
Chapter 13—Coal

Background

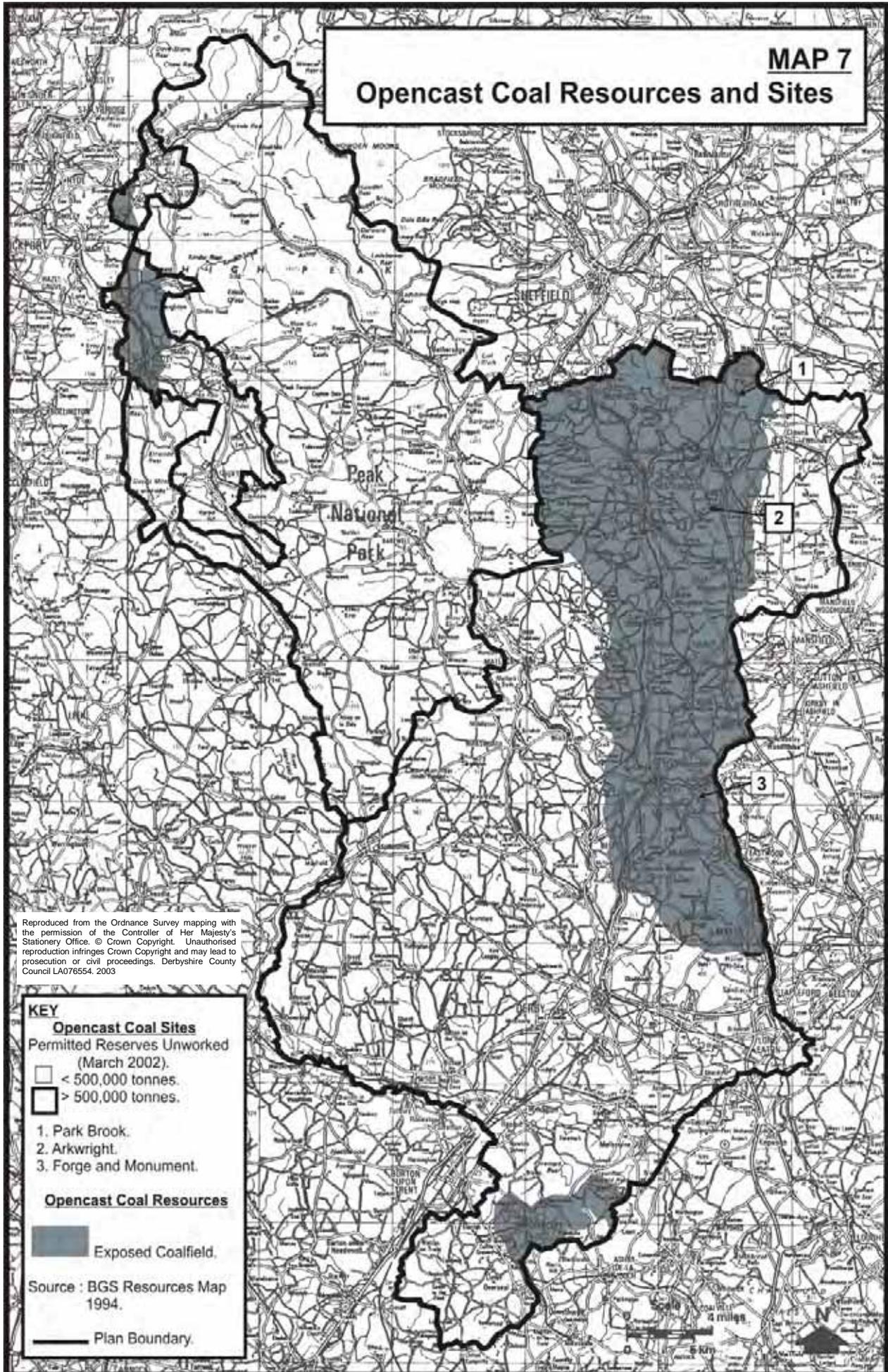
Introduction

- 13.1 There are two coalfield areas within Derbyshire. The North Derbyshire Coalfield is the southern part of the much wider Yorkshire/Nottinghamshire/Derbyshire Coalfield stretching from Southern Leeds in the north to the Nottingham area in the south. The South Derbyshire coalfield is part of the Midlands Coalfield, which extends from Staffordshire in the west through southern Derbyshire into Leicestershire. There are two principal methods of extracting coal. Where coal seams are shallow, ie within the 'exposed coalfield' area, the coal can be extracted by opencast methods; where the seams are deeper, underground methods are employed.
- 13.2 Within Derbyshire, the shallow coal measures occur in a substantial tract of the County (see Map 7) in the area around Chesterfield, between Bolsover in the east and the Peak National Park in the west, extending southwards, east of a line from Holymoorside to Belper, as far as Ilkeston. Around Swadlincote, shallow coal deposits occur in the area from Burton on Trent and Repton Common in the north to Measham, in Leicestershire, in the south. Shallow coal deposits also occur in the north west of the County mainly outside the National Park boundaries between Charlesworth and Whaley Bridge, but these are not, generally, of commercial quality.
- 13.3 The working of coal, by modern methods of opencasting, began in Derbyshire in the 1940's, as in other coalfields, to help supply the country's war-time energy needs. Since that time a large proportion of the area of the shallow coalfield has been exploited with annual output reaching a peak of 2.7 million tonnes in 1956; in recent years output has ranged between 1 and 2 million tonnes per year. Nationally opencast coal output rose steadily after 1987 and reached a peak of 19 million tonnes in 1991/92 (about a quarter of total national coal production) before falling back to about 14.5 million tonnes in 2001/2002. Derbyshire contributed around 4% of this national output. Permitted reserves remaining unworked at 31 March 2002 amounted to around 0.8 million tonnes.
- 13.4 Underground coal-mining in Derbyshire has declined in line with the national picture. Fifty years ago around 60,000 people were employed in over fifty Derbyshire collieries, but as the older mines working the shallower seams closed, working became concentrated on the newer mines to the east, working the deeper, more profitable seams. The last three remaining British Coal collieries at Bolsover, Markham and Shirebrook closed in 1993. Whilst there are one or two small drift mines in Derbyshire, their output is small. It is unlikely that there will be proposals for major new colliery developments in Derbyshire in the foreseeable future, although there may be some potential for the development of smaller-scale mines to work the remaining small pockets of coal.

Working and Reclamation - Opencast Coal

- 13.5 The coal measures in Britain comprise a series of sedimentary rocks which were deposited around 300 million years ago during the Upper Carboniferous period. The coal seams vary in thickness up to several metres and, in Derbyshire, around 30 seams in all are substantial enough to be worked commercially. With steady

MAP 7 Opencast Coal Resources and Sites



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KEY

Opencast Coal Sites

Permitted Reserves Unworked
(March 2002).

- < 500,000 tonnes.
- > 500,000 tonnes.

1. Park Brook.
2. Arkwright.
3. Forge and Monument.

Opencast Coal Resources

- Exposed Coalfield.

Source : BGS Resources Map
1994.

- Plan Boundary.

improvements in earth-moving machinery depths of around 200 metres can now be reached, although 70-100 metre depths are more typical, enabling the re-working of sites that have been worked in the past to recover coal reserves in deeper seams.

- 13.6 After carrying out preparatory works, the operator begins excavation with the separate stripping and stocking of top soil and sub soil. These are often used to form embankments on the edge of the site to screen it and to provide noise baffles. Where possible, extraction is then phased so that only part of the whole site is disturbed at any one time, which enables phased restoration to begin. This may avoid the long term storage of soil which is detrimental to its quality. A series of 'benches' of coal is exposed by removing the over burden and the coal is then extracted; where seams of coal are covered by rock, blasting is sometimes required to loosen it. The coal is normally loaded onto lorries and taken either to the nearest coal disposal point for grading or direct to the customer.
- 13.7 The economics of an opencast coal site are largely determined by the market for coal within the site. Economic sites are typically worked at an overburden-to-coal ratio of between 10 to 1 and 15 to 1. Consequently, the opencasting of coal involves using large engineering plant and machinery in order to remove relatively small quantities of coal, and the impact of an opencast operation on the environment can therefore be significant. Although opencast mining is essentially a temporary use of land, lasting anything from 18 months to 10 years, some of its effects can remain for many years after working has ceased.
- 13.8 However, the effects can be ameliorated to some extent by the careful planning and monitoring of operations. The large amounts of overburden that have to be removed means that, through sympathetic restoration, original landforms can be recreated, or more attractive ones produced over time. Furthermore, as the amount of material extracted is relatively small, sites can be restored to original levels. Some schemes can provide important local environmental benefits. Operations have, in the past, enabled despoiled land to be reclaimed or involved the removal of problems arising from former underground workings such as subsidence, and dangerous emissions of methane gas. The opportunities for such environmental benefits are, however, likely to be more limited in the future as Derbyshire's stock of despoiled land, which offers the potential for opencasting, diminishes.
- 13.9 A recently proposed method of mining in this country is Augering, which is a mechanical form of underground mining. It can be carried out within the excavation of an opencast mine or, where the coal seams are close to the surface, by 'trenching'. It involves boring along the coal seams adjacent to the excavation or trench by an Auger; supporting pillars of coal are left within the seam to minimise the risk of subsidence. Augering can enable additional coal to be removed, which may not otherwise be extracted due to economic or environmental constraints.

Working and Reclamation - Underground Coal

- 13.10 The underground working of coal at major collieries creates large volumes of waste or 'spoil', the disposal of which is one of the main potential causes of environmental problems from coal mining. Increased mechanisation has resulted in large increases

in the production of spoil, and despite the cessation of large scale deep mine production in Derbyshire, the remaining spoil tips are part of the legacy of the major collieries of the past. Some of these tips are covered by planning conditions to reclaim them whilst pre-date planning regulations and their reclamation will depend on arrangements to be reached with the landowners/operators/Coal Authority as appropriate. The most widespread impact of underground working, however, is caused by subsidence at the surface. A survey commissioned by ten Local Authorities in Derbyshire and Nottinghamshire revealed that 33,000 houses in the two counties had been affected by mining subsidence.

- 13.11 The environmental impact of smaller drift mines, is much less significant. In particular the problems of waste disposal and subsidence can virtually be avoided where the extraction of coal is not highly mechanised but is selective and limited through the use of a pillar and stall system. The waste that is produced can sometimes be deposited in the remaining void following extraction of the coal. This usually offers a satisfactory solution provided its impact on water resources is acceptable. In view of the very small number of drift mines in the County, it is considered that spoil disposal is unlikely to be a significant issue. However, provision is made in Policy MP27 for considering such proposals, should any come forward.

Policies for Opencast Coal

National Guidance

- 13.12 National guidance for the extraction of coal and the disposal of colliery waste as set out in MPG3, (published in March 1999) is to ensure that such development only takes place when the best balance been achieved between community, social, environmental and economic interests, consistent with the principles of sustainable development. The Government's central energy policy objective is to secure, diverse and sustainable supplies of energy at competitive prices. The Government believes that this objective can best be achieved through the operation of competitive and open markets.
- 13.13 There is currently no Government target for annual UK coal production whether by underground or opencast mining. MPG3 states that it is for the industry to determine the level of output they wish to aim for in the light of market conditions. The acceptability of individual projects will be determined in accordance with the principles of the land use planning system, which seeks to make adequate provision for development whilst ensuring the protection of the environment and local amenity, in accordance with sustainability objectives. The objectives of sustainable development for minerals planning are set out in Chapter 3 of the Plan at paragraph 3.2. They encompass the issue of how to balance society's needs for minerals against the need to conserve resources and protect the environment and local amenity. MPG3 recognises that whilst large quantities of mineral resources exist, it is becoming increasingly difficult to find sites that can be worked, without damaging the environment to an extent that local communities and society in general find unacceptable.
- 13.14 MPG3 states that, although the extraction period can be relatively short, the nature of opencast mining, particularly the large quantity of overburden that needs to be

removed, can be extremely damaging to the environment and amenity of a locality whilst it is taking place and, although sites are often capable of being well restored, the restored landscape can take many years to mature. For underground working, MPG3 identifies the principal impacts as ancillary surface development, the potential effects of subsidence and the disposal of colliery spoil.

13.15 As set out in Paragraph 8 of MPG3, in applying the principles of sustainable development to coal extraction, whether opencast or deepmine, and to colliery spoil disposal, the Government believes there should normally be a presumption against development unless the proposal would meet the following tests:

- (i) Is the proposal environmentally acceptable, or can it be made so by planning conditions or obligations?
- (ii) If not, does it provide local or community benefits which clearly outweigh the likely impacts to justify the grant of planning permission.

MPG3 also states that additional environmental tests should apply to proposals within or likely to affect Areas of Outstanding National Beauty (AONBs), National Parks, Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Green Belt. (See paragraph 13.22).

13.16 In accordance with paragraph 13.15 above, when considering proposals for coal extraction or colliery spoil disposal, the Mineral Planning Authority will seek to ensure that the impact on the environment, including local communities is acceptable. Where this is not the case and cannot be made so by mitigation measures then the Mineral Planning Authority will consider whether the adverse impacts can be clearly outweighed by local or community benefits. However, where material planning objections to a proposal outweigh any local or community benefits then, planning permission will not normally be granted.

Assessing Disturbance and Benefits

General Policies

13.17 The environmental acceptability of proposals will be determined in accordance with the general policies of the Plan, where relevant, as well as the specific policies set out in this Chapter. Applicants will have to demonstrate that they have identified all the potential impacts of the proposal, and where those impacts are adverse, have addressed them by providing appropriate mitigation measures to ensure that the environmental impact of the development is kept to an acceptable level.

13.18 Policy MP1 of Chapter 3 sets out the potential effects of mineral development that will be taken into account in determining whether the impact of a proposal on the environment is acceptable. MP3 sets out the factors that will be taken into account in assessing the extent to which any adverse impact of proposals can be eliminated or reduced to an acceptable level. A particular environmental impact associated with mineral development is heavy lorry traffic; this issue is dealt with in more detail in

Policy MP5. In assessing the environmental acceptability of proposals the Mineral Planning Authority, through Policy MP8, will take into account the way in which the effective use of planning conditions can minimise the impact of development. The main effects of coal extraction and colliery spoil disposal on the environment and local communities and measures to ameliorate those impacts are set out at paragraphs 13.26 – 13.41.

- 13.19 In some cases the environmental impact of mineral working will be too great to allow it to proceed, Policy MP4 sets out those circumstances where irreparable or unacceptable damage would result to interests of acknowledged environmental importance and consequently would result in a refusal of planning permission.

Environmental Impact Assessment

- 13.20 Chapter 4 of the adopted Minerals Local Plan makes reference to the need for major development projects which are likely to have significant environmental impacts to be accompanied by an Environmental Statement, in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. In accordance with Schedule 1 (19) of the Regulations proposals for opencast mining, where the surface of the site exceeds 25 Ha, are classed as major development projects. Below this threshold, new sites, and modifications to existing sites, will still require EIA if they are likely to have significant environmental effects. Furthermore, as set out at paragraph 44 of MPG3 the Secretary of State takes the view that, by nature, all proposals for new coal extraction and alterations to existing coal developments, are likely to require EIA.
- 13.21 In addition to Environmental Impact Assessment requirements, Section 53 of the Coal Industry Act 1994 imposes an Environmental Duty on the coal industry. In formulating coal mining proposals requiring planning permission, operators are required to have regard to the desirability of the preservation of natural beauty, the conservation of flora and fauna and geological or physiographical features of special interest and the protection of sites, buildings structures and objects of architectural, historic or archaeological interest; and must formulate proposals for the adoption of measures to mitigate any adverse effect of the development on such matters. In considering applications for mining proposals the Mineral Planning Authority will have regard to the extent to which the operator has complied with the duty.

Additional Tests

- 13.22 As previously mentioned, at paragraph 13.15, in particular circumstances additional environmental tests are to be applied to proposals for coal extraction or spoil disposal. Where appropriate to Derbyshire, these additional tests are included within Policy MP4. In the case of Green Belts, because minerals can be worked only where they are found and, 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 the highest environmental standards are maintained and that the site is well operated and restored to the highest standards. In particular, the development, operation and reclamation of the site should not materially impact on the open character of the green belt nor conflict with the

purposes of including land within it, as set out in PPG2.

Cumulative Impact

- 13.23 A particular concern in relation to opencasting is that some areas have been subjected to successive opencast developments over a number of years. MPG3 states that local plan policies should make clear that, where appropriate, the cumulative impact of a proposed opencast development on the community and the environment will be taken into account. A report prepared for the DOE in 1991 on “Environment Effects of Surface Mineral Workings” states that a “series of individually tolerable workings in an area may together produce an unacceptable situation”. One of the arguments in favour of allowing opencast operations is that their damaging effects are limited to the short term, but this argument loses validity if the same area is affected by successive opencast schemes over what might become an excessive time-scale. Therefore, cumulative effects are relevant either where there are mineral workings being carried out simultaneously or where there are successive operations over a number of years. The cumulative impact of development will be taken into account through applying Policy MP4, and proposals, which would have unacceptable cumulative effects on any area, will be resisted.

Extensions

- 13.24 Extensions both in area and depth to existing extraction and spoil disposal sites can extend the severity and duration of the impact of mineral working on the environment and local amenity, particularly in relation to the cumulative impact of working. In considering extensions to sites, therefore, the same policy criteria would apply as would apply to a proposed new site, as set out in Policy MP27.

The Issue of Need

- 13.25 Policy MP2 sets out the factors to be taken into account in determining whether the need for the mineral is sufficient to outweigh any adverse environmental effects caused by the proposals. As previously indicated, at paragraph 13.13, there are no targets set for UK coal production and it is for individual operators to determine the level of output they wish to aim for in the light of market conditions. However, MPG3 states that where the major argument advanced in support of a proposal to extract coal is that the need for the development outweighs the planning disadvantages inherent in it, the Mineral Planning Authority will have regard to the possibility of meeting that need for the mineral from alternative sites or sources of supply. These considerations are set out in Policy MP2.

Impacts and Ameliorative Measures

- 13.26 The main potential impacts of coal extraction and spoil disposal on local communities and the environment are visual intrusion, noise and dust, and transportation. Other environmental issues that are particularly relevant to coal development include impact on the water environment, land stability, spoil disposal, agricultural land and the potential effects on levels of investment in an area.

Visual Impact

- 13.27 For opencasting the main visual disturbance can occur from the creation of soil and overburden mounds prior to, and during the period of extraction and the presence of plant and mobile machinery. For underground mining the main visual intrusion is likely to arise from ancillary surface development, coal stocking or on-site tipping areas, including lagoons. At colliery spoil disposal sites the main visual impact is from the tipping itself.
- 13.28 For both opencast and underground extraction and spoil disposal sites visual intrusion can be ameliorated by the careful planning of site operations, including the design and siting of ancillary buildings and storage areas and screening. Opencast soil and overburden mounds and colliery spoil disposal tips can be limited in height and blended in with the surrounding topography. Tree planting and landscaping can also reduce visual impact especially if carried out well in advance of the development.

Noise

- 13.29 The main sources of noise at opencast sites are soil stripping, the creation of overburden mounds, workings within the site, blasting, where needed, and the transportation of coal. For underground mining, the actual construction of the deep mine is usually the noisiest phase, although vehicle movements associated with coal stocking and the transportation of coal are a continuing source of noise. In relation to spoil disposal vehicle movements associated with spoil handling and transportation are the main source of noise.
- 13.30 Measures such as the construction of baffle mounds; tree planting; acoustic fencing; fitting silencers to mobile plant and the acoustic insulation of fixed plant can all reduce the impact of noise, together with limiting the timing and duration of particularly noisy activities and imposing noise limits at sensitive locations.

Dust

- 13.31 For opencast mining, dust arises through soil stripping, the handling of overburden, transport of coal and the movement of plant over stripped areas. For underground mining the main source of dust arises through the handling, processing, transportation, and stocking of coal. Whilst for colliery spoil disposal dust arises through the handling and transport of the spoil.
- 13.32 Dust generation can be minimised by measures such as seeding on baffle/screening mounds to prevent dust blowing off the slopes, spraying water/binding agents on stockpiles, mounds and landforms, concreting/tarmacing the main internal haulage roads and by sheeting and wheel washing lorries.
- 13.33 In relation to dust, concerns have been expressed about the possible health risks of coal extraction, especially opencasting. In accordance with current government advice (DETR Letter dated 4 Feb 2000), the likely emissions of PM₁₀ particles from a prospective opencast site will be assessed against National Air Quality Standards. In

considering the impact of dust from proposals the Mineral Planning Authority will take the advice of the relevant Environmental Health Officer. The starting point will be to identify whether any communities lie within 1km of a proposed opencast site, and then consider the background levels of PM₁₀s and how these relate to National Air Quality Standards. Where the PM₁₀ impact is found to be likely to be significant in planning terms, but on balance does not merit refusal of an opencast planning application then procedures to monitor and control PM₁₀ particulates will be adopted. Where it is considered that the significance of the impact would be environmentally unacceptable and where the impact would not be outweighed by any local or community benefits then opencast coal proposals will be refused. New national guidance is expected to be issued in a revised MPG11; the Mineral Planning Authorities will take on board any subsequent national guidance on this matter.

Buffer zones

- 13.34 A particular measure to reduce the effects of visual impact, noise and dust on local communities and the environment is the maintenance of a 'buffer zone' between the area of working and nearby land uses, especially the more sensitive ones such as housing, schools etc. However, the appropriate minimum distance to be maintained in any particular case will depend on the other remedial measures to be taken, the local land form, the presence of other features, such as woodland, and the proposed method of working and phasing. The best way of minimising the disturbance to local communities can, therefore, only be determined in the light of the full details of the proposed scheme, and the particular local circumstances.

Transportation

- 13.35 Coal extraction and colliery spoil disposal can generate large quantities of heavy lorry traffic; lorries can cause severe damage to the environment due to noise, dust, dirt and vibration, and can also be a potential danger when they have to pass through settlements.
- 13.36 MPG3 states that it is clearly desirable wherever possible for the movement of coal and colliery spoil to be by means other than along public roads. The Mineral Planning Authority will seek the use of rail, waterway and conveyor as a means of transporting minerals rather than using public roads, wherever this would be feasible and of benefit to the environment. Where transport by road is unavoidable, the impact on the highway network can be minimised by methods such as maximising the use of private roads, internal haul roads and conveyors, stipulating specific access points to the site, vehicle washing/sheeting and limiting operating hours.

Water

- 13.37 An important consideration for coal extraction and colliery spoil disposal is the need to avoid the pollution of ground and surface water. The disposal of surplus water is an integral part of mining operations. Such water has a number of sources including water pumped from underground as part of dewatering, surface drainage from coal stocks and buildings, drainage from spoil tips and effluent from coal processing plants. It is important to consider impacts on the water environment not only during

the period when the mine is open but also when extraction has been completed and artificial controls such as pumping have ceased.

Subsidence

- 13.38 A potential impact of underground mining is subsidence, which may cause damage to surface structures or effect slope stability. As set out in Policy MP27, consideration will be given to the extent and degree of subsidence that is likely to arise and ways in which damage to surface structures or slope stability could be avoided. Where the impacts of undermining are likely to be high, the coal should not be extracted unless the scale of damage can be reduced by means of preventative action to surface structures or modifications to underground lay-out, or extraction is overridingly in the public interest. Of particular concern is where potential subsidence would affect features of acknowledged environmental importance such as sites, structures and remains and the wider historic environment that are of importance to the national heritage. The additional protection of such features is set out in the general policies in Part II of the Plan.

Spoil Disposal

- 13.39 As previously referred to in Paragraph 13.10, the underground working of coal at major collieries creates large volumes of waste or 'spoil' the disposal of which is one of the main potential causes of environmental impact from coal mining. If major new deep-mine operations do prove to be viable in the future, the Mineral Planning Authority, through Policy MP27, will seek to ensure that sufficient land is made available for spoil disposal where this is an essential part of the operation. However, the applicant will be required to demonstrate that the detailed methods and sites which are proposed have been arrived at following a thorough assessment of all the alternatives, and that the proposals represent the most acceptable solution bearing in mind environmental, economic and technical matters such as working methods, access arrangements and drainage and pollution control. This assessment should follow the framework established in the "Procedural Manual Evaluative Framework" (HMSO 1990) and should have regard to all the environmental concerns in the general policies of this plan, including the effects on other (possibly competing) land uses and on efforts to assist economic regeneration of the coalfield.

Agricultural Land

- 13.40 Much of the land likely to be affected by coal extraction or colliery spoil disposal is in agricultural use. The main concerns in relation to development affecting agricultural land are to prevent the irreversible loss of the best and most versatile land and to preserve the long term potential of the land. However, unlike other forms of development, land from which minerals have been extracted can be restored to its former use or an acceptable new use. Agricultural considerations, including whether the land should be restored to an agricultural after-use and the standard of reclamation likely to be achieved, will be taken into account in determining proposals affecting agricultural land. These issues are relevant to mineral development generally and are addressed by Policies MP1, MP4 and MP10 of the Plan. For opencasting particularly, because the amount of material extracted is relatively small,

sites can be restored to their original levels facilitating a return to agricultural use.

Attraction and Retention of Investment

- 13.41 An overall concern is that coal extraction and related development could have an adverse effect on efforts to attract or retain investment in an area. Where there is material evidence to support this view it will be taken into account in determining applications for coal extraction or spoil disposal, as set out in Policy MP27.

Assessing Benefits

General Considerations

- 13.42 If a proposal is not environmentally acceptable and cannot be made so by planning conditions or obligations a further test will be applied to determine if the proposal provides local or community benefits which clearly outweigh the likely impacts to justify approval. When assessing this balance, it will be necessary to determine the nature of the benefits that would come from the proposed development. If particular benefits could be achieved by other means, without the adverse impact of mineral development, it would not be appropriate to attach the same weight to them as benefits of the proposal. Therefore, in this balance of considerations, relative importance will be given to those benefits that would be unlikely to be achieved by other means.

Reclaiming Despoiled Land

- 13.43 In some cases mineral working, particularly opencast mining, can bring about environmental improvements for example, by the restoration of despoiled land, by the removal of land instability caused by old mineral workings, or where landscape enhancement or a contribution to biodiversity can be achieved. The benefits of such proposals to the environment and local community must be weighed against the severity of harm likely to be caused for the duration of the development and in the longer term. Although most of the despoiled land in the county tends to be located in the 'concealed' coalfield, rather than in the area with opencast potential, there may still be opportunities for achieving local and community benefits by the working and reclamation of land that remains despoiled or derelict.

