

PEAK DISTRICT NATIONAL PARK AUTHORITY

Local Development Framework – Evidence Base

Peak District National Park Core Strategy Submission Version



Minerals Background Paper

(Updated to July 2010)

Table of Contents

Introduction	Page 2
National (and Former Regional) Policy Influences	Page 2
Feedback on Minerals Issues from Planning Inspectorate Front Loading Advisory Visit	Page 4
Comparison of Minerals Policy Approaches in Other National Parks in England	Page 4
Policy MIN1 – Minerals Development	Page 10
• Aggregates (Inc. Apportionment)	Page 10
• Cement	Page 14
• Industrial Limestone	Page 17
• Building Stone	Page 19
• Other Minerals	Page 19
• Restoration	Page 20
Policy MIN2 – Fluorspar	Page 21
Policy MIN3 – Local Small-Scale Building and Roofing Stone	Page 27
Policy MIN4 – Mineral Safeguarding	Page 31
Peak District National Park Local Plan – Policies to Remain in Force	Page 37
Appendix 1 – Aggregates Apportionment	Page 39
• List of quarries included in RAWP reports capable of producing Limestone/Sandstone, for aggregate purposes in Neighbouring MPA Areas, between 1997 and 2009	Page 50
• Summary of Market Distribution of Material for Aggregates Purposes	Page 52
Appendix 2 – Self Assessment Questions Posed by the Planning Inspectorate in Relation to Minerals Content in Core Strategies	Page 60
Appendix 3 – Maps and Diagrams Illustrating the Location of Mineral Extraction in the National Park	Page 65
• Map 1 – Extract Figure showing Fluorspar areas taken from the BGS Minerals Planning Factsheet on Fluorspar 2010	Page 66
• Map 2 – Extract showing Mineral Safeguarding Areas	Page 66
• Map 3 – Simplified Geology of the National Park in Pictorial Format	Page 67
• Map 4 – Mineral Sites Within the National Park (As at 2003)	Page 68
Appendix 4 – List of Mineral Sites within the Peak District National Park (as at April 2010)	Page 69



Policy MIN1 – Minerals Development

14. The overall minerals strategy for the National Park needs to reflect national policy and reflect the potential flexibility required over the plan period to allow proposals where the relevant exceptional circumstances set out for minerals development in a National Park context. The policy approach also needs to be flexible enough to allow positive environmental enhancement through exchanges of unacceptable historical consents for increased output at other more suitable locations, whilst meeting the Regional Plan objective of working towards the gradual reduction of aggregates and other land-won minerals within the National Park. Sites where such circumstances may arise over the plan period could include Topley Pike, Birchover and New Pilhough quarries.
15. The policies are generally restrictive, not allocating any further land or allowing working of mineral for aggregates, limestone and shale for cement manufacture, or limestone for industrial and chemical products.

Aggregates

Geology, availability and likely future supply pattern

16. Aggregates are supplied from the Peak District and the adjacent area of Derbyshire overwhelmingly from the Carboniferous limestone. Quarries within the two authorities together supplied just over 11 million tonnes of limestone in 2008 (down from nearly 13mt in 2007, prior to the recession) but just 87,000t of sandstone that year⁵. With production having ceased at Isle of Skye Quarry, there is currently no significant quarry supplying sandstone aggregates now operating in the National Park, although the potential remains for some permitted sites to produce aggregates if the market dictates. The pattern of production of aggregates in the Peak District will be shaped by existing permissions, both within and outside the Park, as no new permissions are expected to be granted within the Park other than in exceptional circumstances. However, during the current recession there is insufficient demand to sustain output at all sites, and Darlton Quarry is at present mothballed.

