to maximise the recovery of the particular materials required to supply that need, or

2) they involve extensions or variations to the boundaries of existing operations which would result in significant net environmental benefits without significantly increasing the level of permitted reserves.

12.12 Having established that there is no overall need to make further provision for the production of industrial limestone, it was necessary, in view of the diversity of the markets and the variety and distribution of permitted reserves, to carry out an assessment of existing operations (summarised in Appendix B). As part of this assessment which included all limestone operations (see para 10.15) mineral operators were asked to provide information on the future prospects of sites in which they had an interest. The assessment concluded, on the basis of information currently available, that there should be no difficulty in specific market demands being met from existing permitted reserves during the plan period, except in the case of Whitwell quarry where there is a need to make further provision for the supply of materials of very particular qualities.

Whitwell Quarry

12.13 Whitwell Quarry lies between the villages of Whitwell and Creswell. The mineral deposit at Whitwell is of national importance both in terms of its special quality and its rarity, and because of its value as an export product. There is heavy reliance on this reserve by other industrial firms. The complexity of the geology, including severe faulting and the variability of the chemistry of the material, together with the nature of the production requirements and market demands, mean that more than one working area is required at any one time. An added difficulty arises because the different qualities of material are required to be produced in different proportions to those in which they occur in the ground. The aim therefore is to enable the blending of specific chemical grades to be made as required, without having to use higher grade materials for less specific use. The existence of a railway tunnel through the site affects both the timing and ease of working the permitted reserves. Taking all these factors into account, there is a need to make further provision in the plan for the following reasons:

- permitted reserves are not sufficient to meet the anticipated needs of a specialist market during the whole of the plan period
- the quarry produces high specification industrial limestone for uses which include refractory stone and high iron content stone for the steel industry, and for which there is a proven need
- there is a shortage of alternative sources for the mineral; Whitwell quarry is currently one of only two major producers of these high quality refractory materials in the UK.

12.14 In view of the need to make further provision for limestone production, the acceptability of potential extension sites has been explored in detail. An extension of working into the area to the east of the south eastern corner of the site would round off the existing site without substantial impact on the environment. It would provide for the production of about 1 million tonnes of stone and, subject to the maintenance of satisfactory peripheral screening, is acceptable in principle, and has therefore been allocated for future working on the Proposals Map (Inset 6).

12.15 The area to the east of the quarry, across Crags Road presently accommodates the

southern of two spoil heaps associated with the former Whitwell Colliery. This site has been considered together with the small area to the east of the south eastern corner of the existing quarry, referred to above, which would be worked first in order to gain access to the tip area to the east. The company has carried out tests on the rock beneath the tip and established the presence of around 10 million tonnes of limestone with a quality and variety roughly comparable with that of the existing quarry. Working this stone would have the advantage of requiring the prior removal of the existing tip providing considerable environmental benefits although this would, of course, involve an additional cost to the company. This site also has the advantage, compared with the other alternatives, of being furthest away from the main neighbouring settlements, Whitwell and Creswell, and offers the possibility of being worked without substantial damage to environmental interests. In principle, therefore, this would be the preferred main area of extension for this quarry, provided that access can be satisfactorily achieved across (probably under) Crags Road and subject to the provision of satisfactory screening and landscaping measures. This site has therefore been allocated for future working on the Proposals Map, (Inset 6). Unfortunately, the site is unlikely to become available to satisfy needs in the short term for which purpose it is estimated that further land, sufficient to supply up to 7 million tonnes, is required to be identified.

12.16 Another potential extension site would involve working westwards from the north-western corner of the existing planning permission. Tests carried out by the company indicate the presence of limestone of the right quality and variety. The working of this area would extend workings further into the gently rolling landscape of Grade 2 agricultural land to the south west of Whitwell Village. Any proposals here would need to be subject to carefully designed advance landscaping works to avoid further visual intrusion into this area; maintaining the southern limit of this extension would be especially critical to avoid breaching an important skyline when seen from Creswell. Of paramount importance would be the need to maintain an appropriate distance between future extraction areas and neighbouring properties in order to safeguard them from the possible effects of blasting. Despite all these constraints, this is considered on balance to be the least damaging alternative extension site to provide for the further requirement with possible scope for around 3 million tonnes of additional material. This site has, therefore, also been allocated for future working, on the Proposals Map (Inset 6). Whilst it is necessary to make this allocation in order to ensure that needs can be met in the medium term, it is possible that not all of the site will be required for this purpose, and applications to work this area will, of course, be subject to Policy MP25 and the general policies of the plan.

12.17 The area eastwards of the north-eastern corner of the existing permission is an area which at present serves as a buffer between the quarry and the area to the north-east. Extension of the quarry into this area could threaten this important buffer and risk opening up views of the quarry from the north and north east. However, the area does contain scarce mineral resources and design work by landscape consultants on behalf of the company give a clear indication that the screening effect can be fully maintained. Therefore, a small area to the north east of the quarry, yielding about 1 million tonnes of stone, has been allocated for future working on the Proposals Map (Inset 6).

12.18 To the south is an area of unique archaeological interests; the Creswell Crags Area is a Scheduled Ancient Monument and a designated SSSI. It has provided archaeologists with some of the most important information on the activities of our ancestors during the middle and upper palaeolithic periods. A great deal of work has been carried out in promoting Creswell as a World Heritage Site, and the area also has acknowledged wildlife importance. It is clearly essential that the heritage and conservation interests in this area should in no way be threatened by the effects of working at Whitwell Quarry. However, there is stone of exceptional quality present to the south of the existing quarry in an extension which would yield about 6 million tonnes of reserves. It should be possible to quarry in this area, under carefully controlled conditions, in such a way as to be assured that no harmful effects will result on the Crags, the caves, their sedimentary deposits, and their environment through blasting, vibration or visual intrusion. In addition, this working provides an opportunity to re-route the road that presently runs through the Crags with such damage to the heritage environment. Subject to the need to show that there would be no significant adverse impact upon the Crags and subject to the provision of satisfactory screening and landscaping measures, a southern extension has been allocated for future working on the Proposals Map (Inset 6).

12.19 In other directions, the existing quarry is tightly constrained by a number of factors which preclude further extensions. To the north and west are areas which have been established as protective 'buffers' between the quarry and the neighbouring settlements of Whitwell and Creswell, respectively; it is critically important that these areas are safeguarded in order to minimise the effects of working on local communities.

12.20 Within the areas allocated on the Proposals Map, the extraction of limestone will be acceptable, subject to the provisions of all relevant policies in the plan, including Policy MP25.

Policy MP26 Whitwell Quarry

12.21 Land is allocated for the extraction of limestone at Whitwell Quarry, to the east, to the north east, to the north west and to the south of the area of existing permissions, as defined on the proposals map. Proposals for the extraction of limestone will be permitted within these areas.