Coalfield Regeneration

- 13.44 It is an established and important part of the Structure Plan strategy, and of initiatives such as the North Derbyshire and North Nottinghamshire Coalfield Alliance, and the Coalfield Rural Priority Area Partnerships, that priority should be given to measures to improve the image of coalfield areas to encourage regeneration and to assist in alleviating economic and social deprivation. The Mineral Planning Authority therefore, in considering proposals for coal extraction, will have due regard to these priorities. In particular, importance will be given to proposals involving the reclamation of despoiled land, especially those that would enable former colliery sites to be released quickly for new uses and potentially new job opportunities.

Sterilisation and Association with Other Minerals

- 13.45 In order to avoid the sterilisation of coal reserves, MPG3 notes the benefit of allowing coal extraction prior to new permanent development above coal reserves provided it can be carried out in reasonable timescale and in an environmentally acceptable way. The close geological association of coal and fireclay or brickclay means that there can sometimes be environmental and economic benefits in extracting both minerals in joint coal and clay operations. However, it will be important to ensure that opencast coal operations are designed in a way in which avoids the sterilisation of any important clay resources. The considerations relevant in assessing all these issues are set out in Policy MP27.

Policy MP27: Coal Extraction and Colliery Spoil Disposal

- 13.46
- A. Proposals for coal extraction, and for the disposal of colliery waste, including extensions to existing sites either in area or depth, will not be permitted unless the impact on the environment:-**
- 1) is acceptable, or capable of being made acceptable by planning conditions or obligations, or
 - 2) if not, the impact is clearly outweighed by local or community benefits that the development would provide.
- B. When considering whether a proposal is environmentally acceptable or capable of being made so, the following will be taken into account, where relevant:-**
- 1) the need to ensure that, where the proposal lies within the Green Belt, it can be developed, operated and restored to the highest standards
 - 2) the extent to which the proposal would adversely affect efforts to attract or retain investment in an area
 - 3) the need to ensure that where the proposal involves the disposal of colliery spoil:-
 - (i) an evaluation of all feasible alternative sites and methods of disposal has been carried out;and
 - (ii) the proposal represents the most acceptable solution having regard to environmental, economic and technical considerations

- 4) the extent and degree of potential subsidence or land instability.
- C. When considering whether the unacceptable adverse environmental impact of a proposal is outweighed by the benefits that the development would provide, importance will be given to those benefits that would be unlikely to be achieved by any other means. In particular, the following will be taken into account, where relevant, either separately or cumulatively:
- 1) the extent to which the environment or communities of the area will benefit from the proposed working and subsequent reclamation, for example; by the restoration of previously despoiled areas; by the stabilisation of unstable ground; by enhancing the landscape, or by contributing to biodiversity. Particular importance will be given to proposals involving the reclamation of despoiled land, especially those that would enable former colliery sites to be released quickly for beneficial new uses
 - 2) whether the proposed extraction is necessary in advance of other approved permanent development in order to avoid the sterilisation of reserves of minerals, or to provide sites for development which would provide local or community benefits, provided that:
 - (i) any additional adverse effects caused by the mineral working will be kept to an acceptable level; and
 - (ii) the extraction will be completed and the land reclaimed in time, and to a standard, to allow the subsequent development to take place as planned without unreasonable delay
 - 3) whether it is necessary to remove the coal to facilitate the efficient and economic working of other minerals in an environmentally acceptable way
 - 4) the extent to which the proposal would provide employment opportunities or other economic benefits.

Future Working Areas

13.47 MPG3 at paragraph 38 advises that Mineral Local Plans should indicate any areas

where coal extraction and the disposal of colliery waste may be acceptable in principle and similarly where such development is unlikely to be acceptable or where coal resources are to be safeguarded for future working. However, the Guidance acknowledges the extent to which it will be possible to identify particular areas for working or spoil disposal, and the level of detail that can be shown in relation to possible sites, will depend upon local circumstances and the level of knowledge about the resource. MPG3 therefore suggests three alternative approaches that Mineral Planning Authorities may wish to adopt:

- broad areas of search; or
- the extent of the shallow coalfield and the constraints within that area; or
- a combination of the two.

13.48 As far as coal extraction is concerned within Derbyshire the Mineral Planning Authorities do not have the technical or commercial information on the quality and extent of the deposits necessary to identify, with confidence, those sites which will come forward during the plan period and which would satisfy the terms of Policy MP27. Furthermore, the occurrence of coal measures in Derbyshire is not confined to a limited number of locations (see Map 7).

13.49 Moreover, MPG3 states that it is the job of the coal industry rather than the planning system to determine the overall level of coal production they wish to aim for. The Government does not regard the need for a particular source of coal for coal blending purposes to be a significant issue for the planning system. It makes it clear that it would be inappropriate to determine, in a local plan, the levels of coal to be produced either by underground or opencast methods. It should also be noted that it would not be possible, at present, to identify any approved development in Derbyshire which would require prior extraction of coal and which, on that basis, would justify the definition of future areas of opencast working in this plan.

13.50 For all these reasons, the plan does not seek to define areas for future coal extraction in detail. The current and anticipated market for coal means that the prospect of proposals for a major new colliery development coming forward is most unlikely in the foreseeable future. Opencast working is relatively small scale and opportunistic in nature, often taking advantage of changing local circumstances to promote new sites. The plan therefore adopts the second of the alternative approaches identified in MPG3, i.e. it indicates the general extent of the shallow coalfield (on Map 7) and defines within that area the main areas of environmental constraints on the Proposals Map (Insets 7-16). The overall scale and location of future coal working that is both achievable and acceptable will be the subject of consultation with operators and determined by the criteria in Policy MP27 and the other relevant policies in the Plan.

Opencast Constraint Areas

13.51 In order to indicate the main constraints within the shallow coalfield consideration has been given to the feasibility of defining areas within which proposals for the

opencasting of coal would be generally unacceptable because the disturbance that would be created would be likely to outweigh any anticipated benefits. MPG3 advises that Mineral Local Plans should indicate those areas where coal extraction is unlikely to be acceptable as well as areas where it is likely to be so. MPG1, paragraph 39, acknowledges that the general presumption in favour of development does not apply where proposals would cause demonstrable harm to interests of acknowledged importance. Consideration has therefore been given to whether areas should be identified where this would be the case.

- 13.52 Environmental interests may be harmed irreparably where features are important because they have remained undisturbed over a long timescale and have acquired a particular heritage value which could not be replaced: e.g. ancient monuments, listed buildings and historic landscapes. This is also true of some natural history features such as SSSIs, ancient woodlands and the quality of previously undisturbed farmland, where complete replacement would not be possible. Where there is a scatter or mosaic of sites of natural history value, the inter-dependence of sites can be especially important, where populations of flora and fauna can be vulnerable to isolation from neighbouring habitats. Such patterns of features may be impossible to replace within a reasonable timescale if they are lost or disrupted as a result of mineral operations.
- 13.53 In addition, conservation interests sometimes have an enhanced value because they are locally very important. One example of this is the notable deficiency of tree-cover, especially a lack of extensively wooded areas in the Derbyshire Coalfield area, which is recognised in such initiatives as the Eastern Derbyshire Community Woodland Project. This means that where areas of woodland do occur they are especially valuable locally as amenity features and for this reason areas of woodland cover have been an important factor in defining constraint areas. In some cases, woodland contributes to local areas of landscape quality which, where there is also a relative absence of detracting features, have a special importance in that part of the County.
- 13.54 Where a particular concentration of features or areas of conservation interest occurs, the cumulative effect is that the area as a whole deserves to be protected in order to avoid unacceptable damage to the environment. Such areas have an importance which is greater than the single occurrence of individual interests within them, and are not already sufficiently well protected by other policies. It is considered that the disturbance that would be caused by opencast operations in these areas would be likely to outweigh any foreseeable benefits that would result. The main areas where such concentrations of interests occur have therefore been defined as "Opencast Constraint Areas" on the Proposals Map (insets 7-16). Many of them are focused on major country houses and their associated lands, eg: Renishaw Park, Barlborough Hall, Hardwick Hall, Shipley Park, Bretby Hall and Calke Abbey. They are important in that they are historic landscapes which provide the settings for historic houses. Such areas also merit protection because of the nature conservation and landscape interests which they contain and because their past ownership and management have ensured that they have been relatively undisturbed by mineral working and therefore retain a greater range and diversity of landscape features and wildlife interests.

- 13.55 All the Constraint Areas form identifiable landscape units which merit special protection, and within which proposals for opencast working of coal and associated minerals will be generally resisted. A more detailed description of the factors which have contributed to the definition of the Constraint Areas is given in Appendix C.

Policy MP28 - Opencast Constraint Areas

- 13.56 **Within areas defined as "opencast constraint areas" on the proposals map, proposals for opencast coal extraction will not be permitted, unless the proposal would not cause any material damage to the area's conservation interests.**
- 13.57 Parts of the exposed coalfield to the north, west and south west of Chesterfield, and in north west Derbyshire, fall within designated Special Landscape Areas, where strict planning controls are applied to protect the essential qualities of these areas. Within these areas mineral working, including opencast coal working, will normally be restricted in accordance with Policy MP4 and therefore these areas will have a similar level of protection to the Opencast Constraint Areas.

Coal Stocking

- 13.58 It is an integral aspect of the coal industry, in order to balance seasonal fluctuations in supply and demand, that coal is required to be stocked. It is considered important, however, that any proposals for coal stocking have an acceptable impact on the environment and are subject to limitations on duration and extent in order to minimise that impact. It will also be necessary to ensure that stocking sites are reclaimed to an acceptable after-use when coal stocking has ceased. These considerations are taken into account in the general policies in Part II of the Plan. Additionally, in considering proposals for coal stocking, the Mineral Planning Authority will favour locations that are well-related to the supplying operations and where feasible and environmentally preferable, will seek to maximise the use of alternative means for transporting coal other than public roads, as detailed at paragraph 13.36.

Policy MP29: Coal Stocking

- 13.59 **Proposals for the use of land for the stocking of coal will not be permitted unless:**
- 1) **the location of the site is well-related to the supplying operations and where feasible, and environmentally preferable, alternative means of transporting the coal other than the use of public roads are maximised, and**
 - 2) **the operations can be accommodated in an environmentally acceptable way.**

Where permission is granted, conditions will be imposed to limit the extent and duration of the development.

Chapter 14—Other Minerals

Clay

Introduction

- 14.1 In Derbyshire, clay has been extracted almost exclusively from the coal measures of the exposed coalfield covering the area of northern, eastern and southern Derbyshire. A wide range of clay types and qualities has been exploited supporting a variety of industries including bricks, pipes, refractories (for furnace linings), sanitary ware, art and tableware. Brick clay occurs widely in Derbyshire and is supplied to a small number of brick manufacturers. It is also used for a range of other purposes including in the construction and waste disposal industries. Fireclays for pottery manufacturing, are supplied to local firms at Denby and around Swadlincote.
- 14.2 The South Derbyshire and North West Leicestershire Coalfield is a nationally important source of specialist fireclays, including high alumina clays suitable for refractory manufacturing. This coalfield which straddles the County boundary is the biggest producer of fireclay in the UK and some clays are exported to other parts of the country such as the Potteries and the Sheffield area. In practice, the centre of production of clay has moved gradually into Leicestershire in recent years as the reserves in South Derbyshire have become worked out and some clay users in South Derbyshire are supplied from Leicestershire.
- 14.3 The clay industries, generally, have undergone major re-structuring since the 1960s, concentrating on fewer, larger operations, and now only a small number of working sites supply clay to a brickworks in Derbyshire. Small quantities of clay are also, from time to time, extracted from opencast coal sites in the county. In addition, an isolated outcrop of clays and sandstones occurs away from the exposed coalfield at Mouselow, Glossop, where the operator supplies raw material for brick manufacturing within the same company, but outside the County.

Working and Reclamation

- 14.4 Historically, manufacturers of clay products extracted clay from their own clay pits in order to retain control over the extractive processes. Most clays, especially brick clays, have a low value by weight which means there are also strong economic advantages in clay being extracted in close proximity to the manufacturing process to minimise transport costs, although there are exceptions where there is a need for material of a particular quality or mix of qualities.
- 14.5 The rising production costs of small, labour intensive, surface and underground operations, together with the rapid increase in the capability of earth-moving equipment after the Second World War, changed the economics and therefore the working methods of the industry. Nowadays, clay is usually extracted as a by-product of large scale opencast coal working. Individual seams are extracted relatively cleanly and to precise specifications, and on a much larger scale and depth by opencasting than was previously possible. Whereas working used to result in a landscape dotted with active and inactive operations, working patterns now involve more rapid exploitation of the clays in joint workings with opencast coal. Some product manufacturers would, ideally, prefer sites to be dedicated to supplying clay for their own needs, but the economic advantages of joint workings are considerable

and usually enable the land to be reinstated more rapidly. In these cases, coal and clay are removed carefully, to avoid contamination, and different qualities of clay are individually stocked.

- 14.6 There are particular environmental implications of the working of clay which arise from the variety of clays and the requirements of the clay consumers. On the one hand there is a concern to avoid a landscape of active and inactive operations by ensuring that sites are worked comprehensively and rapidly rather than at the rate at which clay will be used by its consumers. On the other hand there is a need to keep the stockpiling of clay on the mineral site to within acceptable limits to minimise the environmental disturbance which can result. There is therefore a preference for clay stocking to be accommodated at the industrial site rather than on the mineral site.

Future Clay Working

- 14.7 The Government's guidance on the working of brick clay and fireclay refers principally to the importance of maintaining a continuing supply of clay to meet particular demands, and to the importance of working clay concurrently with coal where the minerals occur in conjunction. MPG1 states that Mineral Planning Authorities should have regard to the demand for bricks, tiles and pipes generally and engineering fill and the continuing demand for products with particular physical or aesthetic qualities. Such qualities are mostly the direct result of the physical characteristics of the raw material used which may be available in only a few locations. Guidance in MPG3 states that where opencast coal seams occur in conjunction with other minerals such as fireclay or brick clay it is important that the opportunity to work these other minerals commercially is fully explored with mineral operators.
- 14.8 There are no national, regional or county demand figures for clay production; rather, the markets for clay are closely related to the needs of particular local consumers. However, the brick and pottery manufacturers supplied from Derbyshire generally have sufficient permitted reserves of clay to meet their needs throughout the plan period and, sometimes, well beyond that period. There is a range of other uses for clay, such as in the construction industry and as a raw material for containment measures at waste disposal site, but there is sufficient scope for supplying clay for these uses from sites where it can be worked in association with other minerals, during the plan period. In view of all these considerations and in view of the widespread nature of the resource, there is no need to make specific provision for sites for the future working of brick clay in this plan.
- 14.9 The remaining commercial reserves of fireclay in Derbyshire are now considered to be very limited although some clay will still be produced as a by-product from opencast coal operations. There are, however, sufficient low alumina clays stockpiled in Leicestershire to supply local vitrified clay pipe producers throughout the plan period, although other local clay consumers may experience a shortage of some high alumina clays during the plan period and may therefore have to be supplied from other neighbouring sources.
- 14.10 In reflecting the issues covered by Government guidance on clay working, the

Mineral Planning Authority has attached importance to maintaining essential supplies to the brick clay and fireclay consumers, seeking to encourage the rapid working and reclamation of sites and, in particular, to resisting proposals in which the stocking of clays would lead to delays in the reclamation of the site. As already outlined, there is a preference for clay to be stocked at the industrial site rather than the mineral site. Policy MP27 (Opencast Coal) and Policy MP17 (Safeguarding Resources) provide for the joint working with coal where this would enable clay to be worked, in an efficient, economic and environmentally acceptable manner, and where the scheme is designed in a way which avoids the sterilisation of important clay resources.

Policy MP32: Clay

14.11 Proposals for the working of clay will be permitted provided:

- 1) the mineral is needed to enable the continuation of production and employment in the clay products industries, or as a raw material in the construction of waste disposal facilities, and**
- 2) the proposal would not have an unacceptable impact on the environment and is designed to secure the rapid working and reclamation of the site.**

Planning permission will not be granted where the stocking of clay on the mineral site would significantly delay the reclamation of the site.

Vein Minerals

Introduction

14.12 The most important vein minerals found in Derbyshire are fluorspar and barytes and the working of these minerals is of national importance. Fluorspar is used as a flux in the manufacture of steel and to a lesser extent in the ceramics industry. It is also used in the manufacture of hydrofluoric acid, the starting point for the manufacture of a wide range of fluorine based chemicals used in the production of aluminium, aerosols and refrigerants. The uses to which the mineral may be put depend largely on its chemical purity and processed size. Metallurgical grade fluorspar is used in steel manufacture whilst acid grade fluorspar is mainly used as a raw material in chemical applications and the smelting of aluminium. From a relatively buoyant market in the late 70s and early 80s the decline of both the steel industry and the demand for fluorocarbons has resulted in a fall in fluorspar production nationally to 58,000 tonnes in 1997. Output is not expected to increase significantly in the near future.

14.13 Barytes is the main naturally occurring ore of barium. Due to its relatively high density, it is used mainly in the offshore oil and gas industries as a weighting agent in drilling fluid, which accounts for approximately 85% of production. It is also used as a high quality filler and extender in the plastics, rubber and paint industries. About one third of domestic demand is produced indigenously, the remainder being

imported.

- 14.14 Sources of fluorspar and barytes are very limited within the UK. They chiefly occur in Derbyshire and Durham and are associated with extensive lead-zinc mineralisation in the Carboniferous Limestone. Cavendish Mill, Stoney Middleton (within the Peak National Park) meets about 70% of the acid grade fluorspar demand in the UK. Barytes is principally produced at Aberfeldy, Scotland, and as a by-product of fluorspar production at Cavendish Mill.
- 14.15 The fluorspar and barytes deposits occur either as relatively narrow steeply dipping and vertical veins or as flat lying irregular masses. A lead ore (galena) may also be present in these deposits and is sometimes produced as a by-product. Within the county the most important occurrences of vein mineral deposits are confined to an area along the eastern edge of the Carboniferous Limestone, see Map 1, extending from the Castleton area in the Peak National Park southwards to Matlock, Wirksworth and Brassington. Deposits are also found in two eastern in-liers of limestone in the Ashover and Crich areas. Due to the nature of deposits reserves are difficult to assess, but whilst the more accessible deposits in the uppermost part of the limestone have already been worked there are thought to be considerable amounts of remaining vein mineral resources within the general area referred to above.

Working and Reclamation

- 14.16 There are currently only a small number of vein mineral operations within the plan area. Vein minerals can be worked by both surface and underground methods depending upon the location of the deposit. In addition the small scale working of fluorspar/barytes from old lead-zinc workings and waste dumps has taken place for many years. In the past the working tended to move along the rakes extracting the shallower veins using a hydraulic machine or dragline. As these have become worked out, the remaining ore is likely to be found at greater depths often inter-mixed with limestone. This results in operations more akin to hard rock quarries with longer timescales. The main visual impact of these workings results from the quarry benches and machine movements; also noise from machinery and blasting can affect nearby settlements. Underground working, particularly, may result in large overburden mounds and subsidence.
- 14.17 Once the material has been worked, it is transported mainly by lorry direct to a processing plant, usually operated by the larger companies, although in some cases it may be initially crushed on site. Processing plants tend to be large in scale and may be intrusive. A particular problem is the impact of traffic on the surrounding highway network and nearby settlements because the plant receives both mined material to be processed and distributes the processed material to customers. Cavendish Mill, Stoney Middleton within the Peak National Park is the main plant serving the Derbyshire area.
- 14.18 The more recent large scale surface workings have similar reclamation problems to hard rock quarries. Because of their scale and the relative small quantities of waste material generated it is not possible to restore land to original levels following

completion of working. In some cases the quarry floor may be restored to agriculture, however a simpler solution is to allow the quarry to naturally revegetate to attract wildlife and promote nature conservation.

Future Vein Mineral Working

- 14.19 Government advice in MPG1 points out that non-aggregate materials which are not used for construction purposes, such as barytes and fluorspar are often in great demand but of limited occurrence and these factors need to be taken into account in drawing up local plan policies.
- 14.20 Within the county the majority of the vein mineral deposits lie within the Peak National Park and, even in the remaining part of Derbyshire, many vein mineral deposits lie within areas of high landscape quality bordering the National Park. The national importance of these deposits must therefore be balanced against the environmental effect of working them in such sensitive locations. The UK demand for vein minerals is not expected to increase significantly over the plan period. Due to their limited occurrence, however, it is likely that Derbyshire will be expected to contribute towards meeting the national demand. The international market for vein minerals fluctuates widely which makes production very difficult to plan for. Further difficulties arise due to the variable nature of the deposit which makes it very difficult to assess reserves. In view of these factors it is not possible to make specific provision for sites for future working of vein minerals.
- 14.21 Proposals for vein mineral extraction will be considered in the light of the need for the mineral to be worked having regard to the availability of alternative sources and the environmental impact of the development, and with particular regard to the effect on areas of special landscape quality. Because vein minerals occur in association with limestone, extraction can involve the necessary production of limestone as a by-product. It is important in these cases that the scale of the whole operation can be justified by the need for the vein mineral and that the scale and duration of the working is limited to what is required to meet that need. The impact of extraction on landscape and settlements can be reduced by maximising the volume of essential production which is won by underground methods. Due to the legacy of past lead workings within the carboniferous limestone the extraction of fluorspar and barytes can give rise to problems of subsidence and land stability which will be taken into account in considering proposals. Proposals will also be required to include appropriate measures to dispose of waste material particularly with regard to waste slurry from processing plants. Proposals for the working of vein minerals will need to be in accordance with the general policies for controlling mineral development as well as Policy MP33.

Policy MP33 Vein Minerals

- 14.22 Proposals for the working and processing of vein minerals will be permitted only where:**
- 1) the duration and scale of operations is limited to the minimum necessary to meet a proven need for the vein**

mineral

- 2) **the development can be carried out in an environmentally acceptable way and the least damaging means of production are employed**
- 3) **the proposals are designed to avoid damage in the form of subsidence or landslips and**
- 4) **the waste disposal arrangements are acceptable particularly in relation to slurry from processing plants.**

Building Stone

- 14.23 Apart from for the production of aggregates, sandstone is also extracted on a small scale (5-6,000 tonnes per annum) for use as building stone. The market for the mineral fluctuates greatly making future demand difficult to predict. There are also wide variations in the character of the stone which are critical to specific market needs. Limestone is produced in very small amounts for this purpose as a by-product at some major limestone operations.
- 14.24 An important aspect of demand, which should be taken into account, is that natural stone is sometimes required as a building material in order to help conserve the built environment when building projects are proposed in sensitive areas, e.g. Conservation Areas. The availability of local stone for the repair of historic buildings, field boundaries, paving, for the construction of new buildings, and for stone roofing 'slate', is of great importance for the conservation of Derbyshire's built environment.
- 14.25 Unfortunately most sandstone lies in areas of high quality landscape, and in some cases, within designated Special Landscape Areas. The need to safeguard the quality of the landscape will therefore be a significant constraint on any new proposals for working these reserves and should be balanced against the need for the mineral. In practice, operations to extract stone for building material are often small in scale with modest production levels, enabling their impact to be minimised.

Policy MP34: Building Stone

- 14.26 **Proposals for the extraction of rock for use as building stone will be permitted provided that:**
- 1) **there is a need for mineral of a specific character to be worked in that location and**
 - 2) **the scale of the proposal is such that its impact on the environment can be kept to an acceptable minimum.**

Oil and Gas

Introduction

- 14.27 Oil and natural gas are composed of mixtures of naturally occurring hydrocarbons, and, where these have become trapped by overlying impermeable rocks or some other feature such as a fault, oil and gas fields are created. Both oil and natural gas are used primarily as fuel and make a major contribution to total energy production in the UK. Other components are used as raw materials for the petro-chemicals industry and in the manufacturing of drugs and plastics.
- 14.28 UK production of oil totalled 120 million tonnes in 1997, of which onshore sources, at 5 million tonnes, represented only 4%. Natural gas production totalled 92 million cubic metres. The largest onshore oilfield in the UK is at Wytch Farm, Dorset which contributed 4.5 million tonnes of onshore oil produced in 1997. The majority of other commercial onshore oilfields are found in an area between central Nottinghamshire and north west Lincolnshire. Oil and gas have been exploited in Derbyshire at Heath and Calow (gas), and Hardstoft, near Pilsley (oil) and exploratory wells have been sunk at four sites at Whitwell, Bramley Moor, Golden Valley and Sawley, all lying within the eastern part of Derbyshire.
- 14.29 The production of oil and gas is subject to the same planning controls applicable to any other mineral. However, because the ownership of petroleum underground is vested in the Crown, companies must obtain a licence from the Department of Trade and Industry to exploit oil and gas resources. A new single Petroleum Exploration and Development Licence (PEDL) has been introduced under the Petroleum (Production) (Landward Areas) Regulation 1995. The PEDL replaces the separate exploration, appraisal and development licences formerly available.
- 14.30 The environmental impact of oil and gas development is relatively limited. The rig may be visually intrusive during the drilling of the well, but this stage is likely to only take a few months. Noise can also be a major factor at the drilling stage, but careful siting and distance from settlements can reduce its impact. If a find is made the rig is replaced with well head gear which is usually about 10-12 ft high. Small scale production facilities at the well head site can be relatively unobtrusive but if there is a need for a gathering station and export terminal the greater area required by these is likely to be more visually intrusive. The possibility of pollution through spillage is a potential problem which can be ameliorated by a system of banks and ditches surrounding the site to contain any pollutants. Consideration must also be given to the need to dispose of drilling mud, other residues and unwanted gas.
- 14.31 At the production stage consideration needs to be given to the proposed mode of transporting oil to the refinery, the use of rail or pipelines will reduce road traffic but the advantages need to be weighed against the economic and environmental costs of providing such facilities. Commercial quantities of gas may be piped into the National Grid system. The restoration of sites is relatively straightforward, involving the removal of all structures, equipment etc. the plugging of wells and replacement of top soils.

Future Oil and Gas Development

- 14.32 National policy considerations relating to oil and gas are set out in DOE Circular 2/85. The Government is keen to encourage exploration for, and production of, the country's own oil and gas reserves both off and on shore as supplies of home produced oil and gas are inevitably more secure than imported supplies. It is, therefore, Government policy to ensure the maximum economic exploitation of these resources over time, consistent with good oilfield practice and with the protection of the environment. There may be circumstances where, exceptionally, the environmental implications will be so great that the proposed development cannot be permitted on a particular site. For example, as with other minerals, special consideration must be given to working in areas designated as having special environmental importance. The guidance states "it will be for the industry to show in any particular case that the need to undertake the development outweighs the environmental objections, including those arising from the factors which led to the designation of the area in the first place". Circular 2/85 also suggests that it might be helpful to distinguish clearly between policies that apply to the three stages of exploration, appraisal and development.
- 14.33 Proposals for the exploration of oil and gas will be considered against the criteria set out in Policy MP13 of the plan which deals with the exploration of all minerals. Whilst an exploratory borehole may indicate the presence of oil and gas, to determine the extent of the field and to assess its commercial viability, it is usually necessary for further appraisal boreholes to be drilled. At this stage operators will be requested to present their proposals as part of an overall scheme for the appraisal and delineation of the field. Planning applications for further exploratory drilling and evaluation will be determined in the light of this overall scheme.
- 14.34 The production and distribution facilities, which will be required if commercial quantities of oil and gas are found, would have the greatest environmental impact because of their scale and duration. It is essential that proposals for commercial development should be presented to the Mineral Planning Authority as part of a comprehensive scheme, to include any adjacent fields so that the whole area can be exploited efficiently and with the least environmental impact. Planning applications for production facilities will be determined in the light of this comprehensive scheme.
- 14.35 All proposals for development in association with the confirmation or exploitation of the oil and gas resource will be considered against the general policies set out in the plan, and the detailed criteria of Policy MP35.