Suppliers and users

17. Multi-national companies operate all the major aggregates quarries in the Peak District National Park, serving wide ranging markets in the East Midlands and beyond. The Carboniferous limestone they excavate is a high quality mineral suitable for use in a very wide range of construction uses. A review of the mineral planning interest in construction aggregates has been prepared by the British Geological Survey⁶.
18. Aggregates excavated in the Peak District serve very wide markets. Sales of crushed rock in 2005 were dispatched as follows⁷:

<u>Destination</u>	(000 tonnes)	(%)
Derbyshire & Peak District National Park	1,444	30
Rest of the East Midlands	807	17
West Midlands	300	6
North West	2,000	41
Yorkshire & the Humber	283	6
Elsewhere	15	0
<i>Total</i>	<i>4,849</i>	<i>100</i>

⁵ East Midlands Regional Aggregates Working Party (2009), Survey and Annual Report for the calendar year 2008, Table 3

⁶ British Geological Survey (2007) Mineral Planning Factsheet: Construction aggregates

⁷ British Geological Survey (2007) Collation of the results of the 2005 Aggregate Minerals Survey for England and Wales, Table 9e

19. The following are the major aggregates-producing sites in the National Park (as at April 2010):

<u>Site (Quarry)</u>	<u>Current Operator (as at April 2010)</u>
Ballidon	Tarmac
Darlton	Tarmac
Goddards	Cemex
Ivonbrook	Aggregate Industries
Longstone Edge West	Glebe Mines
Old Moor	Tarmac
Shining Bank	Dave Maris Ltd
Topley Pike	Tarmac

Recent history of supply

20. Permissions covering large tonnages and long periods at many major sites in the Peak District have ensured that the pattern of aggregates supply has changed only marginally in recent years. The main site closures have been:

- Eldon Hill (time-expired) 1997
- Isle of Skye (time expired – Aggregate Industries agreed not to renew the permission under the Minerals 98 initiative) 2000
- Parish (time expired) 2001
- Hartshead (time expired – Aggregate Industries agreed not to work the site whilst it had an interest in the site under the Minerals 98 Initiative) 2006
- Hartington Station (dormant site – prohibition order confirmed – site identified under the Minerals 98 initiative) 2000
- Furness (dormant site – prohibition order confirmed – site identified under the minerals 98 initiative) 2000
- Moss Rake East (time expired – appeal pending) 2006

Sites with permission: active and dormant

21. In addition to the major sites in the Peak District which have supplied the market in recent years, there is some possibility that two further sites with permission in the Buxton area could be brought back into use. One option is re-activating an existing inactive quarry at Beelow (an extension into the National Park of the much larger active Doveholes quarry) subject to the approval of conditions under a statutory Review of Mineral Permission. Another option is for new operating conditions to be proposed to enable the re-opening of the statutorily dormant Hillhead quarry (an extension into the National Park of the much larger but inactive Hillhead quarry).

Reserves

22. Current permitted reserves of limestone for aggregate purposes amounted to 111 million tonnes as at 31 December 2008, sufficient for about 27 years' supply based on the Peak District's recent share of the East Midlands apportionment figure. There were a further 2.68mt of permitted reserves of sandstone for aggregate purposes as at 31 December 2008⁸ (combined with Derbyshire CC), sufficient for about 20 years based on the current apportionment figure.

23. The impact on the supply pattern of existing sites going out of production, or the rate of output changing in anticipation of this, is difficult to predict exactly. Permissions expire at Longstone Edge West in 2010, Ivonbrook in 2011, Goddards in 2012 and at Darlton in 2013, while most of the remaining quarries have permissions to continue operation until

⁸ East Midlands Regional Aggregates Working Party (2009) Survey and Annual Report for the calendar year 2008, Table 4

around 2040, though the reserves may be exhausted before this date at some quarries. Limestone reserves are unevenly distributed amongst the quarries within the Park, with an especially large reserve remaining in the Old Moor permission (an extension to Tunstead Quarry in Derbyshire, east of Buxton, on the National Park boundary). Aggregates production could be increased from Old Moor and also from most other quarries: they generally had higher outputs in the 1980s and 1990s. The Authority is therefore confident that there is the capacity available within existing permissions for the National Park to satisfy its apportionment.

24. Limestone sales for aggregates also arise as an additional output from quarries operated primarily to supply limestone for industrial use, notably Ballidon Quarry. Limestone is also produced as a secondary product from the processing of fluorspar at Cavendish Mill. There have also been significant sales of limestone from a selection of quarries extracting fluorspar, notably from Longstone Edge (West) (where 1.5mt is permitted to be sold), Backdale Quarry on the south eastern flank of Longstone Edge (though activities there have currently ceased as a result of a High Court decision), and Smalldale Head on Bradwell Moor (where the legality of removing limestone is in dispute).