Policy MP35 Oil And Gas

- 14.36 **Proposals for the development of oil and gas, including facilities associated with the production, processing or transporting of oil or natural gas will be permitted only where they can be carried out in an environmentally acceptable way, and provided that:**
- 1) **any irreparable damage to interests of acknowledged environmental importance is outweighed by a proven need**

- for the development in its proposed location
- 2) the proposal is consistent with an approved overall scheme for the appraisal of, or production from, the area
 - 3) the proposed location of the development is the best having regard to geological, technical and environmental considerations
 - 4) satisfactory arrangements have been made for the avoidance of seepage pollution, the off-site disposal of drilling mud and other drilling residues and the flaring and disposal of unwanted gas.

Other Minerals

14.37 Other minerals such as gypsum, ironstone, natural pigments, ganister, peat and silica sand have been worked in the past, or are currently being worked on a small scale. On account of their very limited occurrence in the county and/or the abundance of easily worked deposits elsewhere in the UK, they are considered unlikely to be worked in Derbyshire on a significant scale in the future. In some instances (as with ganister and natural pigments), their use has been largely superseded by other materials or changes in process technology. The general policies of the plan for controlling mineral development will apply to proposals related to these minerals.

PART V—APPRAISAL AND REVIEW

Chapter 15—Monitoring, Enforcement and Review

The Review of Old Mineral Permissions

- 15.1 Many of the older established mineral operations in the County are covered by planning permissions granted in the 1940s, '50s and 60s. Those permissions contain conditions which were thought to be adequate at the time, but which often fall well short of modern environmental standards. Many were granted planning permission by the Minister of Town and Country Planning in the early 1950s, but later permissions may also fall short of today's standards.
- 15.2 Legislation introduced through the Town and Country Planning (Minerals) Act 1981 aimed at addressing the problems of these older permissions did not prove successful in achieving the necessary updating of conditions to acceptable standards and the Government brought forward new legislation in the Environment Act 1995 to revise the system for review of these permissions. These new provisions build to a considerable extent on the experience gained dealing with the extant mineral permissions granted under "Interim Development Orders" (IDOs) and which were the subject of legislation in the Planning and Compensation Act 1991.
- 15.3 The Environment Act places a duty on mineral planning authorities to carry out an initial review and updating of mineral sites where the predominant mineral permission or permissions relating to the site was granted before 22 February 1982. The initial review of sites will be undertaken in two phases each of three years and draws a distinction between active and dormant sites. In the case of dormant sites these may not recommence operations until a scheme of full modern conditions has been approved by the Mineral Planning Authority. Active sites will be the subject of a submission of a scheme of working and restoration conditions at a date to be specified by the Authority. Where the Authority considers that conditions different to those submitted should be imposed, there is a potential liability to compensation where the conditions would restrict the operation such that either the economic viability of the site, or the asset value of the site, would be prejudiced to an unreasonable degree.
- 15.4 There are also provisions in the Act for periodic reviews of all mining sites. Where sites are not actively being worked and depending on the period for which the site has been inactive, and the likelihood of a recommencement of working, the provisions of the 1981 Act enable Mineral Planning Authorities to take action:-
- a) to prohibit the resumption of working, by means of a Prohibition Order, or
 - b) to require works to be carried out to alleviate damage to amenity during the period of suspension, by means of a Suspension Order.
- 15.5 **All mineral sites will therefore be subject to a review and, where appropriate and practicable, planning permissions will be updated to modern standards so as to mitigate the adverse effects of workings and to secure satisfactory restoration and after care. In appropriate cases prohibition or suspension orders will be made.**

Monitoring and Enforcement

- 15.6 There will be a need to monitor the effectiveness of the Minerals Local Plan on a continuous basis to ensure that its policies and proposals are being implemented as intended, and to assess whether the policies themselves continue to be appropriate in the light of changing circumstances.
- 15.7 At the local level the Mineral Planning Authority will continue to collect information on established mineral operations in co-operation with the industry, including an annual survey of aggregate production and reserves (in conjunction with the East Midlands Regional Aggregates Working Party), and from the ongoing review of mineral working sites referred to above. Every four years a more extensive survey is conducted and is accompanied by a Regional Commentary which outlines supply and demand patterns and examines trends. In addition, the performance of operators in complying with conditions attached to planning permissions, and standards of working generally will be closely monitored.
- 15.8 Where breaches of planning control or other problems arise, solutions will normally be sought by negotiation and agreement in the first instance. In this connection the establishment of local liaison committees can provide an important link between mineral operators and local communities and will be supported in appropriate cases. Where necessary, action will be taken to enforce planning conditions and legal agreements using the powers available under planning legislation. Similarly, in the case of unauthorised mineral development, action will be taken to bring it under planning control and to stop and rectify damaging development as quickly as possible.
- 15.9 **The Mineral Planning Authority will therefore monitor operations on a regular basis and will take action as appropriate to secure compliance with planning conditions or legal agreements, and to bring unauthorised minerals development under control.**

Review of the Minerals Local Plan

- 15.10 At a more general level it will be important to monitor changes in the wider social, economic and environmental circumstances which may have a bearing on the future scale and pattern of mineral working. These will include:
- changes in European, national or regional policies, including government planning guidance, as they affect mineral working
 - changes, existing and forecast, in the overall pattern of supply and demand, both nationally and locally
 - changes in markets and transportation developments
 - improved information on mineral resources, including the potential for the use of waste as a secondary minerals aggregate

- changes in working techniques, restoration opportunities and the overall economics of mineral working.
- 15.11 When it becomes apparent that the overall context has changed substantially it will be necessary to review the policies and proposals in the minerals local plan to determine whether changes are needed. For example, major changes in government guidance on the overall scale of mineral working could require a reappraisal of the amount of land which needs to be released for future working. In any case PPG12 requires that local plans should normally be reviewed at least once every five years.
- 15.12 **The Mineral Planning Authority will therefore review the effectiveness and continued relevance of the policies and proposals of the plan on a regular basis, and where appropriate will prepare a formal review of the Minerals Local Plan.**

Chapter 16—Environmental Appraisal

Introduction

- 16.1 PPG12 (1999) advises that local authorities are expected to carry out a full environmental appraisal of their development plan. Accordingly, separate environmental appraisals were carried out for the adopted Plan and the first Alteration to the adopted Plan. Both of these appraisals have been included in this Chapter, as set out below.

Environmental Appraisal - Adopted Plan

Introduction

- 16.2 Since the Town and Country Planning Act, 1991, there has been a statutory requirement that local planning authorities must "have regard" to environmental considerations, and Government guidance in PPG12 (1999) is that development plans should contribute to the objectives of sustainable development. In 1993, the Department of the Environment published a Good Practice Guide which suggests a number of techniques for carrying out environmental appraisals.
- 16.3 The guide acknowledges that to attempt to catalogue all that is of environmental value and to assess all possible environmental impacts is a potentially enormous task. It makes it clear that environmental appraisal is an integral part of drawing up a plan and not a separate exercise. The purpose of this chapter, therefore, is to highlight the main environmental considerations that have been taken into account in preparing the plan, including sustainability objectives and the key positive and negative effects of policies on the environment.
- 16.4 The UK Strategy for Sustainable Development considers all aspects of the environment; it seeks to assess all possible impacts upon it and to identify ways of putting sustainability into practice. In relation to mineral extraction, it recognises that the stock of raw materials is finite and that their extraction, processing, consumption and use should be managed to encourage re-use and recycling, avoid wastage, and prevent depletion of the natural resource. It should be acknowledged therefore, that, as far as minerals are concerned, the extent to which "sustainability" 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.
- 16.5 Development plans clearly have no influence over many of these aspects, but do have an important role to play in working towards the goal of sustainability. However, in doing so, they must have due regard to government guidance which includes a requirement to ensure that there is an adequate supply of minerals to meet the needs of society. Mineral Planning Authorities are therefore constrained by this requirement and this is reflected in the objectives of sustainable development for minerals planning which are defined in government guidance (set out in para 3.2 of this plan) and which provide a context for the preparation of minerals local plans.

General Policies

The Principle of Balance

- 16.6 The underlying principle of the policies in this plan is that the needs of society for minerals must be balanced against the need to protect the environment and to conserve minerals as far as possible. In requiring this balance, the plan gives effect locally to the strong central theme in all strategic planning policies and guidance, including the UK Strategy for Sustainable Development, MPG1 (sustainable development), MPG3 and MPG6 (objectives of sustainable development), and the Derbyshire Structure Plan (Minerals Policies). This balance between the need for minerals and other competing interests is achieved in the plan through the application of its first two policies; Policy MP1 (The environmental impact of mineral development) and Policy MP2 (The need for mineral development).
- 16.7 Whilst Policy MP2 provides the framework for considering the need for development in circumstances where there is environmental harm, Policy MP1 establishes the criteria against which environmental impact will be assessed, and requires that the impact is acceptable. This policy ensures that all the main environmental impacts that could be caused by mineral proposals, including effects on communities, agricultural interests, landscape, nature conservation, heritage, transport and highway interests, public access and recreation, and water resources, are taken into account and will, on balance, be acceptable.
- 16.8 The preamble to Policy MP2 acknowledges that mineral development proposals almost inevitably lead to some adverse effects on the environment and where this is the case, Policy MP2 requires that sufficient need exists for a mineral to be worked. It ensures that all the relevant considerations, relating to demand, the nature of the mineral deposit, the scale of permitted reserves, what alternatives are available, and the economic implications, are taken into account. It, therefore, seeks to ensure that where there is a sufficient need, it should be met, and where sufficient need has not been established, the mineral resource will be conserved and unnecessary resource depletion will be avoided.
- 16.9 The plan recognises that, in practice, conflicts of interest can only be resolved on a case by case basis. Material to these considerations will be a number of important factors, including the extent to which environmental impacts can be minimised by measures secured by planning conditions or through legal agreements, how far impacts may be offset by restoration proposals or wider environmental benefits, and the extent to which materials are used efficiently and waste is minimised. Policy MP3 requires all these matters to be examined when assessing the environmental acceptability of proposals.
- 16.10 It is recognised that the approach adopted in this plan inevitably implies that there will be some negative environmental effects from mineral development because achieving environmental acceptability is not the same as having no adverse effect; acceptability is qualified by the need for the mineral. It should also be recognised that this is an intrinsic aspect of the principle of balance which, necessarily, is the basis of the plan's approach.

Interests of Acknowledged Environmental Importance

- 16.11 There are, nevertheless, specific acknowledged limits of acceptability in relation to

individual environmental interests, which should not be exceeded. This reflects the principle in government guidance that a general presumption in favour of development does not apply where it would cause demonstrable harm to interests of acknowledged importance (PPG1). Policy MP4 establishes the principle that mineral proposals will not be allowed where they would result in irreparable or unacceptable damage to interests of acknowledged environmental importance, and defines these limits as criteria in relation to a range of particular interests, including agricultural land, landscape conservation, nature conservation, heritage interests, water resource implications, transportation implications, and cumulative environmental impact. Where appropriate a hierarchical approach is adopted to the protection of interests at different levels of importance in line with government guidance (PPG9 and PPG16).

Mitigation and Restoration

- 16.12 Policies MP5, MP6 and MP7 seek to secure appropriate mitigation measures to minimise the impact of mineral development with regard to the highway network, nature conservation, and archaeological interests respectively. In addition, Policy MP5 requires that road transport is used only where there is no practical alternative which would be environmentally preferable. Similarly, Policies MP8, MP9 and MP10 will enable the disturbance to the environment to be minimised by the use of appropriate planning conditions, and (where matters lie outside the scope of planning conditions) by seeking legal agreements, to secure the effective control of operations and proper provision for the reclamation and after use of sites.

Landbanks

- 16.13 Policy MP16 establishes a commitment to maintain landbanks for non-energy minerals at appropriate levels to enable continuity of production to be maintained i.e. 7 years for sand and gravel and 15 years for crushed rock. The latter reflects the longer lead-times generally involved in bringing crushed rock operations into full production, though, in practice the crushed rock landbank in Derbyshire is much longer, extending well beyond the plan period. This policy accords with government guidance in MPG1 and MPG6. For sand and gravel, MPG6 recommends a landbank sufficient for at least 7 years extraction and "a longer period" is suggested for crushed rock. These periods are shorter than in previous government guidance and this reflects the government's policy of gradually changing supply patterns to place less reliance on traditional, land-won (primary) sources and more emphasis on alternatives which include secondary sources.

Safeguarding Mineral Resources

- 16.14 Policy MP17 seeks to resist proposals for built development which would have the effect of sterilising or prejudicing the future working of important mineral deposits. It provides for the prior extraction of such minerals where practicable and environmentally acceptable, and where it does not prejudice the timing and viability of the proposed development. The policy also seeks to resist mineral development which could prejudice the future working of other mineral resources, such as waste tips or the opencasting of coal which is closely associated with clay deposits. It

therefore accords with the aim of sustainable development to conserve mineral resources as far as possible and to encourage their efficient use, although the sterilisation of some minerals may, in practice be unavoidable.

Extensions to Sites

- 16.15 In line with guidance in MPG1, Policy MP18 seeks to allow proposed extensions to established mineral working sites in preference to the development of completely new sites; this approach helps to avoid a proliferation of sites, enables the best use to be made of mitigation measures already carried out and usually permits a greater measure of control over the release of resources. There can be exceptions, however, and the policy would not apply this preference where an extension was environmentally unacceptable.

Additional Sites

- 16.16 For "bulk minerals" (sand and gravel, limestone, igneous rock, and sandstone, supplying the aggregates and industrial markets) the plan's approach is to identify specific preferred areas - allocations - where there is a presumption in favour of mineral working to enable Derbyshire to make its contribution towards meeting demand. The corollary of this approach is provided in Policy MP19 which requires that, outside these areas, proposals for mineral extraction should be generally resisted unless they can be justified either because they are required to meet a need that was not anticipated in the plan or, in the case of proposed amendments to the boundaries of operations, because they would result in significant environmental benefits. These benefits could include sustainability benefits in terms of improving the efficiency of the use of materials or reducing the production of waste. The policy requires however that environmental benefits must be achieved without increasing the level of permissions in order to discourage unnecessary depletion of the mineral resource.

Other Types of Mineral Development

- 16.17 **Borrow Pits:** are temporary operations serving major building or civil engineering projects, such as road schemes. They can have environmental advantages over established quarries, for example, being close to the construction site they may reduce or eliminate heavy and concentrated lorry movements on public roads. They may also 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. However, they involve in effect, the establishment of new working, albeit temporarily and in the past problems of reclamation have been encountered. Therefore, Policy MP11 seeks to allow 'borrow pits' only where net environmental benefits would result compared with supplying the project from established sources.
- 16.18 **Mineral Related Development:** There are a number of industrial activities related to the processing of minerals such as, ready-mixed concrete plants, brickworks etc which may be proposed in close proximity to a mine or quarry. However, whilst there may be good operational reasons for this close link, such development could have

significant environmental effects. Therefore, Policy MP12 seeks to allow mineral related development in a countryside location only where it can be justified in terms of achieving net environmental benefits.

- 16.19 **Mineral Exploration:** Many proposals for mineral exploration are permitted development under the Town and Country Planning General Permitted Development Order, 1995. However, where planning permission is required, proposals will be considered against the environmental safeguards set out in the general policies of the plan and, in particular, Policy MP13 which deals with mitigation and reclamation aspects in more detail.
- 16.20 **Disposal of Non-Mineral Waste in association with Mineral Development:** The disposal of non-mineral waste such as domestic, commercial and non-toxic industrial waste can often be used to restore mineral sites where insufficient quantities of waste are generated by the mineral operation itself. Such an approach can be regarded as 'sustainable' to the extent that it ensures the restoration of mineral sites and provides suitable sites for waste disposal, although it is acknowledged that the "disposal" option has a low preference in the waste management hierarchy of options. Some waste minerals are potential pollutants and, therefore, this option will be subject to essential safeguards, including those of the Environment Agency. Proposals for the disposal of non-mineral waste will, in due course, be considered against the policies of a Waste Local Plan. However, in advance of the preparation of this plan, the Mineral Planning Authority will apply the environmental safeguards provided for in the general policies of the plan wherever they are relevant, including Policy MP10 (Reclamation and After-Use), and Policy MP14 applies the "principle of balance", specifically to these proposals.
- 16.21 **Re-working of Tips:** There are a number of old waste tips within the county from past working of coal, vein and other minerals. Although the materials in them were discarded when they were originally worked, they may now have sufficient value to be economically recoverable. Proposals for the re-working of tips will be subject to the environmental safeguards as set out in the general policies of the plan wherever they are relevant. Policy MP15 also requires that, where such tips have been reclaimed or naturally revegetated to an acceptable after-use, proposals for their re-working will be resisted unless there is a proven need for the mineral which cannot otherwise be met.

Policies for Aggregate Minerals Supply and Demand

- 16.22 National guidance on aggregates provision in England and Wales (MPG6) seeks to ensure that "the construction industry continues to receive an adequate and steady supply of material at the best balance of social, environmental and economic costs whilst ensuring that extraction and development are consistent with the principles of sustainable development". The guidance recognises that resources are finite and that there are shortages of exploitable reserves in some regions. Government policy, however, is that overall demand should continue to be met, albeit tempered by the aim of encouraging a gradual change in supply patterns to rely less on land won (primary) sources and place more emphasis on alternatives, including secondary and recycled materials. However, until national guidance undergoes a more fundamental

change, for example by incorporating environmental limits or measures to reduce demand, Mineral Planning Authorities will be constrained from adopting a more sustainable approach.

- 16.23 In preparing local plans, Mineral Planning Authorities are required to provide an appropriate contribution to the regional provision for aggregates set out in MPG6—the "local apportionment". This guidance states that the local apportionment figures should not be regarded as inflexible and that it is for the local plan to test the practicality and environmental acceptability of the proposed levels of provision. The Secretary of State will, however, intervene where plans do not pay due regard to the guidelines. The acceptability of the apportionment figures has been considered in Chapter 9 for sand and gravel, and in Chapter 10 for crushed rock.

Sand and Gravel

- 16.24 The local apportionment figure for sand and gravel in Derbyshire is 36 million tonnes over the plan period, bearing in mind the level and nature of existing permissions and the need to maintain continuity of supplies, the plan establishes a need to release additional land sufficient to provide for 12 mt of sand and gravel. It is considered that this level of provision is sufficient to meet anticipated needs without allowing unnecessary depletion of sand and gravel resources.
- 16.25 To test the local environmental acceptability of meeting this provision, a broad locational assessment was undertaken of a range of factors including, quality and quantity of the deposit, landscape quality, the communications network and the nature and location of existing workings and permissions. The assessment concluded that environmental constraints are not so extensive or significant as to prevent the county from making provision for continuing sand and gravel production in accordance with national and regional guidance. In broad locational terms the assessment concluded that the areas of the Sherwood Sandstones, Upper Dove Valley and Upper Derwent Valley are particularly constrained in terms of quality and quantity of the deposit, landscape quality, and relatively poor communication links. The search for preferred sites for additional working therefore concentrated on the Lower Dove Valley, the Lower Derwent Valley and the Trent Valley, where the adverse environmental effects are likely to be less.
- 16.26 The search for preferred sites for sand and gravel working involved the detailed assessment of around 30 sites. Particular consideration was given to the potential impact of working on the environment and how far measures could eliminate adverse effects or reduce them to an acceptable level. The main factors taken into account include quantity and quality of the deposit, disturbance to local communities, landscape quality, water resources, agricultural land quality, conservation features, transport and land ownership. Regard was also given to Policy MP18 (para 7.15) and the advantages of extensions to sites compared with developing greenfield sites. The detailed assessment showed that there is sufficient land available without overriding environmental constraints lying adjacent to active or permitted sites to meet the forecast production during the plan period. No new greenfield site offered a better balance of advantages.

- 16.27 Whilst there will inevitably be some negative effects of the proposals on the environment, the sites allocated are the least environmentally damaging of the sites assessed, and detailed proposals on the allocated sites will be required to satisfy the provisions of all the relevant general policies of the plan, including those relating to mitigation, reclamation and after-use. In relation to Sherwood Sandstones (see para 9.44), Policy MP22 will permit variations or extensions to existing operations but only where they would provide the opportunity to achieve significant environmental benefits without significantly increasing the level of permitted reserves. These proposals could bring local environmental gains and could include a greater efficiency in the use of materials, but the policy safeguards against additional resource depletion.

Crushed Rock

- 16.28 The level of existing permitted reserves of rock substantially exceeds the level required to satisfy the predicted future demand for crushed rock aggregates during the plan period. There is therefore no need to release additional land in this plan for future working. Accordingly, Policy MP23 maintains a general presumption against such proposals, ensuring that excessive and unnecessary environmental impact and resource depletion are avoided as far as they can be. This policy is also permissive towards proposals for modifying the boundaries of existing permissions where this would result in significant environmental benefits without significantly increasing the level of permitted reserves. It should be noted that whilst permitted reserves substantially exceed likely demand, this will not lead to a greater proliferation of operating sites because the majority of reserves are located at sites which are already active.

Secondary Aggregates

- 16.29 Policy MP24 seeks to permit the working of secondary aggregates from mineral wastes for the purpose of producing substitutes for primary aggregates, provided that proposals are environmentally acceptable and do not involve the re-working of satisfactorily reclaimed or regenerated former tips. This is in keeping with the government's commitment to sustainable development in MPG6 and the advice that aggregates and products manufactured from aggregates should be recycled wherever possible, and that secondary materials should be used as substitutes for "primary" aggregates wherever feasible and environmentally acceptable.
- 16.30 The Guidance envisages a near doubling of the production of secondary aggregates between 1992 and 2006. The extent to which this can be achieved will depend on a number of factors relating to costs and specifications which are largely outside the influence of the Minerals Local Plan. However, Policy MP24 provides a policy framework to enable progress towards these objectives to be achieved, should sufficient demand for secondary aggregates arise.

Policies for Non-Aggregate Minerals Industrial Limestone

- 16.31 As the level of existing permitted reserves substantially exceeds the anticipated future demand for industrial limestone, there is no overall need to release additional land for future working. Accordingly, Policy MP25 maintains a general presumption against such proposals, ensuring that excessive and unnecessary environmental impact and resource depletion are avoided. The complex and unpredictable nature of both the mineral deposits and the markets have also been taken into account in this policy so that new permissions may be granted to satisfy unanticipated demand, but only where they are justified by specific and proven needs and where proposals are environmentally acceptable. This will further ensure that unnecessary depletion of the resource, and unacceptable impacts on the environment will be avoided.
- 16.32 In line with this principle, the policy for Whitwell Quarry allocates land which is necessary to meet the anticipated needs of specific markets, including some of national importance, throughout the plan period. The sites were allocated taking into account all interests of acknowledged importance including the need to protect the amenities of neighbouring settlements and the international importance of Creswell Crags, but also the opportunities for achieving substantial environmental benefits through the removal and re-use of a former colliery waste tip and the removal of the road from the Creswell Gorge. Whilst there will inevitably be some negative effects from these proposals, including the loss of some grade 2 agricultural land, they are considered, on balance, to be acceptable bearing in mind that the general policies of the plan will ensure that impacts are minimised, and bearing in mind the national importance of the mineral concerned.

Energy Minerals

- 16.33 The principle of balance already described applies to energy minerals within the context of the Government's wish to see the largest economically viable coal industry for the longer term, and the full exploitation of oil and gas resources, provided this is to be consistent with land use planning criteria and the full and proper protection of the environment. The Government's policy is that this is best achieved through the operation of competitive and open markets; applicants do not normally have to prove the need for this development. However, there are circumstances in which arguments as to the need for the development may be considered and these are outlined below in relation to each mineral.
- 16.34 **Coal:** The Government's policy on coal (see para 13.14) is that development proposals should not be unduly restricted where they are environmentally acceptable and consistent with the "principles of sustainable development". In applying these principles, consideration is to be given to the extent to which the proposal provides national, regional or local benefits to the community which outweighs the disturbance caused during the development. Policy MP27 (Opencast Coal), closely follows this criterion by ensuring that proposals which are permitted provide such benefits that outweigh any disturbance that will be caused. The policy then lists specific examples of benefits and these include improvements to the local environment, avoidance of sterilisation of minerals and opportunities for efficient (joint) working of minerals, as potential benefits which might weigh in favour of opencast coal proposals.
- 16.35 Guidance in MPG3 indicates that where proposals would cause disturbance that

would not be outweighed by benefits to the community, arguments relating to need may be considered and in particular, whether the need for the development would outweigh its adverse effects on the environment. Policy MP27 requires that, in these particular cases, development will be permitted only where there is an overriding proven need for the coal. The general policy for opencast coal therefore pursues the sustainability objectives under the provision of MPG3.

- 16.36 In addition, the plan defines "Opencast Constraint Areas" where there is a concentration of conservation features such that each area, as a whole, deserves to be protected. Policy MP28 establishes a general presumption against opencast coal working within these areas to protect their conservation interests.
- 16.37 The policies for the underground working of coal recognise that the environmental effects of these proposals are different from proposals for opencast working. The policies ensure that these effects are acceptable (Policy MP29) having particular regard to the impact of surface installations and operations, the effects of any subsidence on surface development or other interests of acknowledged environmental importance, and the proposed arrangements for the disposal of colliery waste and the transportation and stocking of coal. Detailed criteria to ensure that these latter aspects are acceptable are included in Policy MP30 (Disposal of Colliery Waste) and Policy MP31 (Coal Stocking).

Oil and Gas

- 16.38 The Government is keen to encourage the full exploitation of oil and gas resources provided that it takes proper account of environmental considerations (Circular 2/85). The main concern of the local plan, therefore, is to ensure that proposals will be carried out in an environmentally acceptable way in accordance with an approved scheme. However, where proposals would result in irreparable damage to interests of acknowledged environmental importance, government guidance indicates that the need for the development must be shown to outweigh the environmental objections to it. Policy MP35 (Oil and Gas) includes detailed criteria in accordance with all these principles.