Alternative sources

25. The effect of applying policy in MPS1 will be to cause a gradual rundown in the supply of aggregates from the Peak District National Park as existing sites are worked out or reach the end-dates of their permissions. If overall demand remains the same, other areas outside the Peak District National Park can be expected to provide aggregates instead. The principal knock-on effect of a gradual rundown in aggregates output from the National Park over the next 30 years is likely to be to increase supplies from Derbyshire instead. Derbyshire has very substantial permitted reserves, including at sites which straddle the National Park boundary. At the end of 2008 these totalled 827 million tonnes expected to be available for aggregates use (i.e. excluding a further 366mt of 'non-aggregate' reserves expected to be used for purposes such as cement-making and other industrial uses)⁹. These reserves compare with aggregates sales of crushed rock from Derbyshire in the range 7-9mt annually in recent years, suggesting that sufficient reserves are available far into the future. The process of Derbyshire substituting supplies for the Peak District is supported by Derbyshire County Council. There does not appear to be any risk to overall supply.
26. Aggregate minerals are widely present throughout the UK. The constraints on working many of these deposits can be significant, however, so the resource available in practice is much less than the geological resource. Nonetheless, workable mineral available outside protected landscapes (as Areas of Outstanding Natural Beauty are afforded the same degree of protection from major development like mineral working as are National Parks) is substantial. This would be a factor to be taken into account in considering whether there would be any justification under the MPS1 case of 'exceptional circumstances' to justify granting planning permission for major aggregates workings within the Peak District National Park.

Role in the National Park

27. There is extensive national policy on the provision of aggregate minerals. Much of this is set out in MPS1¹⁰. The main aggregates-specific requirements affecting the National Park are:
- satisfying obligations to make available defined quantities of aggregates in defined periods;
 - maintaining a 'landbank' of permitted reserves (to allow the ordered development of permitted workings) from outside National Parks as far as is practicable.

⁹ East Midlands Regional Aggregates Working Party (2009) Survey and Annual Report for the calendar year 2008, Tables 8a and 8b

¹⁰ CLG (2006, MPS1, Minerals Policy Statement 1: Planning and Minerals, paragraphs 14-15 and Annex 1, TSO

28. Former regional policy on aggregate which influenced the development of this Core Strategy was premised on the basis that Local Development Frameworks (LDFs) should identify sufficient environmentally acceptable sources to maintain an appropriate supply of aggregates and other minerals of regional or national significance; seek to apply aggregates apportionment figures; and make provision for a progressive reduction in the proportion and amounts of aggregates and other land-won minerals from the National Park. This Core Strategy seeks to take forward this policy context.

Regional Aggregates Apportionment

29. Revised National and Regional Guidelines for Aggregates Provision in England allocate new obligations to each region¹¹. The East Midlands is allocated 500mt (million tonnes) of crushed rock over the 16 years 2005-2020. The future apportionment of this quantity between the Mineral Planning Authorities has been discussed by the the East Midlands Regional Aggregates Working Party (RAWP) who recommended that the Sub Regional Apportionment for the National Park be 65.0mt for the period 2005 to 2020 (16 years). The Core Strategy has taken cognisance of this suggested apportionment figure of 65.0mt (annual equivalent of 4.06mt), however the National Park Authority considers that the apportionment obligations on the National Park should decline more quickly than elsewhere in absolute and proportionate terms.
30. Following the abolition of the Regional Planning process, the Government¹² has indicated that decisions on aggregates apportionment is now predominantly a matter for local choice and determination, having regard to the latest apportionment exercise at the national and regional levels. The National Park Authority considers that the current apportionment figure is too high taking account of other competing policy objectives, however it is used for analysis purposes in the evidence base for this Core Strategy as it was utilised as the evidence base for the abandoned review of the former regional plan and it also allows comparison to be made with other Authorities in the region. The National Park Authority will continue to seek a further reduction in the apportionment figure suggested for the National Park at the relevant review stages in the RAWP process or its successor processes. Technical detail on aggregates apportionment is set out in the Minerals Background Paper Appendix 1¹³.
31. Current permitted reserves of limestone for aggregate purposes amounted to 111mt as at 31 December 2008, sufficient for about 27 years' supply. Permitted reserves of sandstone for aggregate purposes amounted to 2.68mt (combined with Derbyshire) as at 31 December 2008, sufficient for 20 years based on the current apportionment figure¹⁴.
32. Crushed rock aggregates output from the National Park has exceeded the apportionment requirement but has been declining gradually over the years, as it has elsewhere, and will decline further as existing sites are worked out or their permissions expire. The impact of existing sites going out of production, or the rate of output changing in anticipation of this, is difficult to predict exactly. Limestone reserves are unevenly distributed amongst the quarries within the National Park. Aggregates output could be increased from a number of existing quarries: they generally had higher outputs in the 1980s and 1990s. We are therefore confident that there is the capacity available within existing permissions for the National Park to satisfy the suggested RAWP apportionment requirement for the remainder of the current apportionment period from 2009 to 2020, when balanced against other pertinent policy objectives aimed at protecting the National Park.