Clay

- 16.39 There are no national or local demand figures for clay production as the need for clay is closely related to the needs of particular local consumers. Taking these needs into account in accordance with government guidance there is no necessity for this plan to identify sites for the future working of clay. Policy MP32 therefore seeks to balance the need for clay working against its environmental effects. It requires that the mineral is needed by particular clay consumers, and that proposals are environmentally acceptable, having particular regard to the need to secure the rapid working and reclamation of the site, and to ensure that clay is stocked at the industrial site in preference to the mineral site.

Vein Minerals

- 16.40 Government guidance acknowledges that vein minerals are relatively scarce.

Deposits are found in Derbyshire, both within the Peak National Park and within the area of high landscape quality bordering the National Park. Due to their limited occurrence Derbyshire is expected to contribute towards meeting national demand. The difficulty in assessing reserves, due to the nature of the deposit and fluctuations in the international market, mean that it is not possible to make specific provision for sites for future working. The main policy approach, therefore, is one of balancing the national need for the mineral to be worked against the environmental impact of working, usually in sensitive locations. In particular, the scale and duration of operations will be limited to that which is necessary to meet proven needs and the least damaging means of production must be employed.

Building Stone

- 16.41 The market for sandstone for use as building stone is difficult to predict because there are wide variations in the character of the stone which are critical to specific market needs. Limestone is also produced in small quantities for this purpose as a by-product from some major limestone operations. One aspect of demand is that the stone is often needed to conserve the quality of the built environment. Most of the resources lie in areas of high quality landscape, although operations to extract building stone are often small in scale enabling impact on the environment to be minimised. Accordingly, Policy MP34 requires that such proposals are needed in their proposed location to supply mineral of a specific character, and that the scale of the development will ensure that their impact on the environment can be minimised, and will be acceptable.

Conclusion

- 16.42 This appraisal has outlined how the plan has had regard to environmental matters. It has sought to clarify the underlying principles and objectives, and the implications for the environment of the policies of the plan. It acknowledges the constraints that there are on how far development plans can achieve sustainability objectives and the responsibility of authorities to balance environmental concerns with other needs. A precise assessment of the environmental costs and benefits of the plan has not been possible. However, the appraisal shows that while fulfilling the plans functional aims which are set out in Chapter 1, the plan will make good progress towards putting sustainability principles into practice.

Environmental Appraisal - First Alteration : Chapter 13 - Coal

- 16.43 PPG 12 advises that Local Authorities are required to carry out a full environmental appraisal of Development plans and says that the same methodology may be used to encompass economic and social issues. Local Authorities are encouraged to consider extending appraisals so that they cover these additional issues and so the Government's four sustainable development objectives. (as set out in "A Better Quality of Life")
- 16.44 It suggests that the environmental appraisal should be a process of "identifying, quantifying and (where appropriate) weighing up and reporting on the environmental effects of policies and proposals "and should be subject to public consultation.
- 16.45 It has been the practice of the Authorities to undertake appraisals of the environmental, social and economic effects of its recently emerging development plans, through sustainability appraisals. However it has been found difficult to undertake either a full environmental or sustainability appraisal of the proposed alteration of part of an adopted plan. This is mainly because the amended policies would not be operated in determining planning applications without reference to other policies of the Plan, which themselves are not subject to proposals for alteration. It is not considered appropriate to appraise the entire plan, as there would be no opportunity to amend parts of the plan outside that being altered, if the appraisal suggested they had shortcomings. Similarly, as noted above, as the amended policies can not be read alone from other policies of the plan, to undertake a full appraisal of the policies alone could give an incomplete picture of their effects.
- 16.46 However it may be noted that the wording of the altered policies very closely follow the advice in the Government's MPG 3, which itself will have been appraised in some way, to ensure its environmental and sustainable development effects are positive.
- 16.47 Despite these difficulties it considered that some form of appraisal of the proposals are important to see that they are furthering the sustainable development agenda (and therefore the environmental agenda) which both authorities are committed to furthering. Thus an appraisal of the effects of the policies alone against the Government's four objectives for sustainable development, as set out in "A Better Quality of Life" has been undertaken. The limitations of such an appraisal, noted above in paragraph 16.45, should however be kept in mind.
- 16.48 The results of the appraisal are set out over page. In general terms it may be seen that the proposals are expected to have an overall clear positive effect on furthering the sustainability agenda, although they may have a small hindering effect on furthering economic growth, because of the need to give proper protection to the environment.

National Sustainability Objectives	Assumed Effect of Policies on Objectives
Social progress which recognises the needs of everyone	Positive effects with the protection of communities from noise, dust etc and the effects on health being central to MP 27 and the effects of proposals on reducing unemployment being a material consideration in determining applications.
Effective protection of the environment	Very positive effect as protection of the environment is central to the policies and the requirement for locations and supplies to be close and linked by rail if possible will add to the benefits of the policies
Prudent use of natural resources	Generally positive effect with the requirements to resist the sterilisation of other mineral resources, the requirements for the protection from pollution of resources such as water and encouragement for the reclamation of despoiled land.
Maintenance of high and stable levels of economic growth and employment	Small negative effect. Some proposals which may bring jobs and other forms of national and local prosperity, will be constrained by these policies, in the interests of environmental protection. However, the policies do allow the benefits which could come from development which assists economic, regeneration and land reclamation to be given consideration in determining applications. Further, the policies allow for economic cost considerations to be part of any assessment of a proposal for the disposal of colliery spoil and for the removal of coal to facilitate the winning of other minerals.

APPENDICES

Appendix A—Proposed Sand & Gravel Sites

Introduction

- A.1 This Appendix sets out the main planning considerations in respect of the sites proposed to be allocated for sand and gravel extraction in Policy MP21. For each site it includes a brief planning history, the environmental consequences of working the site and the principal requirements that need to be taken into account at the planning application stage. The issues and requirements set out in this Appendix are not necessarily a comprehensive set of all the matters which must be addressed in the preparation of a planning application at the sites concerned. Proposals will need to satisfy all policies of the local plan, where appropriate.

Attenborough Pit, Long Eaton Planning History

- A.2 There has been a long history of mineral working in the Attenborough area. Working has progressed along the Trent Valley in a southerly direction from Attenborough, Nottinghamshire and permission to allow workings to extend into Derbyshire was granted in 1965. All extraction currently takes place within Derbyshire but material is processed at the original treatment plant site near Attenborough.
- A.3 Planning conditions require that the site should not be worked using routes within Derbyshire. Furthermore, the transport of material to the processing plant is to be undertaken within the boundaries of the permitted area, thus material is transported to the processing plant by a series of conveyors and barge channels. The purpose of these conditions is to prevent the use of routes to the extraction site through Long Eaton, which were considered to be unsatisfactory for heavy mineral traffic when the application was determined.
- A.4 A further condition relating to the area of land currently being worked requires its progressive restoration to a water recreation area. The Trent Meadows area is proposed for water recreation development in the adopted Erewash Borough Local Plan catering for both active pursuits such as sailing, windsurfing and water skiing and for informal recreational activities such as angling, picnicking, boating and walking. In 1994 almost 10 years of consented reserves remained to be worked at Attenborough Pit with final restoration planned to take place around 2004/2005.

Planning Considerations

- A.5 Two small extension areas are proposed to the west and south of the existing workings. Area A is a 37 Ha site bounded by Cranfleet Canal to the south, the railway line to west and north and existing workings to the east. Its potential yield is estimated at 1,300,000 tonnes. Site B, a smaller site measuring 12 Ha, is enclosed by the River Trent and existing workings: its potential yield has been estimated at 300,000 tonnes. Working of both these areas may be acceptable after the current site is worked out, estimated to be around 2003 unless significant environmental benefits would result from their earlier working. Given the location of the sites it may be of benefit to integrate their extraction with existing workings.

- A.6 It is acknowledged that the existing processing plant at Attenborough is not ideally located, and that the situation is exacerbated by the presence of an adjoining ready mix concrete plant, although the future of this is not tied to any decision regarding the processing plant. However it is considered that the proposed allocations can be worked without increasing the level of impact on local amenity. There have been a number of improvements to the processing plant made over the years, and it is in the interests of sustainability, in terms of making the best and most efficient use of resources, that the two allocated areas of sand and gravel should be worked which would otherwise be unlikely to be extracted. The existing plant is served by conveyor and barge and therefore the proposal will not generate any additional traffic above current levels on the highway network. Further, it is considered that the working of these allocations would provide the opportunity to make improvements in terms of noise and dust emissions, and the visual impact of the processing site. Since the processing site is within the adjoining county of Nottinghamshire, there will be the necessity for close consultation on any application for permission to work the allocations. Apart from any conditions imposed upon a planning permission, a means of achieving the improvements to the site which can be relied upon would be by way of a planning obligation under Section 106 which, for example, may be entered into by agreement between the land owner and operator and Nottinghamshire County Council, the provisions of which would come into force upon the commencement of the development. It is possible that an alternative site for the processing plant could be identified which may result in significant environmental benefits and offer a viable alternative to existing arrangements, and this possibility is provided for in the wording of Policy MP 21. Otherwise the material extracted will be processed through the existing plant, improved in accordance with the principal planning requirements.
- A.7 The allocation of these sites, containing an estimated 1.6 mt of sand and gravel, will extend the life of Attenborough Pit beyond the plan period. Once the two sites have been worked out it is considered that the strong physical features of the railway line to the east and the canal to the south should form the limits to the extent of Attenborough Pit in Derbyshire. Any proposals for further extensions to this site will, therefore, be resisted.
- A.8 It is considered that the two areas can be worked with an acceptable level of impact on the environment. In terms of the effect on local communities and other land uses, the railway to the west and north of site A runs on an embankment which effectively screens the area from Long Eaton. Some individual properties namely Cranfleet Farm, Nottingham Yacht Club, the Lodge and the Lock Keeper's Cottage adjoin the proposed site but their amenity can be protected through the use of measures such as buffer zones, screening/noise attenuation bunds, landscaping/advance planting etc. A large part of site A is taken up by the Trent Rifle Range, a recreational facility which could be reinstated in some form, if required, as part of any reclamation scheme. No properties will be significantly affected by the working of site B, the village of Thrumpton and Thrumpton Hall lie some distance away across the river to the south and are well screened by existing mature tree cover.
- A.9 Agricultural land quality is mainly Grade 3a with stretches of Grade 3b and some Grade 4. Whilst, in general, national planning policy seeks to protect high grade agricultural land (ie grades 1, 2 and 3a) from irreversible development. It is

considered that, in this case, the quantity of high grade land is not particularly significant and furthermore, the working of the two parcels of land would round off the existing permission which also covers land of grade 3a quality. In terms of landform the sites are flat and have not been designated as being of any notable landscape value in the adopted Erewash Borough Local Plan.

- A.10 There are 'nature conservation' issues, both on and off site, which need to be taken into account. Two wildlife sites - Cranfleet Ponds lying adjacent to area A and a site - Trent North Bank within area B will require adequate protection. Furthermore, it may be beneficial to retain a wildlife corridor alongside the bank of the River Trent.
- A.11 A further consideration is the effect that working the sites through the established plant and access arrangements, as proposed in the plan, will have on the SSSI and Local Nature Reserve at Attenborough gravel pits. The existing method of transportation involves barges travelling through the SSSI/LNR to the plant at Attenborough. This journey involves the barges crossing the course of the River Erewash which is discharging directly into the Reserve's lagoons. The NRA in the River Erewash Management Catchment Plan, 1995 acknowledged that water from the River Erewash, directly discharging into the lagoons, has resulted in changes to the flora and fauna present within the Attenborough gravel pits. However, the current permitted reserves are forecast to be worked until about 2003 and, therefore, the barge channel will remain open for this period anyway. Investigations into this issue are ongoing and this matter will need to be taken into account at the detailed planning application stage. Major improvements to the River Erewash are being initiated by the Environment Agency with the objective of achieving water quality RE4 (fair quality suitable for coarse fish populations) by the year 2000, and quality RE3 (fair quality suitable for high class coarse fish populations) by 2005, which will improve the quality of water flowing into the lagoons. Furthermore, the River Erewash has been submitted as a candidate 'sensitive status' area for the purpose of implementing a European Directive (91/271/EEC) which will require the reduction of phosphorous and/or nitrate levels to Directive standards which should lead to an improvement in the ecology of the lagoons. However, it is acknowledged that by the time proposals are submitted for working the allocated sites, sufficient progress must have been made in improving the water quality of the Erewash to ensure that working will not have an adverse impact on the SSSI or cause significant disturbance to the Local Nature Reserve. If there is a remaining problem it will be necessary to secure a diversion of the Erewash to flow more directly into the Trent, to separate it from some or all of the lagoons, and alternative transport arrangements may need to be secured for moving the mineral to the plant.
- A.12 Suitable margins will need to be drawn to protect the amenity and recreational value of both the River Trent and the Cranfleet Canal. The working of site B will affect part of the Cranfleet Trail which will need to be reinstated following extraction. There are several public rights of way crossing the site and these will need to be safeguarded wherever possible or diverted during extraction.
- A.13 The proposed workings are located in the floodplain of the River Trent. The Environment Agency will, therefore, require to agree details of phasing, temporary spoil mounds, restoration and planting. There must be no excavation, tipping of

excavated spoil or raising of ground levels within 30 metres of the landward toe of any flood defences. Where no flood defence exists the distance should be 45 metres from the top of the bank of the River Trent or 30 metres from any other watercourse without prior consent from the Environment Agency. A 12" High Pressure Gas Pipeline from Thulston to Nottingham passes through the north west corner of Site A and this fact will need to be brought to the attention of the applicant at the detailed application stage.

- A.14 In terms of restoration it is considered that restrictions on the importation of fill material to the current workings should be carried forward to the proposed site and therefore, water based after-uses will be appropriate. Opportunity exists at the detail planning application stage to extend the major water recreation proposal Trent Meadows adjacent to the site and potential also exists for nature conservation uses particularly close to Cranfleet Ponds.

Principal Planning Requirements

A.15

- 1) Measures to reduce the emission of noise and dust and to reduce the visual impact of the processing plant and stockpiles at Attenborough will be required.
- 2) Measures such as buffer zones and screening/noise attenuation bunds will need to be introduced and landscaping/advance planting will need to take place, where appropriate, to protect the amenities of Cranfleet Farm, Nottingham Yacht Club, the Lodge and the Lock keepers cottage.
- 3) A hydrogeological survey will be required to take into account the effect of lowering the water table on the 'wildlife sites' Cranfleet Ponds.
- 4) Margins will need to be defined to protect the 'wildlife sites' - Trent North Bank and a wildlife corridor will need to be retained alongside the bank of the River Trent.
- 5) Satisfactory provision will need to be made to ensure that the working of the two sites will not adversely affect the Attenborough SSSI or cause significant disturbance to the Attenborough Local Nature Reserve.
- 6) Measures such as buffer zones, screening/noise attenuation bunds or landscaping/advance planting will need to be defined and introduced to protect the amenity and recreational value of both the River Trent and Cranfleet Canal.
- 7) The Cranfleet Trail and a number of public rights of way (Nos 9, 11, 12, 40) will need to be safeguarded wherever possible or may need to be diverted during extraction.
- 8) Safeguards will be required to protect water resources, water supply and flood protection interests in accordance with the requirements of the EA.

- 9) The reclamation scheme will need to include proposals for water recreation in association with the Trent Meadows recreation facility and proposals for nature conservation in association with Cranfleet Ponds; of particular value would be the creation of small ponds providing opportunities for the spread of plant and invertebrate life which are very rich in this area.
- 10) Satisfactory provision will need to be made for the reinstatement of the recreational facility of the Trent Rifle Range, if required.

Elvaston Quarry Planning History

- A.16 Elvaston Quarry was established in the late 1960's when permission was granted for the extraction of minerals from land at Sawley Road, Draycott. Since that time workings have progressively extended westwards along the Derwent Valley. Extraction is currently taking place at Bellington Hill to the south west of Ambaston village; permission to work this site and erect a new processing plant was granted in 1988. The site is being restored to agricultural use.

Planning Considerations

- A.17 The proposed extension area is to the north of the existing workings at Bellington Hill and continues the westerly movement of Elvaston Quarry along the Derwent Valley. The proposed extension measures 75 Ha and has an estimated potential yield of 1.7 mt. The extension area comprises two parts lying to the north and south of 'Elvaston Avenue' linked by a narrow strip of land to accommodate a conveyor. The boundaries of the northern area are drawn along strong physical features, the River Derwent, Elvaston Avenue and existing hedgerows. The boundaries of the southern area are drawn along the eastern edge of the conveyor line, Ambaston - Thulston Lane and existing hedgerows. Working of this area may be acceptable after the current site is worked out, around 1998. Unless alternative arrangements would result in significant environmental benefits the site will be worked through the existing plant at Bellington Hill and via the existing access onto the A6.
- A.18 It is considered that this site can be worked without unacceptable impact on the environment and will provide for a continuation of production capacity from the Bellington Hill plant until around 2001/2. An extension in this direction is proposed for several reasons; deposits to the west and south of the existing site are much thinner and not considered to be economically viable and whilst working the area to the south east involves good quality deposits it would result in a greater loss of high quality agricultural land and would be particularly detrimental to the amenity and conservation interests of Shardlow village.
- A.19 The main consideration in terms of environmental impact is the effect of working on local communities, individual dwellings and other nearby land uses. Ambaston village lying to the south east of the site is the closest settlement to the proposed working; the eastern boundary of the allocation has been drawn some 300 metres away along

strong hedgerow features which should protect the amenity of the village. The floodbank around its western edge and the mature trees in this vicinity will provide further protection in terms of visual screening, and there will be an opportunity to provide further screening by means of additional planting. Elvaston village sits on a ridge to the south west of the area but few properties directly overlook the site, their focus being mainly towards the Main Street and Thulston is a further distance away to the south west. The south eastern edge of Borrowash is unlikely to be affected by the working as the majority of residential properties are already well screened by mature trees beside the railway line and working will be some distance away across the river. The northern boundary of the site is drawn along a mature hedgerow feature which will further reduce the impact of working.

- A.20 The proposed site lies to the east of Elvaston Castle which is a Grade II Listed Building and whilst the Castle and Country Park are well screened by existing mature trees, there are almost uninterrupted views as far as Draycott from the main entrance to the Park. In order to protect the setting and amenity of the Castle and Park the western boundary of the allocation has been drawn some 500 metres away along a well defined hedgerow. There is a former military camp to the west of the proposed site which is now used for outdoor leisure purposes including camping/caravanning/go-karting and fishing. A hydrogeological survey will need to be carried out to ensure that any possible lowering of the water table will not adversely affect the level of water in the fishing lake at the adjacent leisure site. There are also a number of individual dwellings along Ambaston-Thulston Lane and Station Road. In considering detailed planning proposals account will be taken of the need to introduce measures such as buffer zones, screening/noise attenuation bunds and landscaping/advance planting to ensure the protection of the local amenity of nearby villages, individual dwellings and other neighbouring land uses.
- A.21 Working the proposed site through the existing plant and via the A6 will not result in increased traffic levels on local roads. A Section 106 Agreement will also be sought with the company to prevent lorry vehicles under the company's control from using local roads. A conveyor system, to transport the mineral to the processing plant, will need to cross Ambaston-Thulston Lane. A crossing underneath the road with additional planting/ screening should reduce visual intrusion.
- A.22 Another consideration is agricultural land quality. National planning policy seeks to resist development that would result in the irreversible loss of high grade land. The site is mainly used for grazing although some land in the west, lying outside the floodplain, is used for arable purposes. MAFF indicates that the quality of agricultural land is no more than 3b for much of the site due to the risk of flooding. Approximately 7.5 ha on the slightly raised ground to the west has been assessed as Grade 3a ie high grade but the possible loss of this land is not considered to be a significant constraint to the working of this site.
- A.23 In terms of landform the site is relatively flat and open and has not been defined as being of local landscape value in the South Derbyshire District Local Plan. It does, however, adjoin an important historic landscape feature in the form of the 'Avenue', a double line of mature and over mature deciduous trees with some new planting that forms part of the setting of the eastern fringe of Elvaston Castle. The 'Avenue'

although containing a number of dead or dying trees is the subject of a Tree Preservation Order and together with the Castle and Park is listed on English Heritage's Register of Historic Parks and Gardens. Site boundaries have been drawn back to exclude the 'Avenue' to protect the trees and their setting. The 'Avenue' will need to be crossed by the conveyor and plant although this will be undertaken in a very localised corridor. A hydrogeological survey will need to be undertaken to ensure that any possible lowering of the water table will not adversely affect the trees in the 'Avenue'. The precise definition of working areas will need to have regard to the results of this survey. Appropriate buffer zones and sensitive working practices together with sympathetic restoration including replanting should protect and enhance this feature. The site also contains a number of mature trees and hedgerows which should be retained and protected where appropriate.

- A.25 There are no designated wildlife sites within the proposed area of working although it may be beneficial to retain a wildlife corridor alongside the bank of the river. The site does contain some features of archaeological importance namely: crop marks and ridge/ furrow as identified on the Sites and Monuments Record. Development proposals will need to include measures to allow for the evaluation, recording and appropriate protection of archaeological features within the site.
- A.26 The public footpath linking the B5010 and Ambaston village passing through the north eastern corner of the site should be protected wherever possible or may need to be diverted during extraction.
- A.27 The site lies within the floodplain of the River Derwent and part of its northern boundary adjoins the river. Ambaston Brook which flows across the site, originates from a lake in the grounds of the Castle. A hydrogeological survey will be required to ensure that any possible lowering of the water table will not adversely affect the lake or brook. Consideration also needs to be given to the requirements of the EA in terms of the effect on water resources, water supply and flood protection interests. In particular the EA will require to agree details of phasing, temporary spoil mounds, restoration and planting. There must be no excavation, tipping of excavated spoil or raising of ground levels within 30 metres of the landward toe of any flood defence. Where no flood defence exists the distance should be 30 metres from the top of the bank of the River Derwent or 30 metres from any other watercourse without prior consent from the Environment Agency.
- A.28 In terms of restoration, the areas of high grade agricultural land should be reinstated using material generated from within the site. It is considered that the remainder of the site should be left in water for a variety of after-uses. In keeping with the character of the nearby Country Park, 'quiet' water based recreational activities or nature conservation uses are considered to be appropriate. Where possible, opportunity should be taken to establish linkages with the existing Country Park/ Riverlife Way routes by extending these networks.

Principal Planning Requirements

- A.29
- 1) Measures such as buffer zones and screening/noise attenuation bunds

Appendix A—Proposed Sand & Gravel Sites

will need to be introduced and landscaping/advance planting will need to take place to protect the local amenity of the villages of Ambaston, Borrowash, Elvaston and Thulston, individual properties and other nearby land uses, such as Elvaston Castle and Country Park.

- 2) A Section 106 Agreement will be required to prevent lorry vehicles under the company's control from using local roads.
- 3) The proposed conveyor system linking the site to the processing plant at Bellington Hill will need to cross Ambaston-Thulston Lane under the road and a planting/screening scheme should be introduced to reduce the visual intrusion of the conveyor link.
- 4) A hydrogeological survey will be required to ensure that any possible lowering of the water table will not adversely affect "the Avenue", the lake in Elvaston Park, Ambaston Brook, the fishing lake at the adjacent leisure site or other features including buildings.

Specific measures will be required to ensure that ground water levels are controlled in order to protect these features, including, as appropriate:

- the clay lining of adjoining excavations
 - the detailed monitoring of ground water levels and the application of pumping, watering and flow augmentation schemes
 - the maintenance of buffer zones
 - the phasing of operations to take account of these cumulative effects and of seasonal fluctuations in water levels.
- 5) A wildlife corridor should be retained alongside the River Derwent.
 - 6) The public right of way (No. 6) linking the B5010 with Ambaston will need to be safeguarded wherever possible or diverted during extraction.
 - 7) An archaeological evaluation of the site will need to be carried out particularly of the features identified on the Sites and Monuments Record and provision will need to be made for appropriate recording or retention of archaeological features in situ if warranted.
 - 8) The proposed method of working and reclamation should seek to retain and protect mature trees and hedgerows where appropriate.
 - 9) Safeguards will be required including the way in which the operations are to be phased to protect water resources, water supply and flood protection interests in accordance with the requirements of the EA.
 - 10) The reclamation scheme will need to make provision for the

reinstatement of high grade farmland on land lying outside of the floodplain using fill material generated from within the proposed site. Provision will also need to be made for the enhancement of the 'Avenue'. On other parts of the site, the scheme will need to include proposals for water based after-uses. In keeping with the character of the Park 'quiet' water based recreational activities or nature conservation uses will be appropriate. It will be important to ensure that the scheme takes the opportunity to establish linkages with the Country Park/Riverlife Way routes, by developing appropriate extensions to these networks.

Shardlow Pit Planning History

- A.30 Planning permission for sand and gravel extraction at Shardlow Pit was originally granted in 1971. Shardlow Pit was always regarded as a follow on operation after reserves at sites in Leicestershire had become exhausted which did not occur until 1989. In 1990, the company in accordance with planning conditions submitted revised details for the processing plant. The proposed annual production capacity of 1 million tonnes was double the level suggested in the original application and raised much concern about the amount of traffic that would be generated on the existing access route, particularly in Shardlow. Accordingly, the revised details were approved subject to the annual production being restricted to a maximum of 650,000 tonnes until an alternative access to the site could be provided. Permission has since been granted for a direct temporary access, for the duration of mineral extraction, off the A564 Southern Derby By-Pass which passes directly through the site and became operational from 1997.

Planning Considerations

- A.31 Two extension areas are proposed to the west and south of the existing workings. Site A is the larger area and will extend the existing workings in a south westerly direction along the Trent Valley. The site is contained by the canal to the west and the river to the east; it measures 87 ha and has an estimated potential yield of 4,700,000 tonnes. Site B is the smaller area measuring 6.3 ha. It has an estimated potential yield of 287,058 tonnes. Working of these areas may be acceptable after the current site is worked out, estimated to be around the year 2000, unless there would be significant environmental benefits from earlier working. Similarly, unless alternative arrangements would result in such benefits, material will be processed through the existing plant which has direct access onto the proposed A564 Derby Southern Bypass. The Highways Agency requires the temporary access to be permanently stopped up within two months following completion of extraction of minerals and consequential restoration works and must not be used for any after-use proposed. The allocation of these sites will extend the life of Shardlow Pit to the end of the plan period.
- A.32 It is considered that these areas can be worked with an acceptable impact on the environment. In terms of the effect on local communities and individual properties, the canal which forms the eastern boundary of the site sits higher than most of the land providing a natural screen to the site. The site is partly visible from the villages of

Appendix A—Proposed Sand & Gravel Sites

Aston-on-Trent and Weston-on-Trent which are built on slightly higher ground and are at least 0.8km and 0.5km away from the workings at their closest points, respectively. Existing mature trees alongside the canal will also provide an effective screen to working.