¹¹ CLG (2009) National and regional guidelines for aggregates provision in England 2005-2020, TSO

¹² CLG (2010) Revocation of Regional Strategies Letter from Chief Planner 6 July 2010

¹³ PDNPA (2010) Minerals Background Paper, Appendix 1

¹⁴ East Midlands Working Party on Aggregates (2009) Survey and Annual Monitoring Report for calendar year 2007, Table 4

33. The principal knock-on effect of a gradual rundown in aggregates output from the National Park over the next 30 years is likely to be to increased supplies from Derbyshire instead (unless overall demand declines significantly). Derbyshire has very substantial permitted reserves, including at sites which straddle the National Park boundary (Doveholes, Hillhead and Tunstead quarries). These amounted to 760mt at the end of 2007 – sufficient for well over 80 years at the 2007 rate of supply in Derbyshire.

Policy approach

34. There remains no case for granting major planning permissions for aggregates working in the National Park. A national obligation to maintain a landbank of permitted reserves (which existed when the former Structure Plan was prepared) has been withdrawn. There is no intention on the part of policy to undermine national aggregates policy by pressurising the Peak District National Park Authority into granting new permissions simply to sustain output at the rate apportioned to it. There are considerable resources with permission outside the National Park, especially in Derbyshire, where the mineral planning authority (Derbyshire CC) is sympathetic to substituting for output lost from the National Park over time. In any event, the considerable permitted reserves in the Peak District will ensure substantial output from the National Park for many years to come (about 27 years at recent output rates). The exceptional circumstances which would be needed to justify the grant of permission for fresh aggregates working in the Peak District do not therefore exist, and there is no case for allocating land where such working would be permissible in principle.

Cement

Geology, availability and likely future supply pattern

35. The principal materials used in the manufacture of cement are calcium carbonate, which in the Peak District is obtained from Carboniferous limestone, and mudstone, which in the Peak District is obtained from shale. The two minerals are found in close proximity at Hope (in the central east area of the National Park), where a cement works was first established in 1929. This is the only cement works in the National Park, and is expected to continue in operation throughout the LDF period and beyond.
36. In addition, limestone quarried within the National Park supplies the Tunstead cement works just outside the Park. This cement works is part of the major Tunstead complex which uses material from the quarry's Old Moor extension inside the National Park (permitted on appeal in 1980) to supply not only its own cement works but also industrial limestone and aggregates. All the material from Old Moor is used for these purposes.
37. An overview on raw materials used in the cement industry has been provided by the British Geological Survey¹⁵.

Suppliers and users

38. Lafarge Cement (UK) (LCUK) operates the Hope cement works and controls the mineral supplies to it. Quarrying at Old Moor is by Tarmac to serve its cement works at Tunstead just outside the National Park. Both have wide distribution networks for manufactured cement.

Recent history of supply

39. A consolidated permission was granted at Hope cement works in 1990, involving a change in the shape of the limestone quarry, which allowed working until 2042. This permission along with the old shale permissions were further consolidated in 2006, effectively reviewing the old mineral permissions, again allowing working until 2042. No additional reserves were permitted at either the limestone or shale workings.

Sites with permission: active and dormant

¹⁵ British Geological Survey (2008) Mineral Planning Factsheet: Cement

40. There are no other planning permissions in the National Park for working materials which are anticipated to supply cement works, though limestone from a number of quarries would be technically suitable to supply Hope and other cement works.