- A.33 The site is of mixed agricultural use with arable uses nearest to the canal and grazing in the vicinity of the river. MAFF indicates that the site has significant proportions of Grades 2 and 3a quality agricultural land particularly in the area adjoining the canal. National planning policy seeks to protect the irreversible loss of high grade land (1, 2 and 3a) and provision will need to be made for this land to be reinstated. In terms of landform the site is flat and has not been identified as being of any landscape value in the South Derbyshire Local Plan.
- A.34 In terms of nature conservation there are no designated wildlife sites within the proposed extraction area but it may be beneficial to retain a wildlife corridor alongside the River Trent. The site also contains features of archaeological importance (namely: Weston aerial photograph marks and enclosures) as identified on the Sites and Monuments Record and adjoins Scheduled Ancient Monuments listed as Iron Age Settlements which lie across the canal to the west. Development proposals will need to include measures to allow for the evaluation, recording and appropriate protection of these features. The Trent and Mersey Canal Conservation Area borders the site and accordingly development proposals will need to include measures to protect its character. The public bridleway passing through the site from Weston-on-Trent to Kings Mills should be safeguarded wherever possible or may require diversion during extraction.
- A.35 The proposed workings are located in the floodplain of the River Trent. The Environment Agency will therefore require to agree details of phasing, temporary spoil mounds, restoration and planting. There must be no excavation, tipping or excavated spoil or raising of ground levels within 30 metres of the landward toe of any flood defences. Where no flood defences exist the distance should be 45 metres from the top of the bank of the River Trent or 30 metres from any other watercourse without prior consent from the Environment Agency. The Agency may require a hydraulic model to be used to determine the effects of the mineral workings and restoration of the drainage system during flood events.
- A.36 In terms of restoration, conditions attached to the existing site require it to be returned to an agricultural after-use. Since that time, however, there has been a significant change in factors affecting the site. The Environment Agency has increasingly imposed stringent conditions on the disposal of waste materials in the Trent Valley, the construction of the A564 Southern Derby By-Pass through the site will affect the amount of filling that can take place within the floodplain and, furthermore, the expected levels of fill material are unlikely to be available. Bearing this in mind it is likely that the existing site will be restored to a mixed agricultural/water based after-use.
- A.37 In view of the above factors a similar mixed agricultural/water-based after-use would appear to be appropriate on the proposed site. The area nearest to the canal containing significant proportions of high grade agricultural land should be reinstated.

That part of the site containing an area where current access to the river is very limited which provides an undisturbed stretch of river that is very valuable for wildlife should be reclaimed for nature conservation purposes. The remainder of the site offers opportunities for water based recreation.

Principal Planning Requirements

A.38

- 1) A wildlife corridor should be retained alongside the River Trent.
- 2) An archaeological evaluation of the site will need to be carried out particularly of the features identified on the Sites and Monuments Record and provision will need to be made for the appropriate recording or retention of archaeological features and protection in situ if warranted.
- 3) Measures such as buffer zones, screening/noise attenuation bunds and landscaping/advance planting will need to be introduced to protect the character of the Trent and Mersey Canal Conservation Area.
- 4) The public bridleway (No. 6) from Weston-on-Trent to Kings Mills will need to be safeguarded wherever possible or diverted during extraction.
- 5) Safeguards will be required to protect water resources, water supply and flood protection interests in accordance with the requirements of the Environment Agency.
- 6) The reclamation scheme will need to include proposals for a mixed agricultural/water based after-use. The area nearest to the canal containing significant proportions of high grade farmland should be reinstated for agricultural use whilst the area closest to the river which is undisturbed with limited public access should be used for nature conservation purposes. On the remainder of the site water-based recreational activities may be acceptable. Any filling material should be brought onto the site via the access directly off the A564 Southern Derby By-Pass. The Highways Agency requires the temporary access to be permanently stopped up within two months following the completion of extraction of minerals and consequential restoration works and must not be used for any after-use proposed.

Egginton Pit Planning History

A.39 Permission for sand and gravel extraction was first granted in 1960; the area was extended under a 1968 permission. Gravel has been won from about half the permitted area but there has been no extraction from this site for a considerable period. The sand and gravel previously extracted from Egginton was taken to be processed at an off-site plant. Infilling with pulverised fuel ash has been progressing and about 20 Ha of land has been restored to agriculture.

- A.40 In 1992 permission was granted for the erection of sand and gravel processing plant and a concrete batching plant on land immediately south of the railway line but the development has not yet started. Current conditions require the removal of plant and machinery from the site and its restoration for agriculture/forestry no later than 10 years from the date of commencement. Conditions also require improvements to be made to the access with the A5132.

Planning Considerations

- A.41 Two extensions are proposed to the south and east of the existing site which will result in the comprehensive working of Egginton Pit and will effectively round off existing operations. The allocation of Area A will extend workings in a southerly direction towards the river. The site measures 36.2 Ha and has an estimated yield of 1,350,000 tonnes. It is well defined by strong physical features; the dismantled railway line in the west, permitted workings in the north and east and, in the south, the River Dove/Hilton Brook and an area of woodland. The southern boundary has been drawn along these physical features to define a limit to further expansion south eastward along the Dove Valley; this area being particularly attractive with a mature landscape and general parkland appearance. The allocation of Area B will effectively round off workings in the east. This small site is surrounded on three sides by existing workings and its eastern boundary is well defined by an existing track. It measures 3.8 Ha and has an estimated potential yield of 250,000 tonnes.
- A.42 It is a proposal of the plan that unless alternative arrangements would result in significant environmental benefits, material will be processed through the permitted processing plant with access onto the A5132. Under the existing planning permission development is required to commence by April 1997. If processing begins at this date it is estimated that the existing permitted site will be worked out by 2002 at which point further reserves will be needed to maintain production. Bearing in mind, however, the location of the proposed sites in relation to the existing permitted areas, particularly Area B, environmental benefits may result from integrating their extraction with existing workings. It is estimated that the allocation of the two sites containing an estimated 1.6 mt of sand and gravel will extend the life of Egginton Pit beyond the plan period.
- A.43 It is considered that the proposed sites can be worked without unacceptable impact on the environment. The main concern in working this area is the protection of nearby settlements, particularly Egginton. Area A is in a relative remote location and Egginton is well screened from this site by extensive tree cover to the west of the village. Rolleston on higher land above the floodplain of the River Dove, however, may have long distance views of the proposed workings but these can be reduced by appropriate screening measures. Area B is relatively close to Egginton village, although no closer than areas which already have permission for extraction. Whilst there is good tree cover along the western edge of the village the site is visible from a few properties in Egginton but measures such as screening/noise attenuation bunds will minimise the effects on the local amenity of the village.
- A.44 Both sites are in agricultural use. Area A is a mixture of arable and grazing, the latter

being nearest to the river. Area B is wholly in arable use. Agricultural land quality on both sites is estimated, by MAFF, at no more than 3b or 4 due to the risk of flooding. In terms of landform both sites are flat and have not been designated as being of landscape value in the South Derbyshire District Local Plan.

- A.45 In terms of nature conservation, there are no designated wildlife sites within the proposed extraction areas but it may be beneficial to retain a wildlife corridor alongside the River Dove. A public bridleway passes along the southern boundary of Area B and crosses the southern part of Area A; this route should be safeguarded if possible but may require diversion.
- A.46 The proposed workings are located in the floodplains of the River Dove and Hilton Brook. The Environment Agency will therefore require to agree details of phasing, temporary spoil mounds, restoration and planting. There must be no excavation, tipping of excavated spoil or raising of ground levels within 30 metres of the landward toe of any flood defences. Where no flood defence exists the distance should be 30 metres from the top of the River Dove and Hilton Brook or 30 metres from any other watercourse without prior consent from the Environment Agency.
- A.47 The existing permitted area has been partly worked out. Planning conditions require the site to be restored to agriculture but due to the lack of available fill material only a relatively small area to the west of the existing access road has been successfully restored. Other parts have been left in water and have become established as important areas for wildlife and are included on the Derbyshire Wildlife Register. In view of the established nature conservation sites, the uncertainty in the availability of fill material and the relatively poor quality of agricultural land it is considered that the site should be reclaimed to a mixed agricultural/water after-use, with nature conservation and 'quiet' water based recreation being particularly acceptable.

Principal Planning Requirements

- A.48
- 1) Measures such as buffer zones and screening/noise attenuation bunds will need to be introduced and landscaping/advance planting will need to take place, where appropriate, to protect the amenities of Egginton and Rolleston villages.
 - 2) A wildlife corridor should be retained along the River Dove.
 - 3) Public Bridleway No. 35 will need to be safeguarded wherever possible or temporarily diverted during extraction.
 - 4) Safeguards will be required to protect water resources, water supply and flood protection interests in accordance with the requirements of the Environment Agency.
 - 5) The reclamation scheme will need to include proposals for a mixed agricultural/water after-use. Proposals for water based after uses will preferably include nature conservation or 'quiet' informal recreational activities.

Hemington Quarry Planning History

- A.49 Hemington Quarry is situated in Leicestershire and has been active since 1985 when operations commenced. The most recent permission was granted in 1996 which allows for an extension of the quarry to the south west. The permission requires the site to be backfilled with inert waste, infilling is expected to be completed by 2006.

Planning Considerations

- A.50 The proposed allocation is to the north of the existing operations and will extend the site into Derbyshire. The extension area measures 35 hectares and has an estimated yield of 2.1 mt. The boundaries of the site have been drawn along existing strong physical features, the Trent and Mersey Canal in the north, the River Trent in the west, the floodbank in the east and existing field boundaries in the south. Working of this area may be acceptable after the currently permitted site is worked out, estimated to be around 2001. Unless alternative arrangements would result in significant environmental benefits, material will be conveyed across the River Trent to the existing processing plant in Leicestershire and, the existing access onto the B6540 which direct links to the Derby Southern Bypass will continue to be used. Annual production is estimated to be approximately 400,000 tpa and therefore, it is estimated that the allocation of this site will extend the life of Hemington Quarry to the end of the plan period.
- A.51 It is considered that this area can be worked with an acceptable impact on the environment. In terms of the impact on local communities and individual properties the eastern edge of Shardlow lies some 200 metres away although a small enclave of housing, around Millfields, is closer the nearest house lying only 50 metres from the site boundary. The existing floodbank and mature hedgerows in the vicinity will ameliorate the impact of working although other measures such as a buffer zone where excavation is prohibited, screening/noise attenuation bunds or landscaping/advance planting will be introduced as necessary to protect local amenity. Properties on the southern edge of Great Wilne that are on slightly higher ground will have long distance views of parts of the site but they are far enough away for the impact of working to be considered acceptable.
- A.52 The site consists of improved and semi improved grassland and is mainly used for grazing. MAFF indicates that the quality of agricultural land is no more than 3b for much of the site due to the risk of flooding. Approximately 7.5 ha on the slightly raised ground has been assessed as being Grade 3a ie high grade agricultural land, but the loss of this land is not considered to be a significant constraint to the working of the site. In terms of landform the site is flat rising very slightly away from the river, it has not been designated as being of local landscape value in the South Derbyshire District Local Plan.
- A.53 In terms of nature conservation there are two designated wildlife sites within the vicinity of the proposed allocation. Porter's Bridge Pond adjoins the southern boundary whilst Derwent Mouth Lock is located to the north east, of which a 40 to 50 metre strip lies within the allocation area. Additionally Cow Way Drain passing through the centre of the site may be of ecological interest. Adequate protection will need to be made for

these features and it may be beneficial to retain a wildlife corridor along the bank of the River Trent.

- A.54 Regionally significant archaeological remains are likely to be present on site and will need appropriate protection from mineral working. This may be in the form of an ‘Archaeological Conservation Zone’ in which no disturbance would be allowed to take place. Ridge and furrow is also present and will need appropriate protection.
- A.55 Shardlow village and Wharf is a designated Conservation Area as is the Trent and Mersey Canal; Porter’s Bridge and Derwent Mouth Lock on the Canal are Listed Buildings. The area is generally important for recreation; moorings are available on the canal immediately north of the site, a public footpath runs along the canal towpath, Shardlow marina lies approximately 100 metres to the south west and a picnic site is proposed off Wilne Lane to the west of the site in the informal Trent Valley Recreation Plan. Although the site is partially screened by mature hedgerows development proposals will need to include measures to protect the character of the area.
- A.56 The site lies within the floodplain of the River Trent, it is bounded by the river, canal and Cow Way Drain runs through the centre of the site. Consideration needs to be given to the requirements of the Environment Agency in terms of the effect on water resources, water supply and flood protection interests. In particular, the Environment Agency will require to agree details of phasing, temporary spoil mounds, restoration and planting, There must be no excavation, tipping of excavated spoil or raising of ground levels within 45 metres from the flood defence to the west of the site or from the top of the bank of the River Trent or within 30 metres from the canal, without prior consent of the Environment Agency.
- A.57 In terms of restoration opportunities for infilling are constrained by the floodplain location, the need for a river crossing and the impact on Shardlow village and the Trent and Mersey Conservation Area. It is considered therefore that the areas of high grade agricultural land should be reinstated preferably using material generated from within the site whilst the remainder of site should be left in water for mixed recreational/nature conservation uses. In view of the presence of existing wildlife sites nature conservation use would be most appropriate in the eastern part of the site. The western part of the site would provide an opportunity for recreational uses, these should be ‘quiet’ uses to protect the adjoining nature conservation interests, the character of the nearby Conservation Areas and the amenity of Shardlow village.

Principal Planning Requirements

- A.58 1) Measures such as buffer zones and screening/noise attenuation bunds will need to be introduced and landscaping/advance planting will need to take place where appropriate, to protect the local amenity of Shardlow Village, the character of Shardlow and the Trent and Mersey Canal Conservation Areas and the recreational value of the area in general.
- 2) The proposed conveyor system linking the site to the processing plant will need to cross the River Trent. Development proposals should seek to reduce the visual intrusion of this conveyor link.

Appendix A—Proposed Sand & Gravel Sites

- 3) A hydrogeological survey will be required to examine the effect of any lowering of the water table on the two designated wildlife sites. Measures will need to be taken to protect these sites from the impact of working.
- 4) Features of ecological interest will need to be adequately protected and a wildlife corridor should be retained alongside the bank of the River Trent.
- 5) An archaeological evaluation of the site will need to be carried out in view of the likely presence of significant archaeological remains and provision will need to be made for the appropriate recording or retention of archaeological features in situ if warranted.
- 6) Safeguards will be required to protect water resources, water supply and flood protection interests in accordance with the requirements of the Environment Agency.
- 7) The reclamation scheme will need to include proposals for the reinstatement of high grade agricultural land and for water based after-uses. In keeping with the existing character of the area nature conservation uses may be appropriate towards the eastern part of the site. For the remainder 'quiet' recreation uses will be appropriate in keeping with the character of the nearby conservation areas and existing recreational uses.

Appendix B—Crushed Rock & Sand & Gravel Operations

Sand & Gravel

- B1 There are currently four operations producing sand and gravel within the county (see Map 5), two within the Trent Valley, one within the Lower Derwent Valley and one within the Sherwood Sandstones.
- B2 **Attenborough Pit** operated by Butterley Aggregates Ltd (part of the RMC Group) is currently being worked in the area to the south of Long Eaton. Working has progressed along the Trent Valley in a south westerly direction from Attenborough, Nottinghamshire and permission to allow workings to extend into Derbyshire was granted in 1965. All extraction currently takes place within Derbyshire but material is processed at the original processing plant site near Attenborough. Approximately 9 years of permitted reserves remain to be worked at Attenborough Pit with final restoration for water recreation purposes planned to take place in 2004/2005. The plan proposes to allocate land for sand and gravel extraction as extensions to the existing workings which will ensure continuity of production throughout the plan period.
- B3 **Elvaston Quarry** operated by Tarmac Roadstone (Eastern) Ltd is located in the Lower Derwent Valley. Elvaston Quarry was established in the late 1960's when permission was granted for the extraction of minerals from land at Sawley Road, Draycott. Since that time workings have progressively extended westwards along the Derwent Valley. Extraction is currently taking place at Bellington Hill to the south west of Ambaston village. Permission to work this site and erect a new processing plant was granted in 1988. It is proposed to restore the site for agricultural use. Approximately 5 years of permitted reserves remain to be worked. The plan proposes additional reserves as an extension to this site which will ensure continuity of production to around 2001/2.
- B4 **Shardlow Pit** operated by ARC (Central) Ltd is located in the Trent Valley to the south of Shardlow. Planning permission for sand and gravel extraction at Shardlow Pit was originally granted in 1971 and renewed in 1983. Approval for a processing plant was granted in 1982 and renewed in 1987. Working began in 1989 after reserves at sites in Leicestershire had become exhausted. In 1993 permission was granted for a direct private access, for the duration of mineral extraction, off the proposed A50 Stoke-Derby link road which passes directly through the site. The direct access became operational in 1997. It is estimated that existing permitted reserves will last to around the turn of the century. The plan proposes to allocate additional reserves as extensions to Shardlow Pit which will ensure continuity of production throughout the plan period.
- B5 **Mercaston Pit** operated by ARC (Central) Ltd is the only active site within the Sherwood Sandstones. Sand and gravel extraction at Mercaston began in the late 1940's when a processing plant was established to the west of Mercaston Lane. The potential life of the site has been difficult to forecast for several reasons: the variable nature of the deposit, improvements to extraction and processing which have enabled less tractable deposits to be worked and changes in specifications of the sand and gravel required by the market which have made different parts of the deposit more or less attractive. Over the years, therefore, there have been occasions when it was considered that reserves at Mercaston were nearing exhaustion and nearby areas have been permitted to prolong the life of the pit. At present there are sufficient permitted reserves to last to the end of the plan period and, therefore, no additional land

is proposed to be allocated at Mercaston.

- B6 There are two inactive sites within the County where working has taken place in the past, but has currently ceased.
- B7 **Egginton Pit** where the operator is ARC (Central) Ltd is located within the Lower Dove Valley. Permission for sand and gravel extraction at Egginton was first granted in 1960 and permission was extended in 1968. Gravel has been won from about half the permitted area but there has been no extraction from this site for a considerable period. Infilling with pulverised fuel ash has been progressing and about 18 ha has been restored to agriculture. The remainder of the worked out area has been left in water and has successfully revegetated to form an important area for nature conservation. In 1992 permission was granted for the erection of a sand and gravel processing plant and a concrete batching plant on land immediately south of the railway line. The plan proposes to allocate land at Egginton Pit to ensure a continuity of production throughout the plan period.
- B8 **Mugginton Pit** where the operator is Tarmac (Roadstone) Eastern Ltd is located within the Sherwood Sandstones. The original pit along with the processing plant was established before 1947. Several extensions have been permitted since that date. Whilst some of the site has been worked out and restored to agriculture, part of the site remains to be worked. There has, however, been no extraction at Mugginton for several years. Future re-opening of the site will depend on the economic climate, but there are unlikely to be opportunities for further extensions to this site that would be environmentally acceptable.
- B9 There are a number of sites with planning permission within the Trent Valley where working has not yet commenced.
- B10 Extraction of sand and gravel in the Swarkstone area, including the erection of a processing plant began before 1947. Working has extended from the original site in a westerly direction along the Trent Valley. The most recent permission for working in this area was issued in 1994 following completion of a legal agreement in the area to the south west of **Barrow-on-Trent**. The operator, Redland Aggregates Ltd, commenced production in 1996, it is estimated that the permitted reserves will be more than sufficient to ensure a continuity of production throughout the plan period.
- B11 Other permitted sand and gravel sites within the county include **High Bridge Lane**, ARC (Central) Ltd and **Castleway Lane**, Western Aggregates Ltd (part of the R M C Group) both to the south west of Willington, and **Potlocks House Farm** ARC (Central Ltd) to the east of Willington. The commencement of operations at these sites will depend very much on the economic climate. It is estimated, however, that they will have sufficient reserves to last to the end of the plan period and beyond.

Limestone

The Buxton Area

- B12 There are six major limestone operations in the area to the north east and south east of Buxton (see map 6). Three of these quarries, Dowlow, and Hillhead to the south east of

Buxton and Dove Holes to the north are primarily concerned with the production of limestone for the aggregates market. Production at the other three quarries, Hindlow and Brierlow to the south east of Buxton and Tunstead/Old Moor to the east, is determined by the market for industrial limestone.

- B13 **Dowlow Quarry**, which is operated by Redland Aggregates Ltd, lies south of Sterndale Moor, and is the southern-most of four quarries lying between the A515 Buxton to Ashbourne road and the National Park boundary to the south west. Its permitted reserves of limestone are more than sufficient to meet the anticipated needs of the operators throughout the plan period.
- B14 Adjoining Dowlow quarry to the north west is **Hindlow Quarry**, where the operator is Buxton Lime Industries Ltd. The quarry itself has been inactive for some years, although the lime kilns at the site are still operational, receiving limestone by rail from Tunstead for treatment purposes. The prospect of limestone extraction re-starting at the quarry will depend on market conditions. In the event of the quarry re-opening, the permitted reserves are more than sufficient to meet likely needs during the plan period.
- B15 **Brierlow Quarry**, north west of Hindlow Quarry is the third adjoining quarry in this area. The output from Brierlow is used primarily in the production of lime, and most is processed on the site which accommodates substantial industrial plant for this purpose. This represents a substantial capital investment in the site by the operators RMC Roadstone Products Ltd, soon to include the more efficient and modern kilns recently permitted. Although there are clear physical limits to the area of this site there are long term reserves, more than sufficient to meet anticipated needs throughout the plan period.
- B16 **Hillhead Quarry**, lying to the south-east of Harpur Hill, is the fourth in the line of quarries to the south of Buxton. Operated by Tarmac Roadstone (North West) Ltd, it mainly serves the roadstone and construction aggregates market. Much of the output is transported to North West England. Whether rail can be used in future will depend on commercial factors including investment in loading facilities and the commercial position of the rail transport industry.
- B17 During the plan period, output from Hillhead may increase as the quarry eventually takes over some markets currently supplied by the company's quarry at Topley Pike. This may necessitate some amendment to the present permissions for operational reasons. There will, however, be no necessity to increase the size of permitted reserves as these are sufficient to meet the expected needs during the plan period and beyond.
- B18 **Tunstead/Old Moor**, to the east of Buxton is a substantial limestone operation which lies partly inside and partly outside the Peak National Park. The quarry, operated by Buxton Lime Industries Ltd, contains two different beds of limestone, the dolomitised stone of the "Woodale" beds and the chemically pure stone of the "Cheedale" beds. However, production is mainly determined by the chemical stone market with aggregates limestone as a secondary product. Whilst extraction in the past has concentrated in the area outside the National Park, the emphasis of workings has changed in recent years and a significant contribution now comes from within the

Appendix B—Crushed Rock & Sand & Gravel Operations

National Park. Permitted reserves are sufficient to meet anticipated needs during the plan period and beyond.

- B19 **Dove Holes Quarry**, operated by RMC Roadstone Products Limited, lies to the east of Dove Holes village. The whole site covers an area which includes three long-established operations; Holderness Quarry, Beelow Quarry and Newline Quarry. Production here is focused primarily on the aggregates market and the quarry has the advantage of being able to transport limestone by rail. Some of the highest and most prominent parts of the site extend into the area of the National Park around the summit of Beelow Hill.
- B20 Because of the size of this site, and because of the prominence of some parts of it in the landscape, there may be scope for modifying the area of permitted working. This could be of benefit both to the environment, by reducing the visual impact of future working on the landscape, and to the Company by rationalising operations on the site. There will however be no necessity to provide any overall increase in the scale of permitted reserves as these are more than sufficient to meet expected needs during the plan period and beyond.
- B21 **Ashwood Dale Quarry** lies to the south east of Buxton. The plant on site was being used by Derbyshire Stone Ltd to process only imported materials which were then supplied primarily to the chemical stone market. However, the quarry has now reopened and the stone won on site supplies the existing plant with the benefit that vehicles previously used for importing the stone have been removed from the public highway. Permitted reserves are sufficient for the plan period; the operator may seek further permissions later in the period to maintain continuity of production, although the site is tightly constrained on most sides by conservation constraints including SSSI and Special Landscape Area designations.

The Matlock/Wirksworth Area

- B22 There are seven limestone operations in the Matlock/Wirksworth area (See Map 6). Four of these quarries, Bone Mill, Crich, Dene and, (though currently inactive) Middle Peak, are based on the production of limestone for use mainly for aggregates. Production at Grange Mill Quarry, Longcliffe Quarry and Middleton Mine mainly supplies the market for industrial limestone.
- B23 There are also quarries at Ball Eye and Slinger Top, which have permitted reserves of limestone in association with vein mineral, the latter producing limestone as a secondary product. The levels of output of limestone from these operations tend to be variable and relatively modest; issues and policies relating to vein minerals are considered in Chapter 14. Minor operations, for demonstration purposes, may take place intermittently at the National Stone Centre near Wirksworth.
- B24 **Dene Quarry** is operated by Tarmac Roadstone (Eastern) Ltd and lies between the villages of Cromford to the east and Middleton to the west. The quarry mainly serves the aggregates market, especially for roadstone. It is unlikely that the permitted reserves will be sufficient to maintain current production levels throughout the plan period. The limits of the quarry itself are tightly defined; to the east and west by the

- proximity to the settlements of Middleton and Cromford; to the south by the B5038, Cromford Hill, nature conservation constraints, including an SSSI, and the residential areas of Steeple Grange; and to the north by the Via Gellia which is included in a Special Landscape Area where policies aim to resist major limestone extraction.
- B25 Because of the likely ultimate depths of working at Dene Quarry, there may be difficulties in establishing productive after-uses for parts of the site, although in the shallower areas there will be more scope for natural regeneration, or, possibly, commercial uses. Any minor extension to the permitted working area at this quarry would need to avoid the constraints outlined in the previous paragraph and have regard to the need to facilitate appropriate after-uses as far as possible.
- B26 **Middle Peak Quarry** which lies on the north west side of Wirksworth is currently inactive. Output aimed primarily at the aggregates market ceased in 1992 for reasons of working difficulty in the prevailing market conditions. Future re-opening by the company will depend on the economic climate. Permitted reserves should be sufficient to satisfy anticipated needs during the plan period and beyond.
- B27 To the north west of Middle Peak Quarry and to the west of Middleton village is **Middleton Mine**, which is a major operation extracting limestone by underground working, beneath Middleton Moor. Almost all the output from the mine is focused on the chemical limestone market, with the main interests of the company, Derbyshire Stone Ltd, being in powders and sugar stone. Permitted reserves at the mine are estimated to be sufficient to meet anticipated needs throughout the plan period and beyond. Future planning proposals are likely to be limited to minor developments, such as plant modifications, or access or ventilation requirements.
- B28 There are also a number of planning permissions for surface working of limestone on and around Middleton Moor including **Hopton Wood** and **Intake Quarries**. However, these quarries are now inactive and it is considered unlikely that these reserves will be worked during the plan period. The northern edge of Middleton Moor is included in a Special Landscape Area which is aimed at protecting the special landscape quality of the Via Gellia by resisting mineral working which would cause irreparable damage. Much of this area is also included in an SSSI.
- B29 Output from Middleton Mine is received for processing by plant which is located at Hopton Wood Quarry and at Middleton. There is a continuing need for the transporting of limestone between these points to be carefully managed to maximise direct access through the mine and to minimise impact on the highway network.
- B30 At the western end of the Via Gellia, to the south west of Grangemill, is **Grange Mill Quarry** which supplies a specialist market for high purity limestone. The Operator, Ben Bennett Jnr Limited, has developed a significant export market. The quarry is physically constrained by Special Landscape Area, by the geological limits of the mineral deposit and by the adjoining quarry to the south west. Permitted reserves could become depleted during the plan period which may lead the company to seek a small extension to the existing operations. Any such extension would have to have particular regard to the need to protect the landscape of the SLA.