Reserves

41. Hope Cement Works has permitted reserves of about 44mt of limestone and 13.6mt of shale (2008). These reserves of limestone are estimated by LCUK as sufficient to sustain output at recent rates of about 1.4mtpa until around 2038, and shale reserves are sufficient to sustain output at recent rates until about 2058. However, some of the shale reserves contain a high sulphur content which may restrict its future use. If only shale of low sulphur content is used, then LCUK estimate this would last until about 2018. Shale with high sulphur content could potentially be blended with low-sulphur pulverised fuel ash (PFA) from coal fired power stations; this could bring sulphur emissions from the cement manufacturing process to acceptable levels. PFA is currently taken to the site and used as an additive to the cement. Permission has recently been granted to erect a new PFA silo that is rail-linked; this could potentially be used to receive PFA as a shale substitute.
42. Permitted reserves of limestone in the National Park at Old Moor are substantial, capable of providing a supply for all purposes to the Tunstead complex for many years.

Alternative sources

43. Despite the availability of substantial reserves, a search for alternative sources should commence forthwith as a matter of sound long term planning. This should respond to the expiry of those reserves in due course and promote an alternative pattern of cement-making and the supply of its raw materials which is more sympathetic to the purposes of the Peak District National Park. The operator of Hope Cement Works, LCUK, has four operational plants in mainland UK; Hope has the highest production capacity, with Cauldon just outside the Park in Staffordshire a close second. Tarmac has concentrated its cement production at Tunstead, increasing its capacity to at least 800,000tpa as a result of a permission granted by Derbyshire County Council in 2000, and now aiming to develop an additional kiln with a capacity to produce a further 1 million tonnes per annum. The plant could focus on using the Chee Tor and poorer quality Woo Dale limestone in the Derbyshire County Council area of the site, extending the life of Old Moor and enabling a higher proportion of Old Moor to be used for high grade (industrial) purposes. Meanwhile, many of the cement works listed in MPG10¹⁶ have closed, but not a single new site has been developed since it was produced in 1991 (though permission has been given for one on a greenfield site at Snodland in Kent). The result of this is that the quarrying of cement-making materials has been concentrated in the Peak District National Park, and cement manufacture in and around it. This is the opposite of the long term outcome envisaged in planning policy.
44. Limestone (or chalk) and shale (or clay) are available outside the Park, and there are also reasonable alternative arrangements which could be made for supplying the market. These are indicated by:
- the closure of other cement works, some with outstanding reserves;
 - the existence of an unimplemented planning permission for a new cement works at Snodland;
 - the availability of other resources for Hope's operating company, Lafarge, both at Snodland and just outside the National Park at Cauldon in Staffordshire (which has an unused access to the rail network and a significant level of permitted reserves – limestone reserves in excess of 100 million tonnes and shale sufficient to 2029);
 - the great distance from Hope to many of its markets for cement.
- In these circumstances there appears to be a sound case for Lafarge to develop alternative production and distribution capability outside the Peak District National Park at an appropriate time in the future.

¹⁶ DoE (1991) MPG10, Minerals Planning Guidance 10: Provision of Raw Materials for the Cement Industry, TSO

Role in the National Park

45. There is considerable Government policy on the provision of cement-making materials, set out in MPG10¹⁷, though this policy is broadly based rather than specific to National Parks.