- B31 Adjoining Grangemill Quarry to the south west is **Longcliffe (Brassington Moor) Quarry**. It is operated by Longcliffe Quarries Limited and its output primarily serves the industrial limestone market, much of which requires high purity limestone of very particular chemical characteristics. Permitted reserves of limestone at this quarry are considered to be sufficient to meet anticipated needs for the plan period and beyond, on the basis of information currently available. In the longer term, the levels of investment in plant which may be necessary for the production of very specialised products, may require the working of further reserves. Proposals for such working will be considered with reference to Policy MP25 and the general policies of the plan and will be likely to be acceptable only in the event that satisfactory measures, mitigating the effects of quarry on the landscape are put in place. Any such measures should include extensive planting and screening in advance of any working in order to achieve a degree of maturity in the landscaping and to maximise its effectiveness.
- B32 **Bone Mill Quarry**, about 2 miles to the south east, was initially developed with the intention of securing a nationally important source of dolomite to produce magnesium metal. It is now operated by Longcliffe Quarry Ltd and is producing aggregate materials for the local construction market. The current working is part of a much needed phased improvement programme for the site. Further development is anticipated to exploit the higher quality dolomite to be supplied for a number of industrial uses. Due to the variable quality of the rock and the difficulty of predicting the nature of particular markets it is not possible to predict the timescale of the working of this site.
- B33 **Crich Quarry** lies about 3 miles to the east of Wirksworth, just to the north of the village of Crich and is operated by Tarmac Roadstone (Eastern) Ltd. This is a long-established quarry serving mainly the limestone aggregates market. The operations here are constrained on all sides by landscape constraints including Special Landscape Area designation along its western boundary. For these reasons, further extension of the quarry would be considered unacceptable. Existing permitted reserves are sufficient to meet anticipated needs for most of the plan period, but may become exhausted before the end of the period.

The Whitwell/Bolsover Area

- B34 The Permian Limestone area covers the north east corner of the county east of a line from Barlborough to Hardwick. There are two active operations in this area, to the east of Bolsover, at Bolsover Moor and at Whitwell, just to the south of the village.
- B35 **Bolsover Moor** quarry is an operation where the company, Tarmac Roadstone (Eastern) Ltd, produce limestone primarily for aggregates, and supplies markets to the east of Derbyshire in Nottinghamshire, Lincolnshire and East Anglia. There is therefore some benefit in its location on the eastern fringe of the county, avoiding the cross-county lorry movements that would be necessary if these markets were supplied from quarries in the west of the county. Permitted reserves, which have recently been extended, are likely to be sufficient to meet anticipated production needs during the plan period. The most recent extension which will add an estimated 10 to 12 years to the life of the operation includes proposals for the phased restoration of the site to agriculture and conservation uses.

- B36 **Whitwell Quarry** lies between the villages of Whitwell and Creswell, and is operated by Redland Aggregates Ltd. Production at the quarry is driven primarily by the demands for high specification industrial limestone e.g. for refractory stone and for high iron content limestone for the steel industry. The quality of the refractory stone produced is very specialised indeed with significant exports to a number of countries. The quarry is currently one of only two sources of this particular quality of stone in the UK. Unfortunately the operation itself is hampered by a number of factors both geological and physical with the effect that permitted reserves are sufficient to meet anticipated needs only until about mid-way through the plan period. In view of the specialist nature of the market and the shortage of alternative sources for the mineral, the plan puts forward proposals for future extensions to this site in Chapter 12.

Sandstone and Igneous rock

- B37 Sandstone is extracted and crushed for use as aggregates at **Birch Vale**, near New Mills, and intermittently at **Hayfield**. The output from these quarries supplies markets in Derbyshire and in North West England. However, the existing permitted reserves here are likely to become exhausted during the plan period; the prominence of these quarries and their close visual relationship with adjoining areas of high quality landscape, including the Peak Park and Special Landscape Areas, impose severe constraints on opportunities for further extensions. Given the high level of permitted reserves of crushed rock in the county and the limited demand for sandstone aggregates, no further provision is required for the extraction of sandstone during the plan period (in accordance with Policy MP 23).
- B38 As indicated in paragraph 10.8 there are no known workable resources of igneous rock in the county in addition to the deposit which is currently being worked at **Waterswallows** near Buxton and therefore there is no scope for making further provision for igneous rock production.

Appendix C—Opencast Constraint Areas

Introduction

C1 Chapter 13 Paragraph 29 states that:

"Where a particular concentration of features or areas of conservation interest occurs, the cumulative effect is that the area as a whole deserves to be protected in order to avoid unacceptable damage to the environment. Such areas have an importance which is greater than the single occurrence of individual interests within them and are not already sufficiently well protected by other policies. It is considered that the disturbance that would be caused by opencast operations in these areas would be likely to outweigh any foreseeable benefits that would result." The main areas where such concentrations of interests occur have therefore been defined as Opencast Constraint Areas on the Proposals Map within which proposals for opencast coal working will be generally resisted. Each of the areas defined forms an identifiable landscape unit; they represent the main concentrations of conservation interests within the area of the exposed coalfield.

Barlborough Constraint Area

- C2 This area covers the attractive landscape most closely associated with Barlborough Hall. The area is generally well wooded with a high level of tree cover compared with the surrounding areas and has been classified as an area of above average landscape quality in the County Landscape Appraisal 1968. The area to the east of the motorway consists largely of the parkland associated with Barlborough Hall. Longrybank Wood and Nitticarhill Wood, which are on the Wildlife Sites Register, are included together with Car Plantation in the constraint area because they are important features in the landscape. Crabtree Wood in this part of the area is a designated SSSI. Also on the Register are the water features, Pebley Reservoir, Butcherlawn Pond, Hawke Wood Pond and Thompson's Holt Pond. The parkland around Barlborough Hall is a conservation area and is listed as an historic parkland by English Heritage.
- C3 The area to the west of the motorway has many hedges and a number of well developed woodlands including the ancient woodlands of High Wood, Ingdale Wood and Quarrydam Wood which are also on the Wildlife Sites Register. Other sites in this area on the Register are Ingdale Farm Carr, Quarry Dam and Quarry Dam Fields complex, Sheffield Road Field and part of Spinkhill Railway.

Eckington/Renishaw Constraint Area

- C4 The main part of the area is that covered by Renishaw Park and Renishaw Golf Course which was formerly part of the Park. This area has a higher proportion of woodland and tree cover than is generally found in the surrounding areas. The area of Renishaw Park and Golf Course are included within the Eckington and Renishaw Park Conservation Area and is an area of above average landscape quality identified in the County Landscape Appraisal 1968 and the Visual Quality Analysis 1977. Renishaw Park is listed by English Heritage as an historic park. The hillside on the eastern side of the area also has a high level of tree cover, Birley Wood being on the Wildlife Sites Register. Other sites within the area that are on the register are Renishaw Lake,

Chapelwheel Dam, Renishaw Meadows, Park Brook Marsh and the Foxstone Wood complex.

Chesterfield/Brimington Constraint Area

- C5 The Constraint area consists of two areas of countryside largely surrounded, and overlooked, by urban areas. The larger, western area is characterised by a pattern of small fields with well wooded hedges and several small areas of woodland. This area is overlooked by the built up areas surrounding it and is extensively used as a recreation facility by the local residents. The grounds of Tapton House, which is a Grade II* listed building, are listed on the Sites and Monuments Record as being of historical importance.
- C6 The eastern area consists of a well wooded valley. Much of its eastern side is covered by West Wood, an ancient woodland as defined by English Nature and is recorded on the Wildlife Sites Register. The western side of the area consists of both arable and pasture fields with mature hedges and trees. The north eastern part of this area is occupied by Ringwood Hall, which is Grade II listed building on the Sites and Monuments Record and its parkland which is listed as being of historic importance. Troughbrook Wood is an ancient woodland.
- C7 There are a number of sites within the area as a whole that are on the Wildlife Sites Register. The include Brimington Field, Piccadilly Cottages scrub and allotments and the water features, Ringwood Lake, Tapton Fish Pond and the Tapton Golf Course Fish Ponds. The area is classified as one of above average landscape quality in the Visual Quality Analysis 1977.

Hardwick Constraint Area

- C8 This constraint area is based on Hardwick Hall and Park and the surrounding well wooded countryside. The area can be divided into two visually related parts west and east of the motorway. To the west of the motorway the landscape consists of a number of small valleys running eastwards to the valley of the Doe Lea. They contain woodlands, Stainsby Plantation and Astwith Dumbles are on the Wildlife Sites Register, and mature field boundaries. This area overlooks, and is overlooked by, the parkland of Hardwick Hall. Within this area Stainsby Pond is also on the Wildlife Sites Register and the villages of Astwith, Stainsby and the part of Hardstoft in the area are conservation areas.
- C9 The area to the east of the motorway contains the landscaped parkland of Hardwick Hall, this is registered by English Heritage as being of Special Historic Interest and has a good level of tree cover. One of the areas of woodland in this area is Dovedale Wood which is an SSSI. The Great Pond, Row Ponds and Car Ponds are all on the WSR. The Rowthorne Trail is a Local Nature Reserve and is included on the WSR; the Teversal/Pleasley Trail is an SSSI. The northern part of this area has a high level of tree cover; this consists largely of the ancient woodlands of Cross Wood, Stainsby Park, Hollingworth Wood, Hucknall Wood, Thompson Wood and Griff Wood, which, together with Lodge Plantation, are included on the Wildlife Sites Register.

Butterley/Golden Valley Constraint Area

C10 The area consists of Butterley Park and Golden Valley and contains a number of mature woodlands, mature hedges and old parkland associated with Butterley Hall. This contrasts with much of the landscape in surrounding areas which has been opencasted and is characterised by regular field boundaries, treeless fences and poor hedges. Woodlands in the area which are entered on the Wildlife Sites Register are Forty Horse Wood and The Tanyard Plantation; Codnor Park Reservoir, Cromford Canal and the Midland Railway Centre Country Park are also on the Wildlife Sites Register. Much of the area is identified as being of above average landscape quality in the County Landscape Appraisal 1968 and the Visual Quality Analysis 1977. The Jessop Monument and Jessop Park Hall are both Grade II listed buildings. The Golden Valley Conservation Area contains the cottages alongside the Cromford Canal.

Horsley Constraint Area

C11 The area is a well defined landscape area separated from the surrounding countryside by a series of ridges. It consists of a number of small valleys leading into the larger valley of Park Brook. The eastern part of the area is identified as being an Area of Local Landscape Significance by Amber Valley Borough Council and was identified as an area of above average landscape quality in the Structure Plan Visual Quality Analysis. It contains The Warren and an ancient woodland, Cloves Wood, both of which are listed on the Wildlife Sites Register. The landscape is made up of attractive combinations of hedgerows, hedgerow trees and small wooded areas.

ShIPLEY Country Park Constraint Area

C12 The area is based on the boundaries of ShipleY Country Park. ShipleY Country Park forms an important recreational facility for the surrounding urban areas of Heanor, Ilkeston and West Hallam. It contains a number of mature woodlands, ponds, lakes and managed meadows. Some of the ponds and lakes are on the Wildlife Sites Register including Paul's Arm, Walkers Pond and Mapperley Reservoir, the nature reserve near Mapperley Reservoir is also included on the register. The woodlands in the area, including the ancient woodland of ShipleY Wood, form important features in the local countryside. ShipleY Wood and Office Coppice are also listed on the Wildlife Sites Register. ShipleY Hill and The Field are important in that ShipleY Hill is an historic garden as identified by English Heritage on the Register of Parks and Gardens of Special Historic Interest, and The Field is a Conservation Area. The area around Mapperley Reservoir and Mapperley Wood is an area of above average landscape value as defined in the Visual Quality Analysis 1977.

Dale Constraint Area

C13 The area consists of the valley of the Sow Brook with the ridge of Arbour Hill extending into the area. On the northern edge is the small area of higher ground that Dale Windmill stands on. The features of the area which give it special character include mature field boundaries, with a number of hedgerow trees, and a greater degree of

woodland cover than the surrounding countryside. The landscape of the area has historical significance due to its relationship with the Abbey and the Hermitage. The Erewash Borough Local Plan refers to the area around Dale as being one where there is a higher level of woodland cover than other parts of the Borough. The majority of the woodlands are covered by Tree Preservation Orders. Three areas of woodland are classified as Ancient Woodland; two of them Hermits Wood and Ladywood, are listed on the Wildlife Sites Register. The third, Dale Hills, is largely within the Dunhill Regionally Important Geological Site.

Bretby Constraint Area

- C14 An area of Local Landscape Value identified in the South Derbyshire Local Plan and the Bretby Conservation Area define this constraint area, the boundary following easily identifiable features in the landscape. The area contains a number of features which give it special character and a higher landscape quality than the surrounding, more open countryside. The features include ponds, lakes and streams, mature field boundaries and a greater degree of woodland cover than the surrounding countryside. Two of the areas of woodland, Repton Shrubs and Caulkley Wood are ancient woodlands, and are both listed on the Wildlife Sites Register. The water features entered in the Wildlife Sites Register include the Park Pond complex, the Bretby Park fish ponds and the Hillside Cottage stream margins. Other sites included on the Register are Bretby Castle Field, The Gorse, The Leveling, Hoofies Wood, Big Rough Meadows and Lee Wood Grassland. Bretby Park is on the Register of historic parks and gardens as identified by English Heritage.

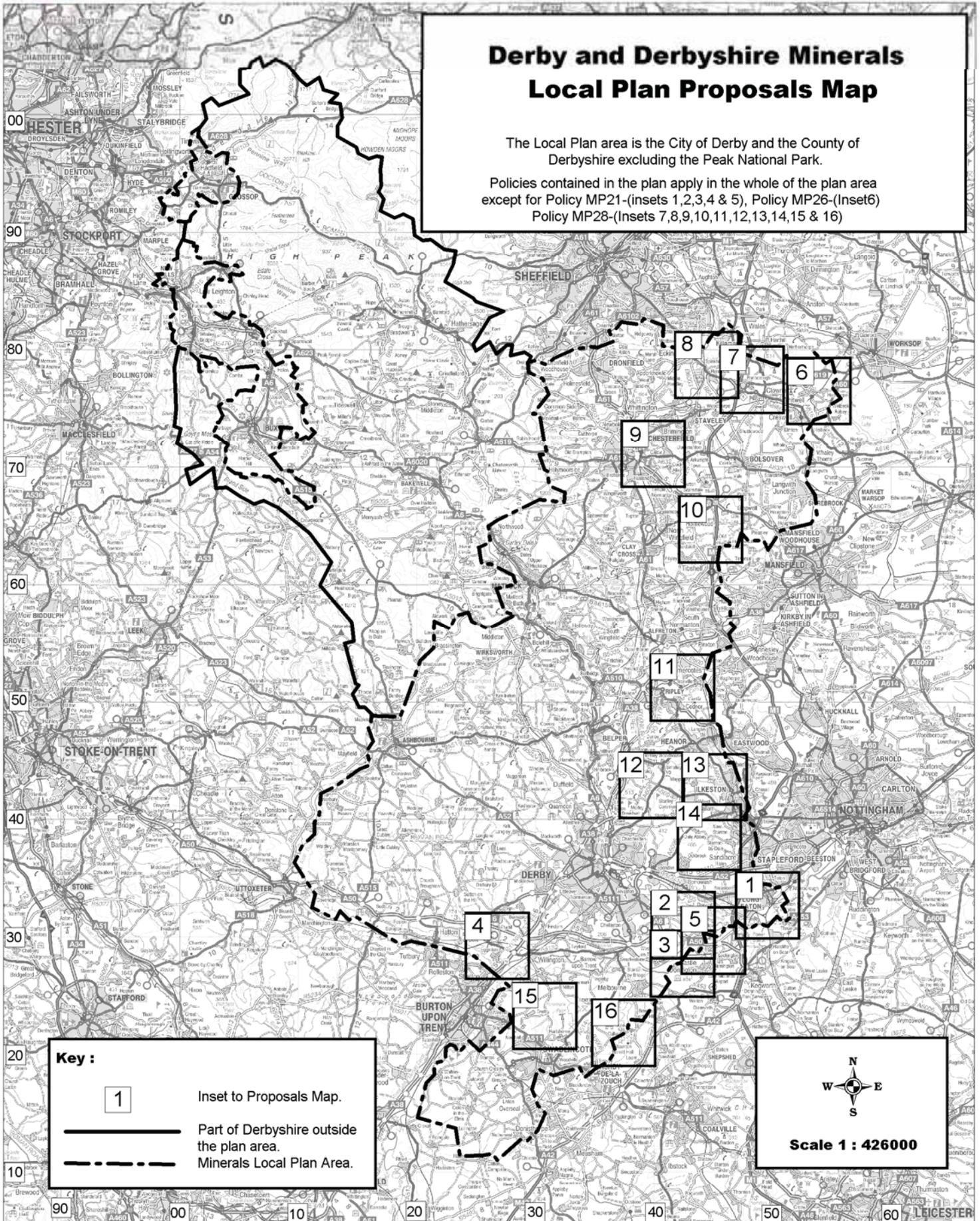
Calke Abbey Constraint Area

- C15 This area is based on Calke Abbey and Park with the surrounding woodlands and the SSSI at Ticknall Quarries. The area is included in the South Derbyshire Local Plan as an area of Local Landscape Value. It is characterised by a high proportion of woodland, parkland, mature hedges and water features which, in combination, distinguish it from the surrounding areas.
- C16 Ticknall Quarries is a local nature reserve that is classified as an SSSI and is on the Wildlife Sites Register. Other SSSI in the area are Calke Park and part of Dimminsdale. Other Wildlife sites in the area are Poker's Leys, Jubilee Plantation and the area along the western edge of Staunton Harold Reservoir. Ancient woodlands in the area, which are all listed on the Wildlife Sites Register, are Long Alders and Pisternhill Plantation; Shaw's Alders and Archer's Alders; and South Wood and Bryan's Coppice. The constraint area includes part of Ticknall conservation area and Calke Abbey which is included in the English Heritage Register of historic parks and gardens.

Derby and Derbyshire Minerals Local Plan Proposals Map

The Local Plan area is the City of Derby and the County of Derbyshire excluding the Peak National Park.

Policies contained in the plan apply in the whole of the plan area except for Policy MP21-(insets 1,2,3,4 & 5), Policy MP26-(Inset6) Policy MP28-(Insets 7,8,9,10,11,12,13,14,15 & 16)



Key :

- 1 Inset to Proposals Map.
- Part of Derbyshire outside the plan area.
- Minerals Local Plan Area.


Scale 1 : 426000

KEY:-

Proposed Allocation



Existing Permitted Area



Existing Permitted Plant
Located at Attenborough
Accessed by barge



Local Plan Boundary



Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 1

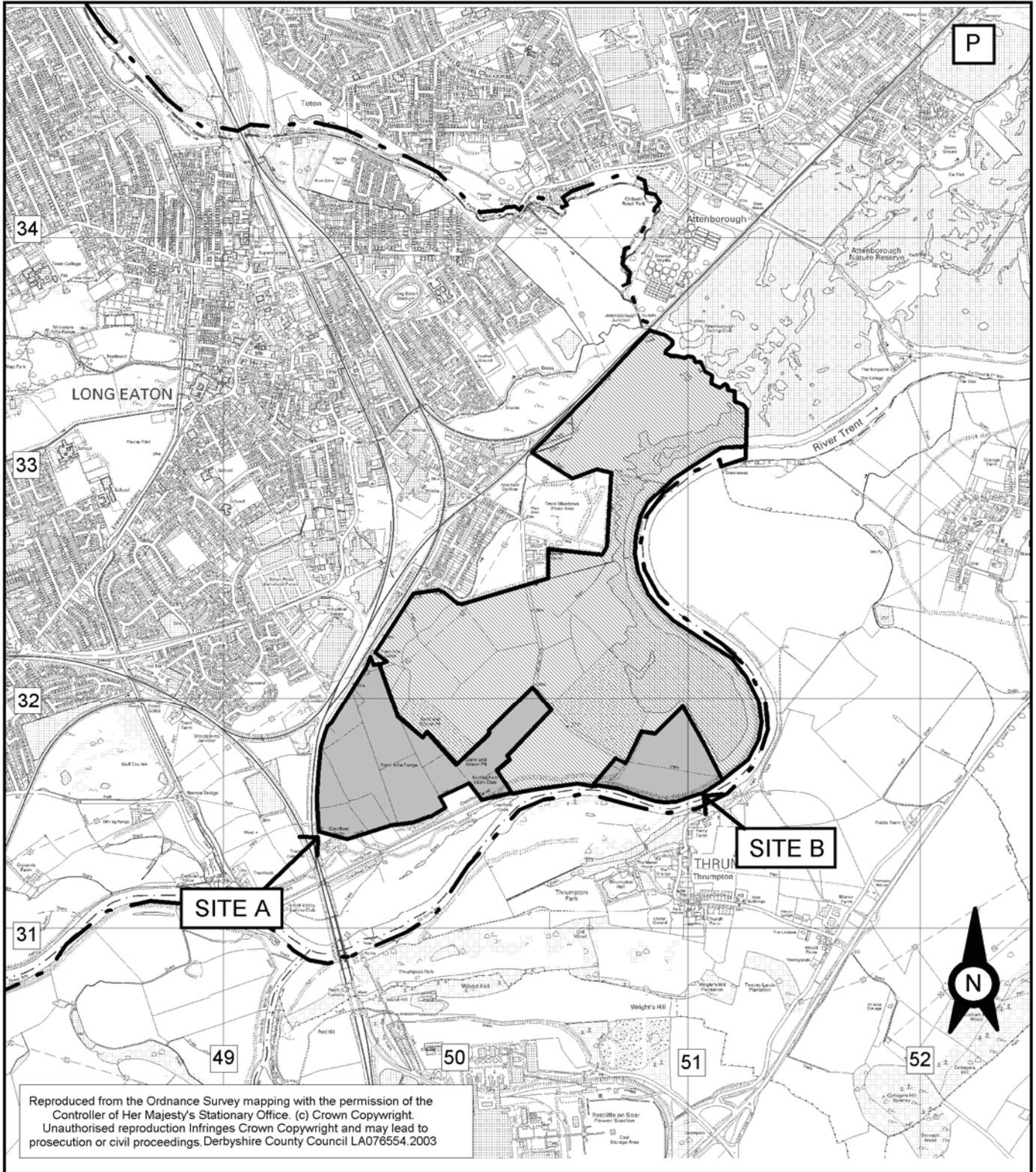
Proposed area of sand and gravel working

- ATTENBOROUGH

Policy MP21

Para: 9.46

Scale 1:23,250



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KEY :-

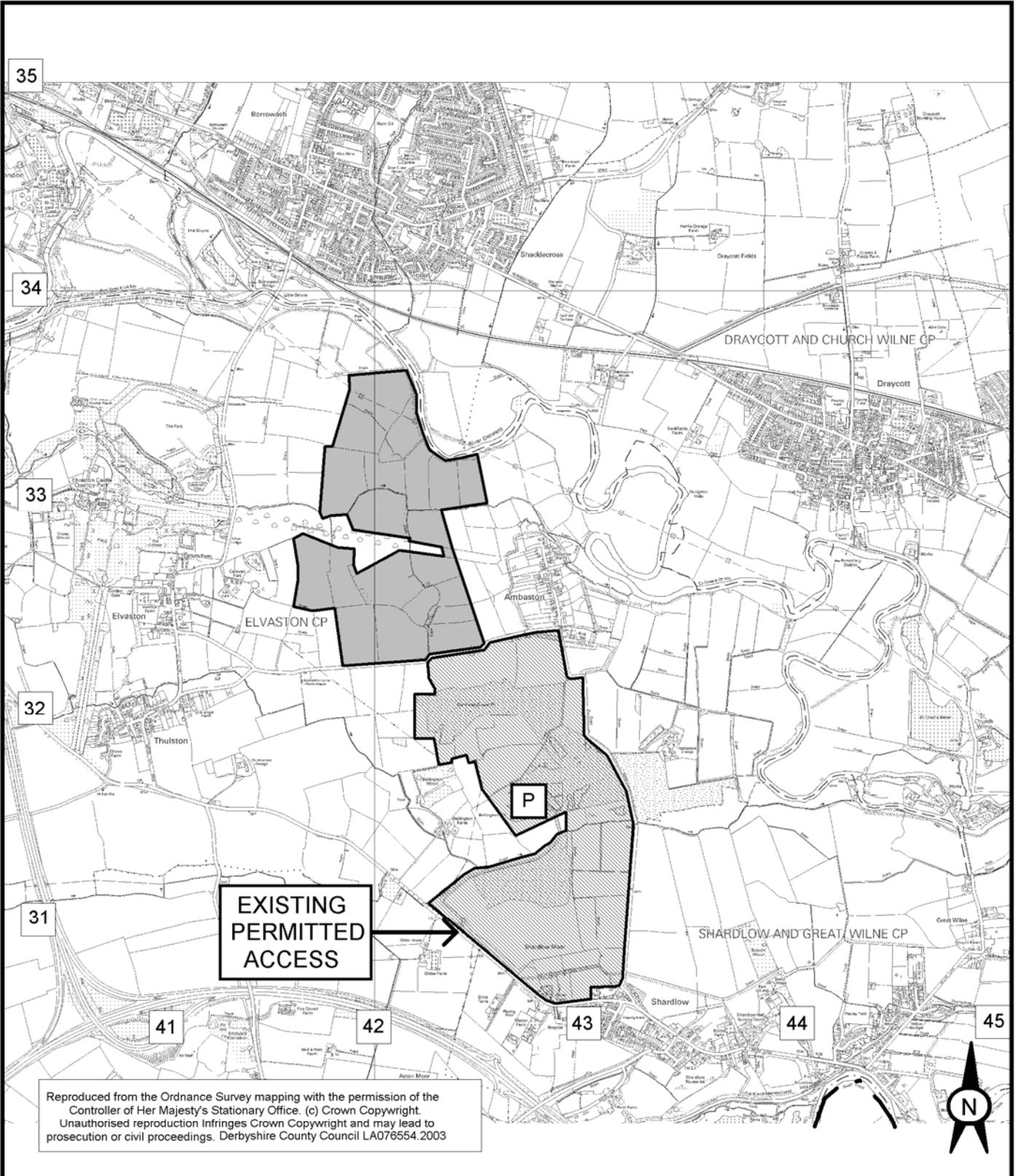
- Proposed Allocation 
- Existing Permitted Area 
- Existing Permitted Plant 
- Local Plan Boundary 

**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 2**
Proposed area of sand and gravel working
- ELVASTON

Policy MP 21

Para : 9.46

Scale 1: 24,670



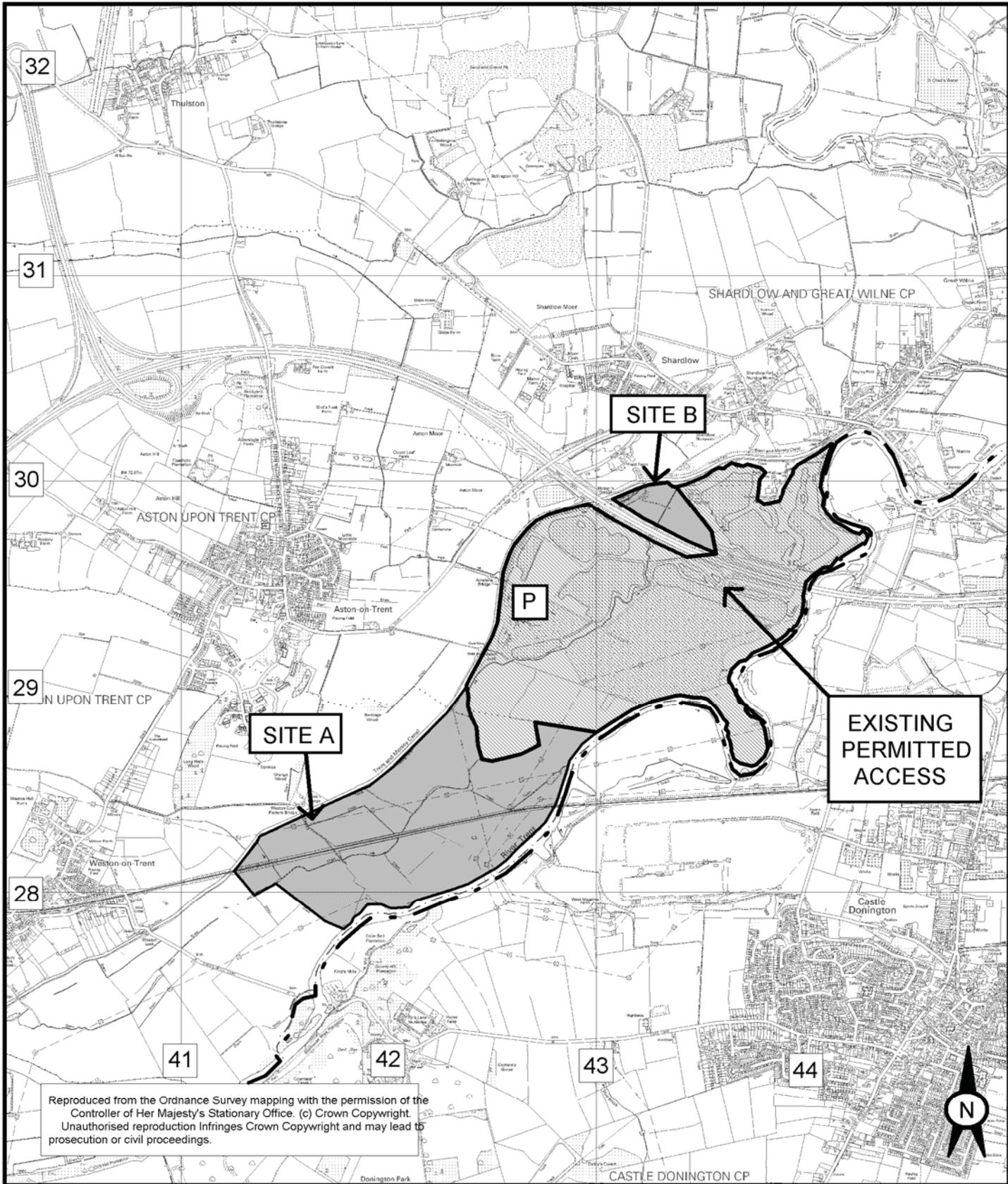
KEY :-

- Proposed Allocation 
- Existing Permitted Area 
- Existing Permitted Plant 
- Local Plan Boundary 

**Derby and Derbyshire Minerals Local
Plan Proposals Map : INSET 3**
Proposed area of sand and gravel working
-SHARDLOW

Policy MP 21 Para : 9.46

Scale 1: 24,860



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KEY :-

Proposed Allocation



Existing Permitted Area



Existing Permitted Plant



Local Plan Boundary



Derby and Derbyshire Minerals Local

Plan Proposals Map: INSET 4

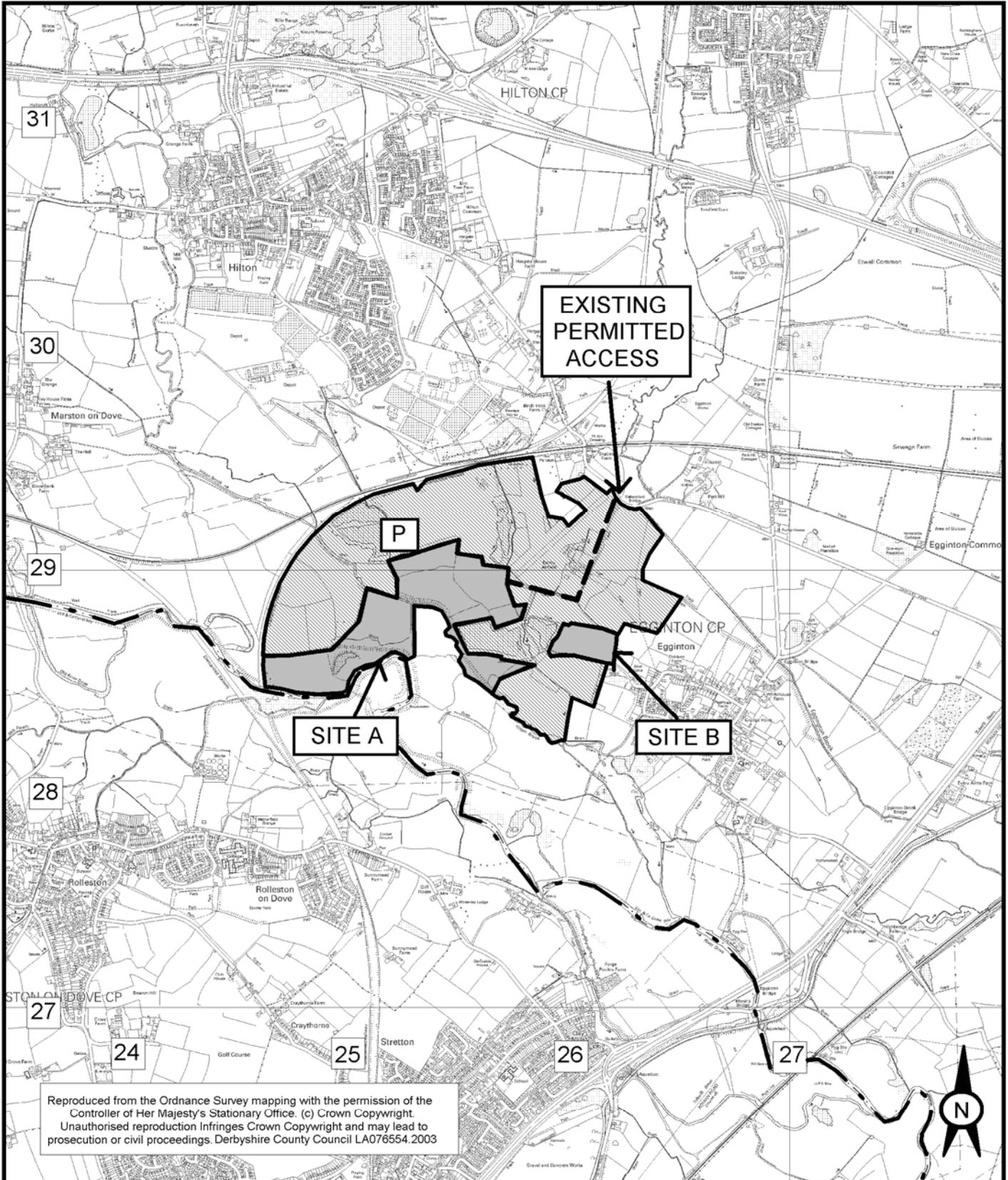
Proposed area of sand and gravel working

- EGGINGTON

Policy MP 21

Para : 9.46

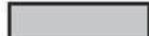
Scale 1 : 23,280



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KEY :-

Proposed Allocation



Existing Permitted Area



Existing Permitted Plant



Local Plan Boundary



Derby and Derbyshire Minerals Local

Plan Proposals Map: INSET 5

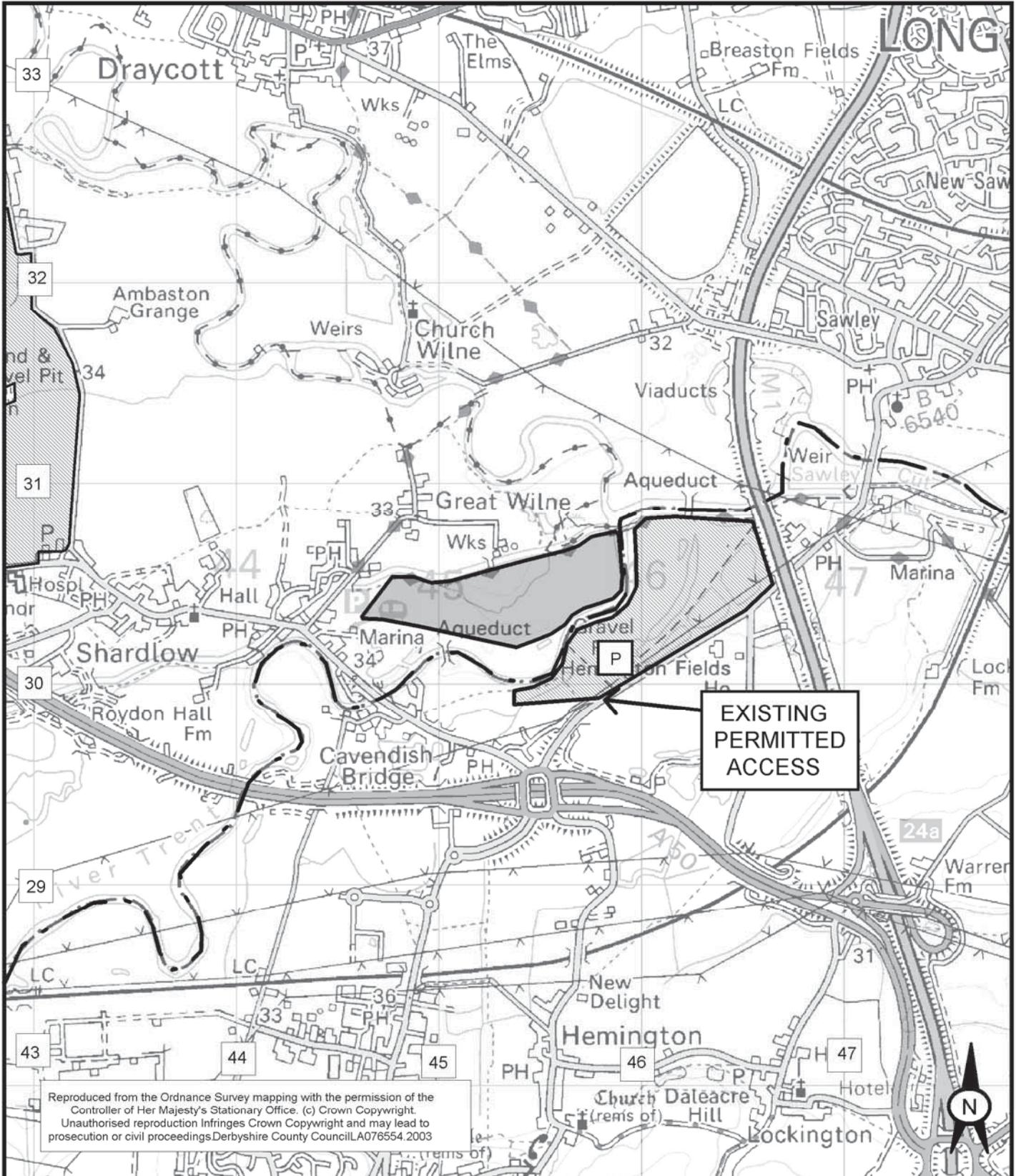
Proposed area of sand and gravel working

- HEMINGTON

Policy MP21

Para : 9.46

Scale 1: 25,560



**EXISTING
PERMITTED
ACCESS**

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KEY :-

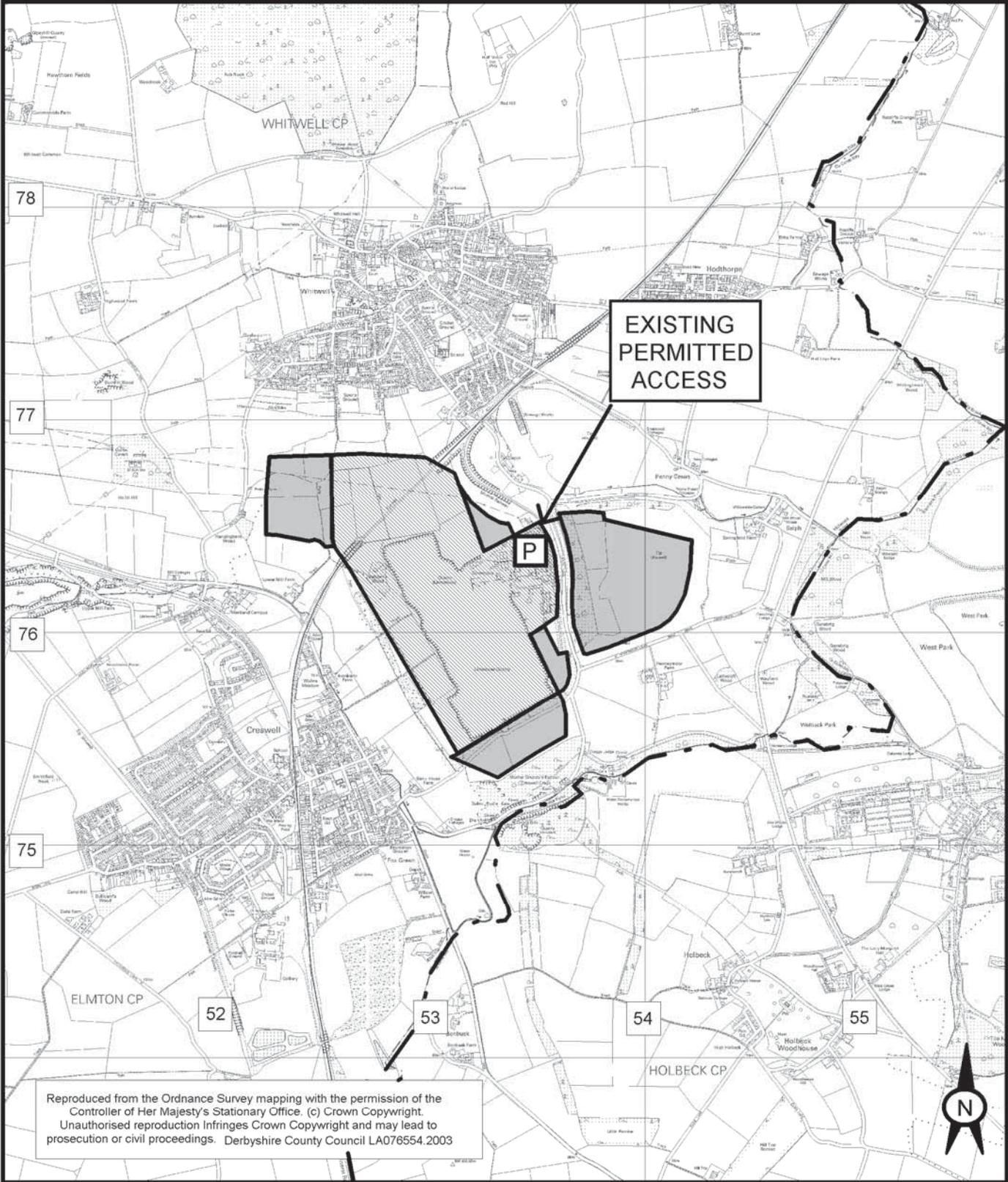
- Proposed Allocation 
- Existing Permitted Area 
- Existing Permitted Plant 
- Local Plan Boundary 

**Derby and Derbyshire Minerals Local
Plan Proposals Map :INSET 6**

Proposed area of Limestone working
-WHITWELL COLLIERY

Policy MP 26 Para : 12.21

Scale 1: 24,040



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KEY:-

Proposed Opencast
constraint Area



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 15**

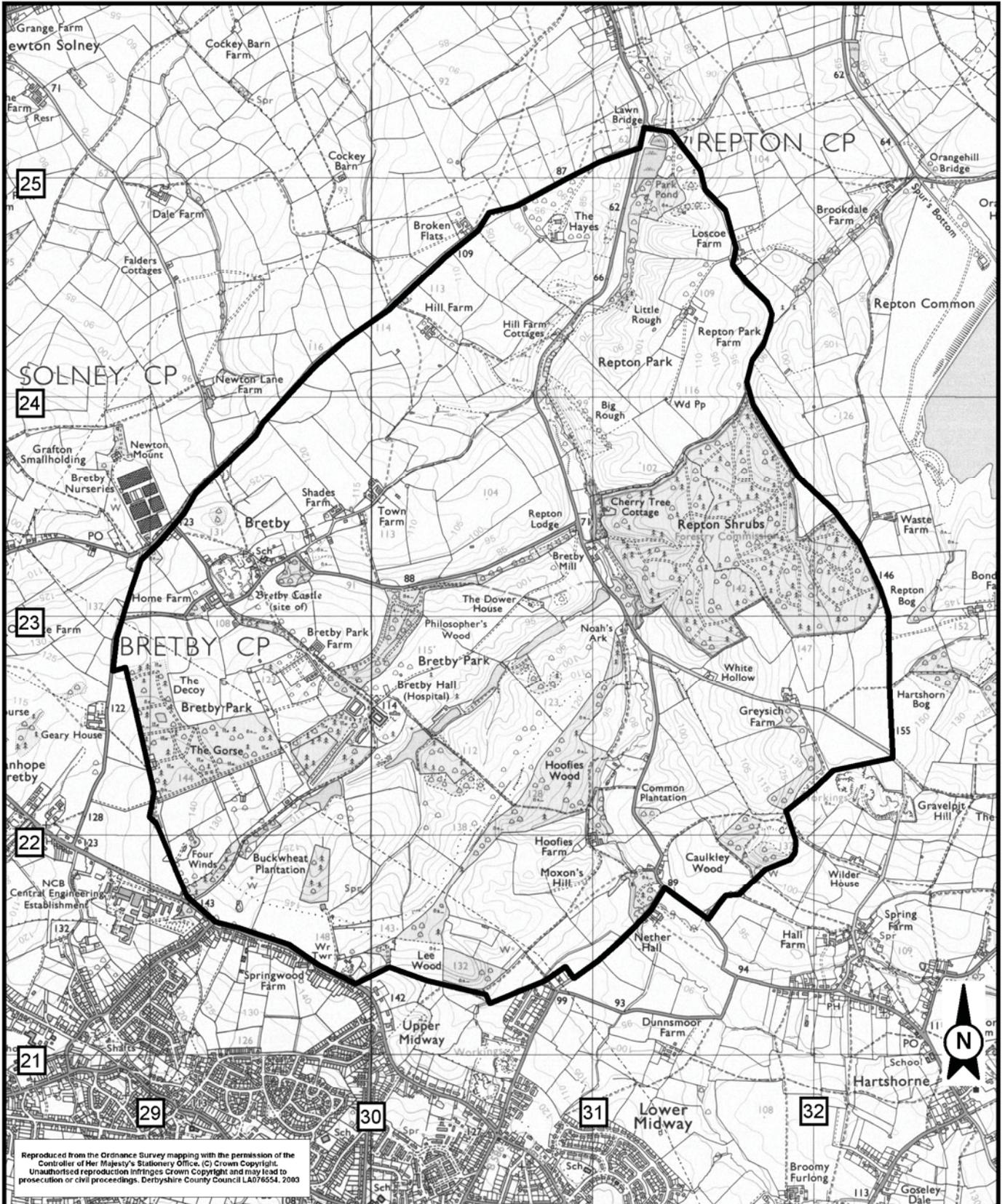
Proposed opencast constraint area

- BRETBY

Policy MP 28

Para: 13.56

Scale 1:25,000



KEY:-

Proposed Opencast
constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 11**

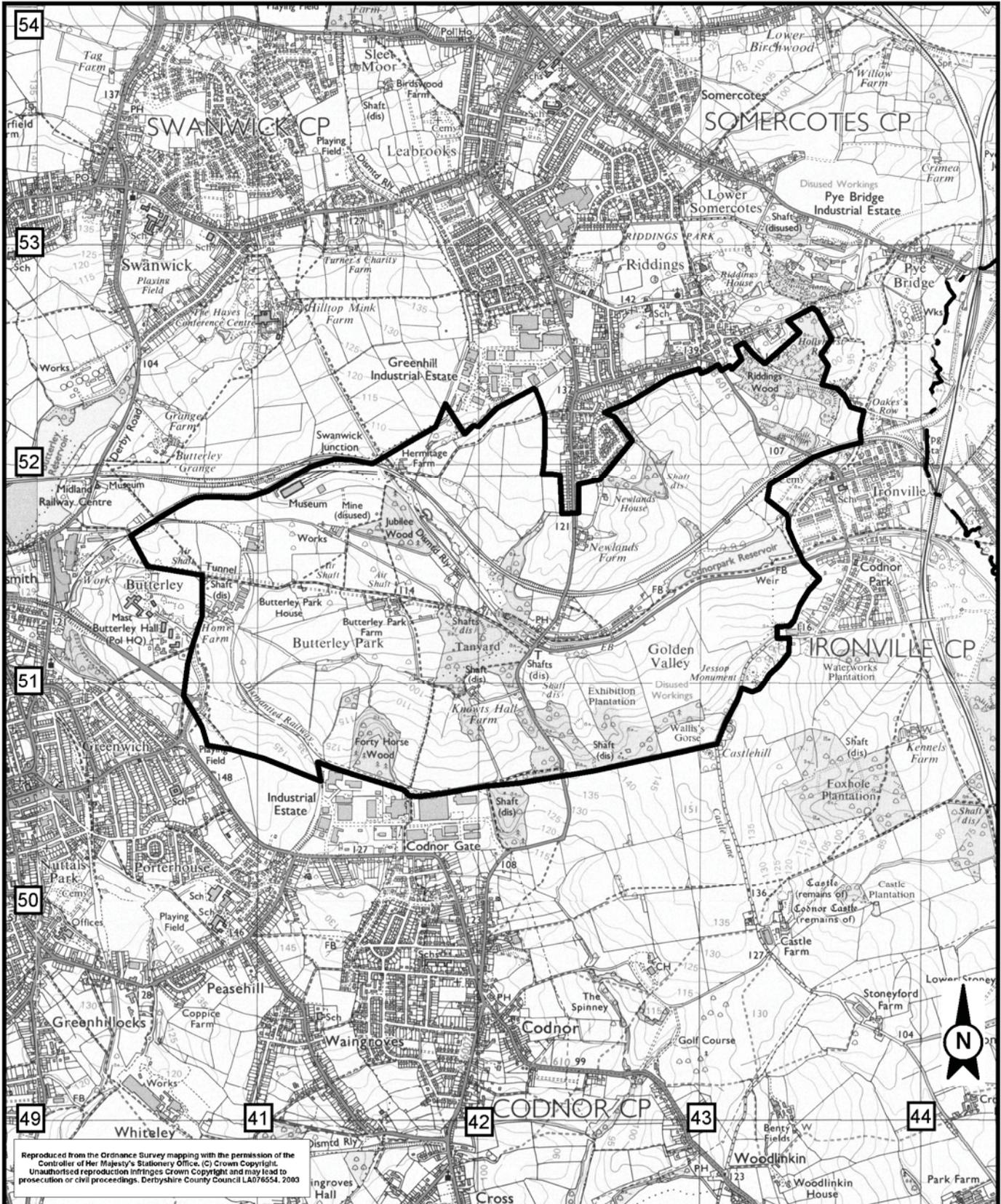
Proposed opencast constraint area

- BUTTERLEY / GOLDEN VALLEY

Policy MP 28

Para: 13.56

Scale 1:25,000

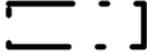


KEY:-

Proposed Opencast
constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 16**

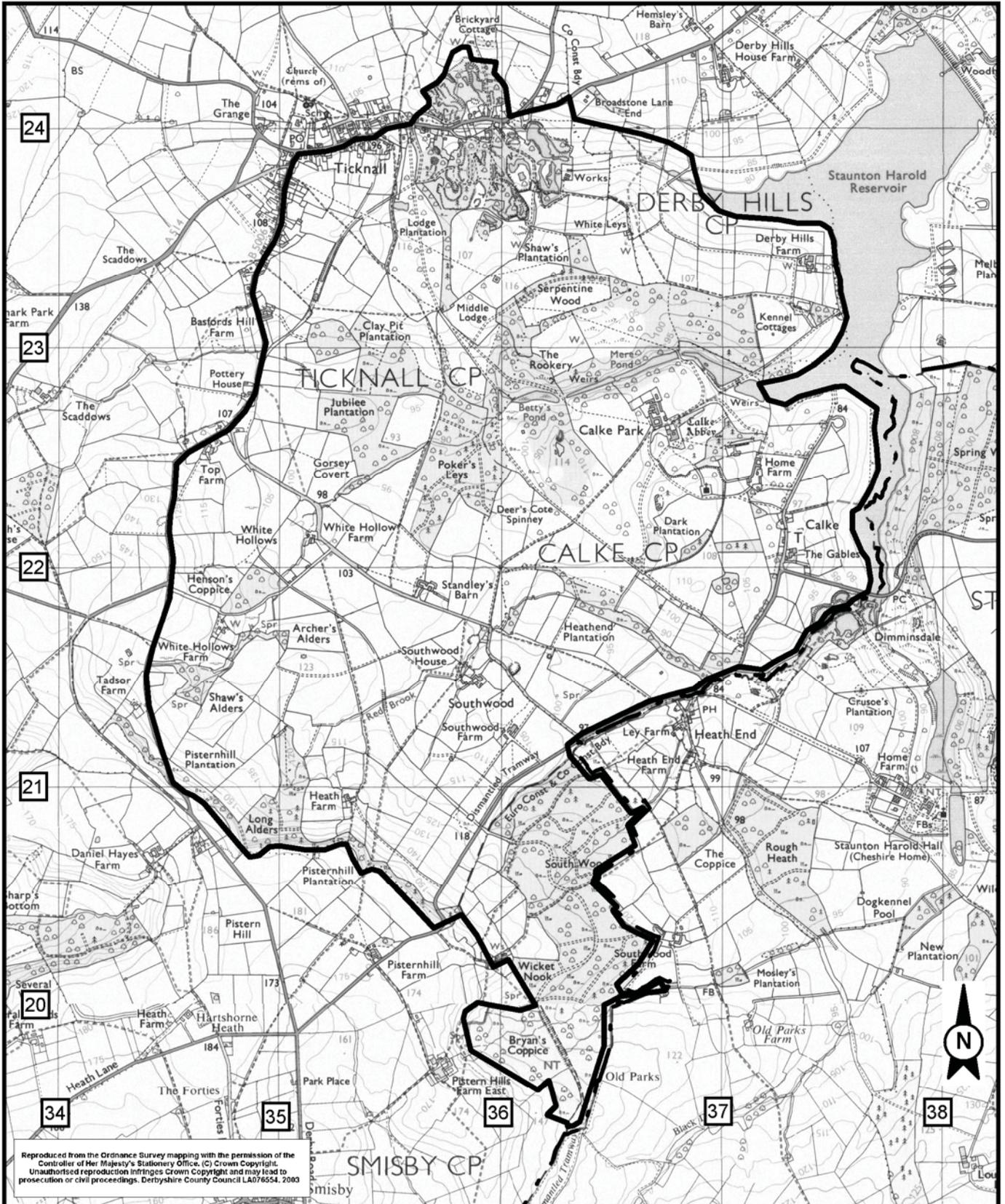
Proposed opencast constraint area

- CALKE ABBEY

Policy MP 28

Para: 13.56

Scale 1:25,000



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SMISBY CP

KEY:-

Proposed Opencast
constraint Area.