Policy approach

46. Major limestone and shale quarrying and cement making at Hope – the only cement works in the National Park – is considered fundamentally incompatible with National Park purposes, it is also a major emitter of CO₂ and would almost certainly fail to be approved today against current policy. However, the Authority has no realistic scope to influence significantly the output of cement from Hope cement works over the next three decades, due to the existence of substantial permissions for the plant and for quarrying limestone and shale raw materials. This period of stability, however, does provide an opportunity to work with Lafarge Cement UK to effect a transition to a more environmentally sustainable pattern of supply more in line with national policy, based on mineral working and cement-making outside the National Park. The Authority considers that the best approach to cement making at Hope is to commit to assisting Lafarge to retain modern and efficient operations there until the consented reserves of limestone run out, perhaps around 2038, or when the planning permission expires in 2042, whichever is the sooner. Further reserves will not be allocated nor permissions granted where these would extend the life of operations beyond the permission date.
47. The decision on the future of Hope Cement works is based around a consideration of the national or regional need for cement, impact on the local, regional or (possibly) national economy, the economic analysis of the substantial infrastructure established at Hope against the need to pursue national park purposes and the planning policies referred to above. The Authority considers that it will be necessary to address the long-term future of the Hope Cement works beyond its current lifespan in relation to other alternatives outside of the National Park in subsequent reviews of the Core Strategy, as this will be the appropriate time to start to consider an issue that will then be pertinent to the rolled forward strategic planning time horizon. The Authority is keen to see the future of Hope dealt with through the plan led system, and by indicating now that subsequent reviews will address the issue all interested parties can start to develop their thought processes in anticipation of the issue being considered.
48. With around thirty years to effect the transition, there is ample time to achieve a transition to raw material supply and cement manufacturing outside the Park, while continuing to use the existing permissions at Hope. The Authority should discuss this transition with the operator, recognizing that 32 years until the expiry of permissions is a long time and that circumstance can change in the interim. This would be in accordance with the regional planning policy which envisages a progressive rundown in mineral supplies from the National Park (though in practice there would be a lengthy build-up to the switching from cement-making at Hope to other plants).
49. The Authority will also be consulted upon planning decisions affecting the supply of materials to, and operation of the cement works at, Cauldon in Staffordshire and especially Tunstead in Derbyshire. In particular, the decision on a proposal for a second kiln at Tunstead cement works will shape the future of the site for decades to come. It offers some potential for limestone supplies to be sourced from within Derbyshire rather than the Old Moor extension to Tunstead in the National Park, releasing the latter increasingly for high grade uses. However, it also raises the prospect of further concentration of cement making in or close to the Park, with the scale of industrial activity and mineral transport in the locality which that entails.

¹⁷ DoE (1991) MPG10, Minerals Planning Guidance 10: Provision of Raw Materials for the Cement Industry, TSO

Industrial limestone

Geology, availability and likely future supply pattern

50. The British Geological Survey notes¹⁸ that Carboniferous Limestone is the main source of industrial limestone in England, with a high proportion coming from Derbyshire (both inside and outside the National Park). The Bee Low Limestone is the most extensively quarried type and is consistently of very high purity and consistency throughout the region. However, the conflict with protected areas is significant: 42% of the carboniferous limestone resource is found within National Parks (and a further 17% in Areas of Outstanding Natural Beauty) throughout England.
51. For planning purposes limestone resources to be used for very high purity industrial or chemical purposes must have a minimum calcium carbonate content of 98%. This is the level of purity adopted by BGS in their Mineral Resource Map for the Peak District. However, a single definition of very high purity limestone should be used with caution as there are many different qualities of limestone, including physical properties and consistency, which must be considered in determining what is fit for particular purposes. What is very high purity to one user may be considered as ordinary grade by another user. In the excavation of high grade limestone, rock of other grades will often be produced. Further background information is provided in a research report commissioned by the Government¹⁹. No definition of industrial or very high purity limestone is proposed in this Core Strategy, in view of the gradations within the geological resource and the different meanings the term would have for different end-users. Prospective developers would need to identify the specifications of the limestone required by customers and the alternative means of meeting such specifications.

Suppliers and users

52. The two main quarries in the National Park supplying industrial limestone are Ballidon and the Old Moor extension to Tunstead, both operated by Tarmac. The specific importance of Ballidon for industrial limestone is acknowledged through a legal agreement which requires that at least 40% of the production is used for non-aggregate (i.e. industrial) purposes, reflecting the geology of the site. The Secretary of State permitted the working of 205mt of limestone at Old Moor within the National Park in 1980 in large measure due to the suitability of the limestone for industrial uses, but no restriction was imposed on end uses. The mineral from Old Moor is therefore used to produce a range of industrial, cement and aggregates end uses.
53. The main industrial uses to which very high purity limestone from Ballidon and Old Moor is put includes fillers (in animal feeds, polymers, paints, paper and pharmaceuticals), chemical manufacture, lime mortar, flux in iron and steel and other metal manufacture and agriculture and horticulture uses.

Recent history of supply

54. Ballidon and Old Moor have been producing high purity industrial limestone (and other products) for many years. With very large reserves and end dates still three decades away, little has changed in practice over the 15 years since the Structure Plan clarified that no further provision was required for limestone used for its chemical purity.