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 9**

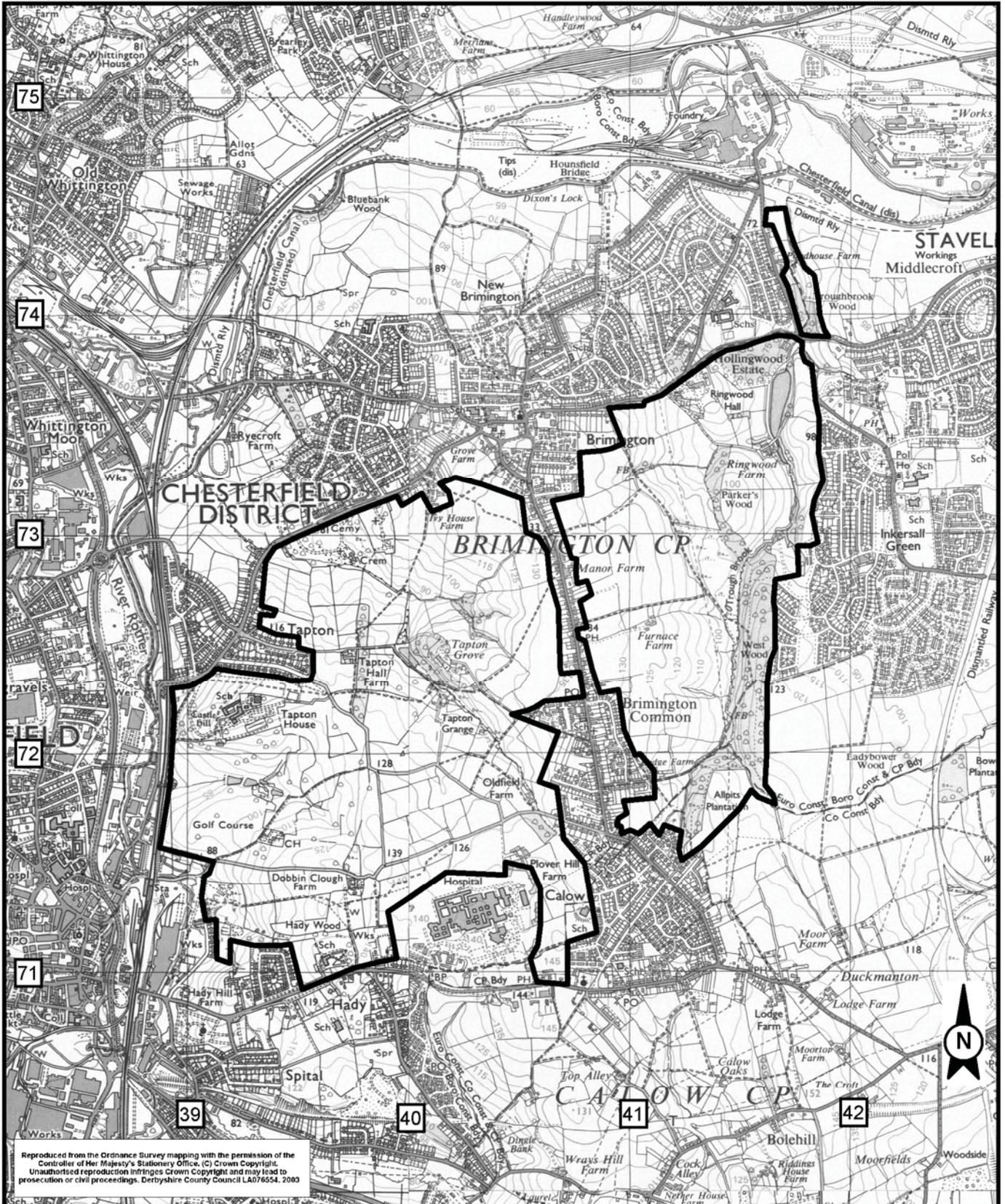
Proposed opencast constraint area

- CHESTERFIELD / BRIMINGTON

Policy MP 28

Para: 13.56

Scale 1:25,000



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KEY:-

Proposed Opencast
constraint Area



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 14**

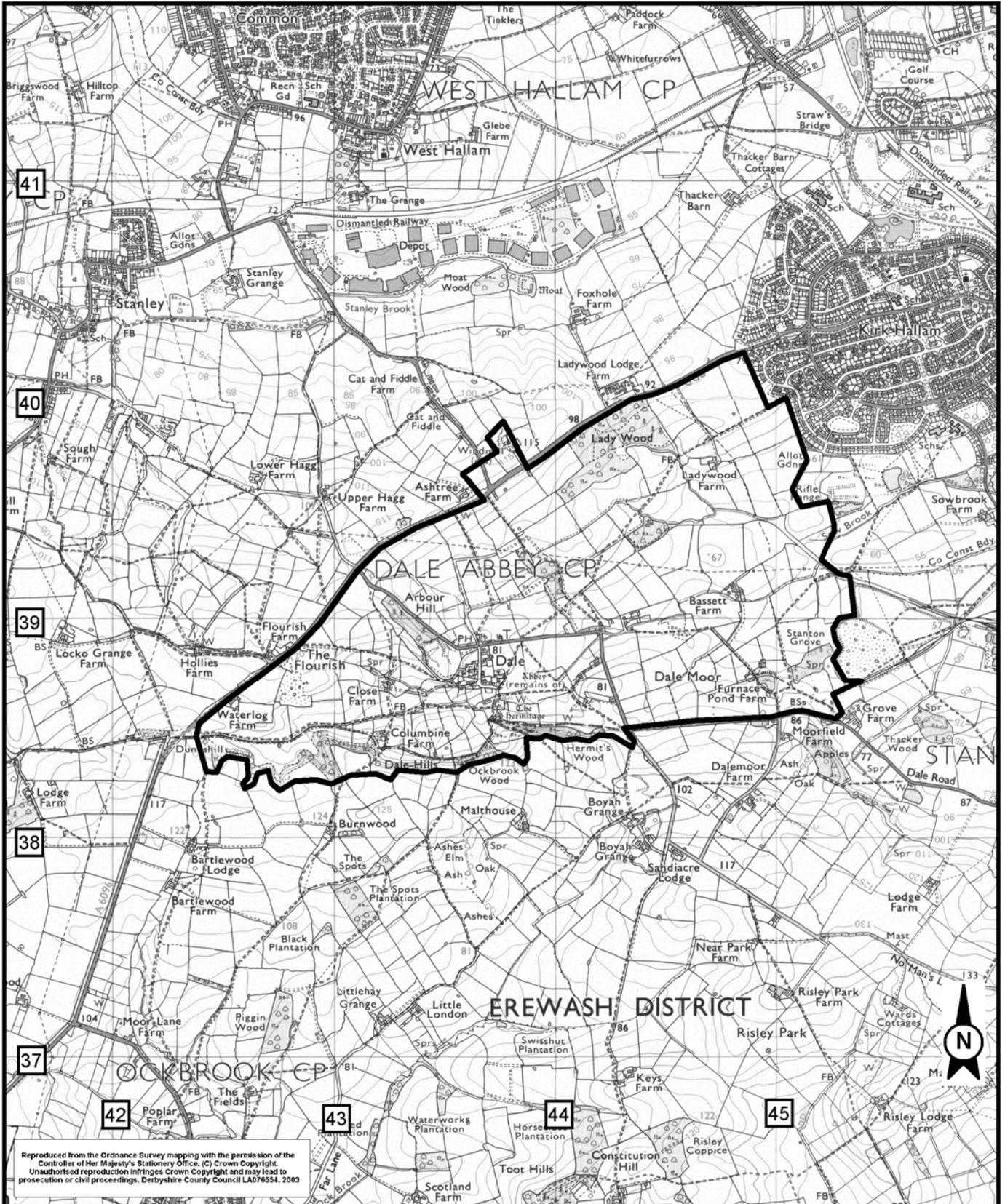
Proposed opencast constraint area

- DALE

Policy MP 28

Para: 13.56

Scale 1:25,000

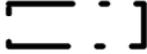


KEY:-

Proposed Opencast
constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 10**

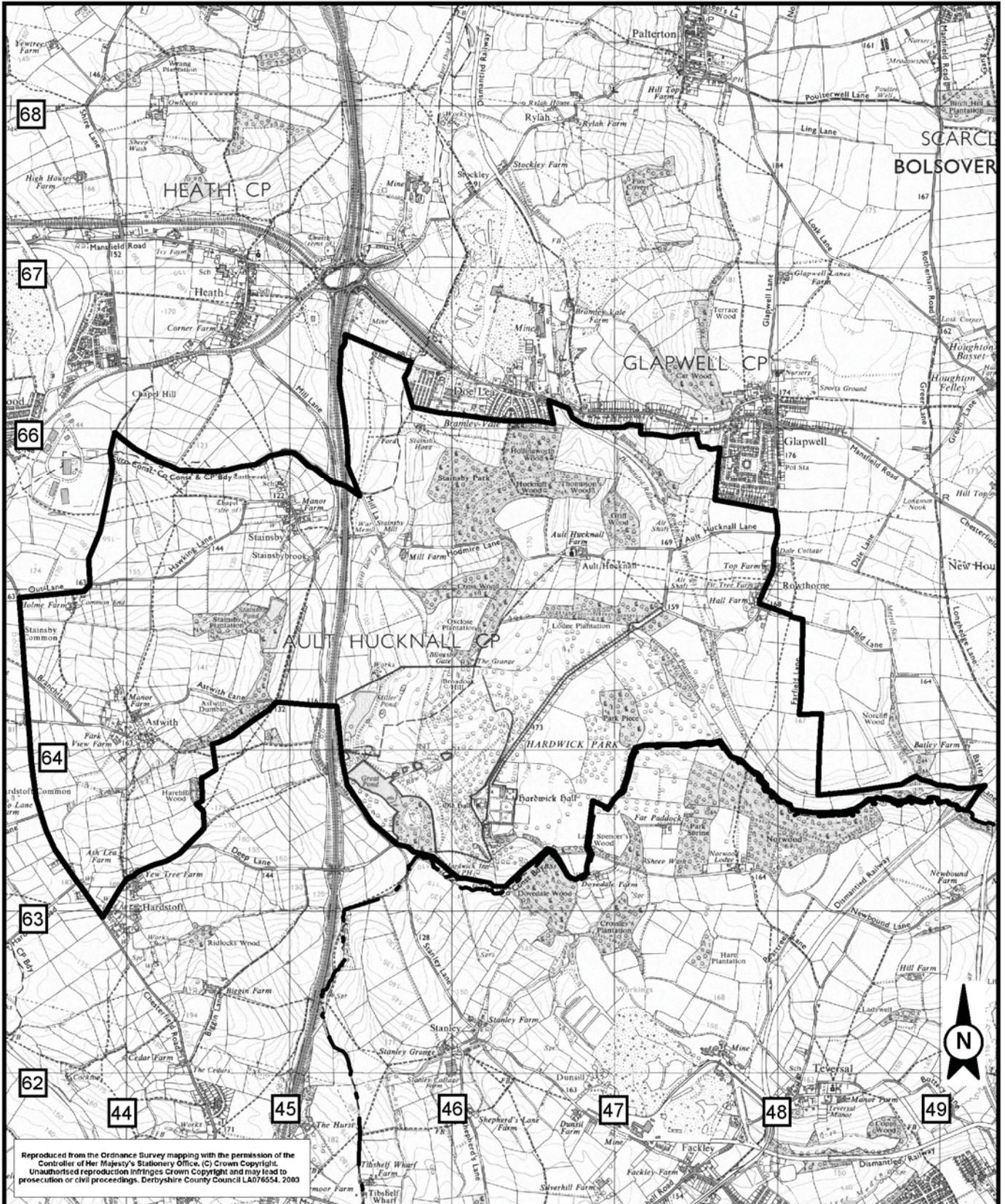
Proposed opencast constraint area

- HARDWICK HALL

Policy MP 28

Para: 13.56

Scale 1:35,000



KEY:-

Proposed Opencast
constraint Area



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 12**

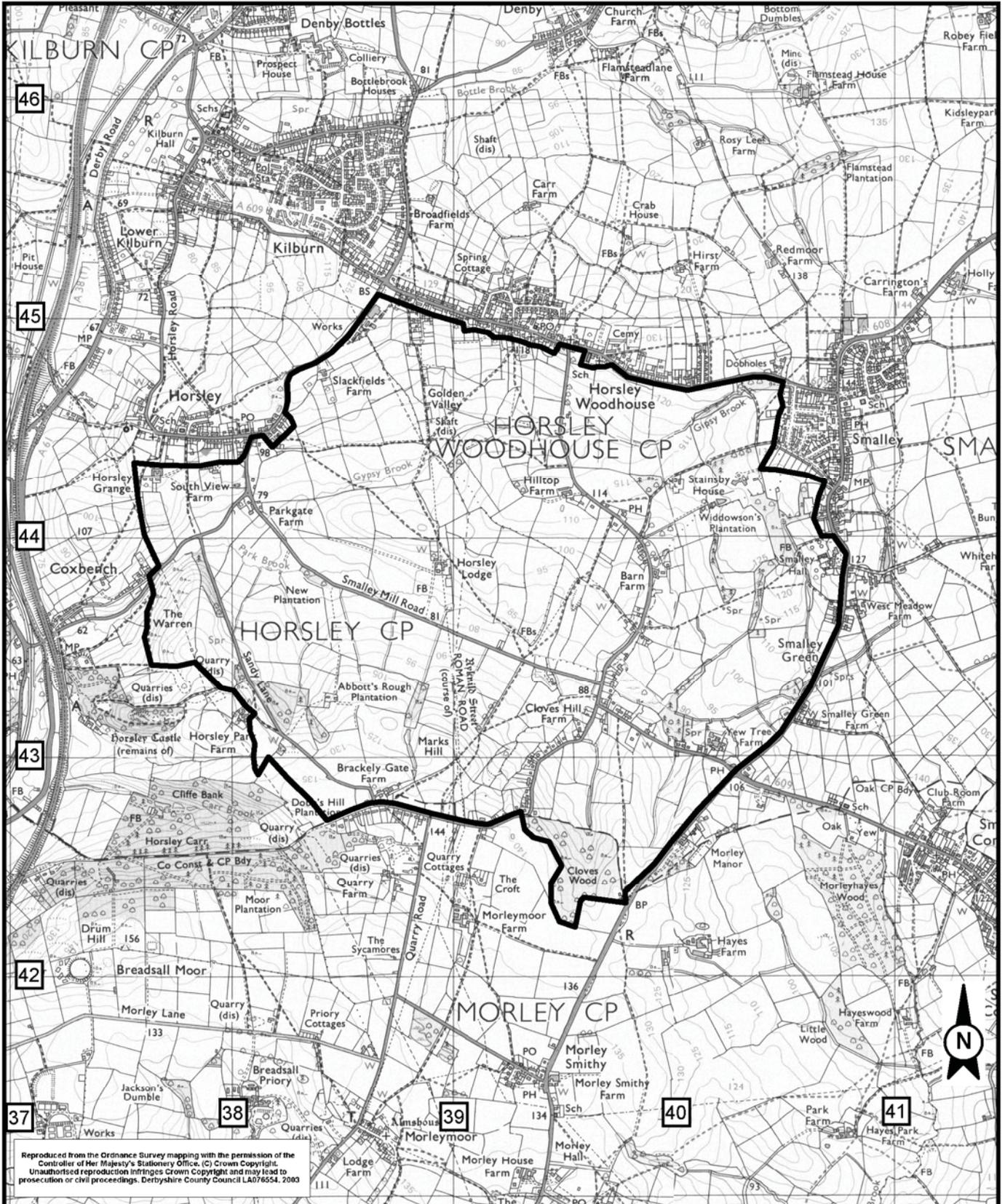
Proposed opencast constraint area

- HORSLEY

Policy MP 28

Para: 13.56

Scale 1:25,000



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KEY:-

Proposed Opencast
constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 13**

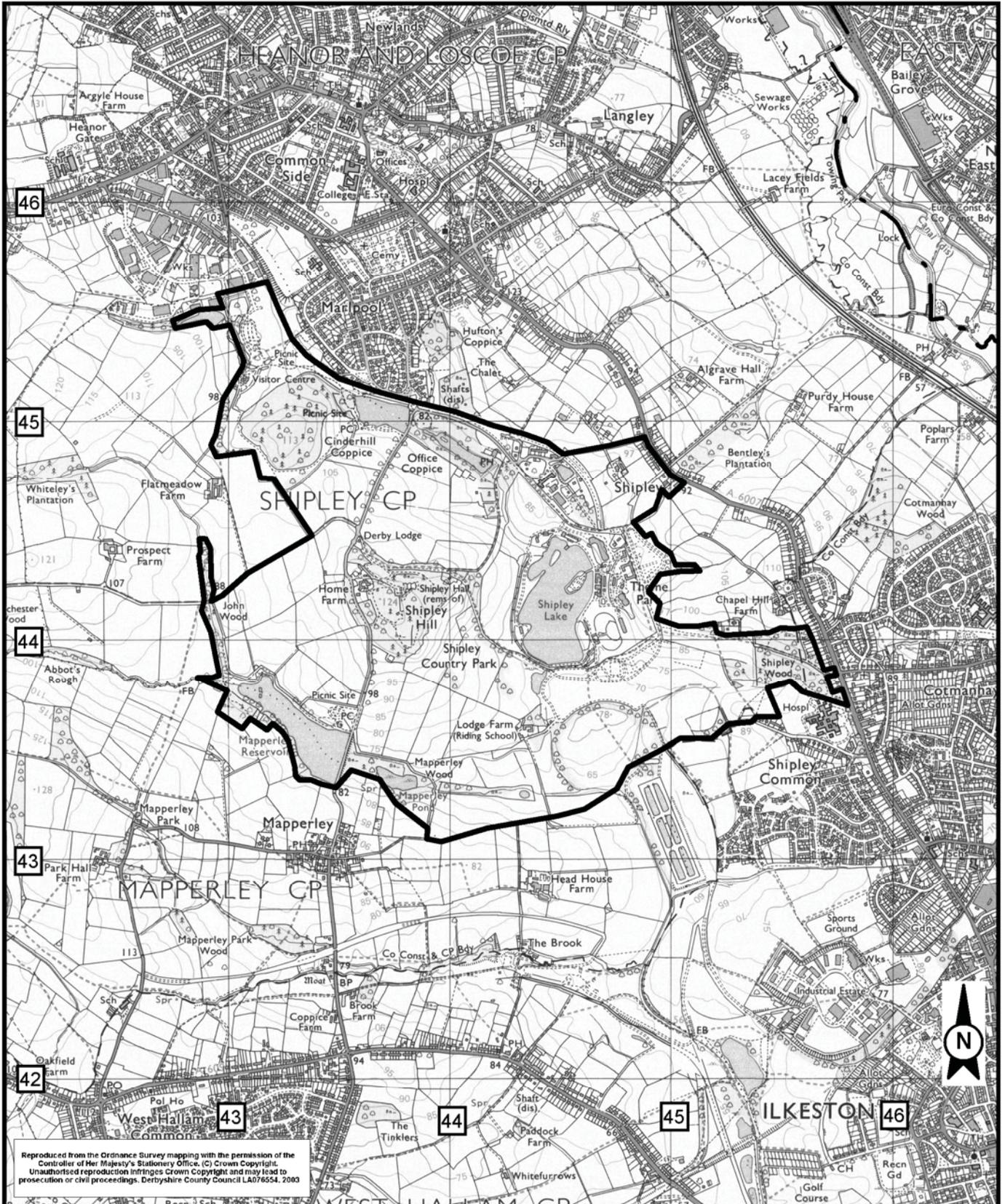
Proposed opencast constraint area

- SHIPLEY COUNTRY PARK

Policy MP 28

Para: 13.56

Scale 1:25,000



KEY:-

Proposed Opencast
Constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 7**

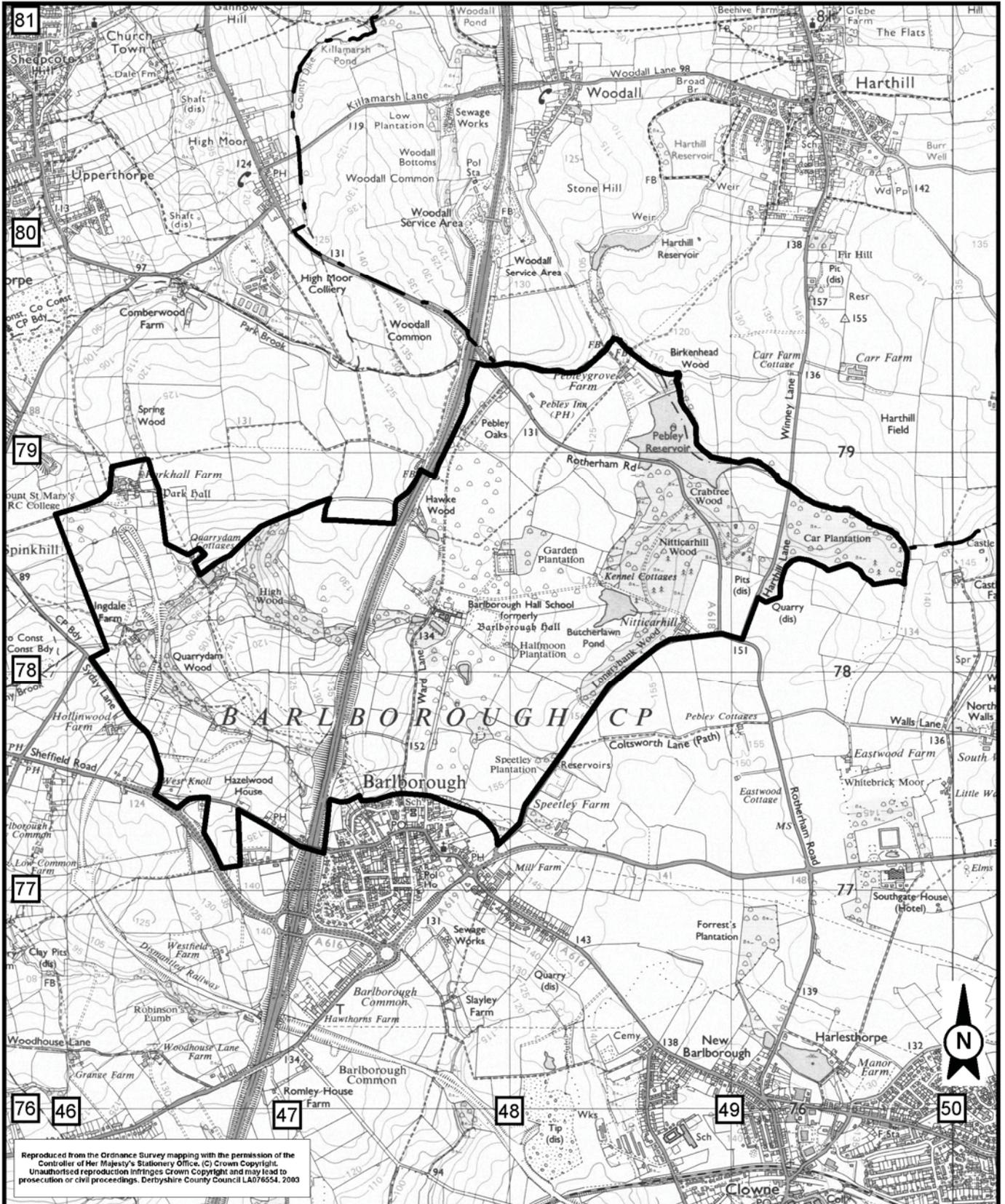
Proposed opencast constraint area

- BARLBOROUGH

Policy MP 28

Para: 13.56

Scale 1:25,000



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KEY:-

Proposed Opencast
constraint Area



Local Plan Boundary



**Derby and Derbyshire Minerals Local
Plan Proposals Map: INSET 8**

Proposed opencast constraint area

- ECKINGTON / RENISHAW

Policy MP 28

Para: 13.56

Scale 1:25,000