¹⁸ British Geological Survey (2006) Mineral Planning Factsheet: Industrial Limestone

¹⁹ Roger Tym & Partners (1991) Appraisal of high-purity limestone in England and Wales: A study of resources, needs, uses and demands, Department of the Environment

Sites with permission: active and dormant

55. There are no sites in the Peak District with planning permission other than Old Moor and Ballidon which would be expected to produce limestone for industrial high purity uses.

Reserves

56. Ballidon and Old Moor have substantial reserves and their permissions will last until 2041 and 2040 respectively.

Alternative sources

57. There are working quarries within Derbyshire, outside the National Park, which supply industrial limestone from the same geological resources, though each site has its specialist processing and marketing arrangements. Close to Ballidon are the quarries of Brassington Moor and Grangemill; while close to Tunstead are Dowlow, Hindlow, Brierlow, Hillhead and Ashwood Dale. Between them, these quarries outside the National Park have very substantial permitted reserves and long-life permissions.
58. The Secretary of State permitted the working of 205mt of limestone at Old Moor within the Park in 1980 in large measure due to the suitability of the limestone for industrial uses, but no restriction was imposed on end uses. The mineral from Old Moor is therefore used to produce a range of industrial, cement and aggregates end uses. The Authority has attempted to encourage the operator to concentrate the production of industrial limestone from Old Moor, and to source aggregates from the poorer quality limestone, for example the Woo Dale limestone type, in adjoining Tunstead.
59. Ballidon and Old Moor illustrate that proposals for quarrying limestone for industrial purposes may be capable of satisfying the strict tests which apply in nationally-designated landscapes. Any applicant would be required to show in particular:
- that alternative sources of high purity limestone could not be used instead, e.g. existing permitted reserves outside the National Park (considered to be well in excess of 250mt in Derbyshire alone);
 - evidence on whether or not permitted sources of high purity limestone had been squandered for aggregates uses; and
 - consideration of the scope for mineral users to adjust their needs so that these could be satisfied by lower grade limestone.
60. If these conditions were satisfied, and permission granted for an acceptable working scheme, the developer would be expected to agree to end-use controls over mineral extraction to conserve better quality materials for high-purity non-aggregate uses. This would probably be similar to the restrictions on use which apply at Ballidon.

Role in the National Park

61. Industrial limestone is not specifically mentioned in MPS1²⁰, and is noted only in passing in the accompanying Good Practice Guide²¹ as one of a number of industrial minerals required in England in substantial quantities.

Policy approach

62. The Authority's preferred approach to the release of additional limestone for industrial and chemical purposes is informed by the existence of significant permitted reserves of limestone for these purposes, both within the National Park and nearby in Derbyshire. There is therefore no case for identifying additional sites for limestone for industrial and chemical purposes, while prospective applications for planning permission are not expected to be able to demonstrate that other sources are not available.

²⁰ CLG (2006) MPS1, Minerals Policy Statement 1: Planning and Minerals, TSO

²¹ CLG (2006) Planning and Minerals: practice guide, paragraph 164, TSO

Building StoneGeology, availability and likely future supply pattern

63. The southern Peak District around Stanton Moor is an area of key importance for the supply of Carboniferous Millstone Grit. Here there is a concentration of active sites (Birchover, Dale View and New Pilhough quarries) and intermittently worked sites (Stanton Moor and Wattsciffe quarries), collectively with a significant output of sandstone in a variety of hues and textures. The large majority is sold for use outside the National Park rather than to serve the repair and maintenance of vernacular structures in the locality. Dale View may be the largest building stone quarry in England. There is a range of other sandstone quarries around the National Park producing building stone, with active sites at Chinley Moor (Hayfield), Shire Hill (Charlesworth), Stoke Hall (Grindleford), Wimberry Moss (Rainow) and Canyards Hill (Bradfield). All serve a variety of local and more remote markets. The range of sites reflects the varieties available within the gritstone. Total sandstone output for building stone was nearly 100,000 tonnes in 2007. Sandstone reserves are in theory 7.25 million tonnes, though these are unevenly distributed: for example, more than half the total is at Shire Hill.
64. Building and walling stone is also obtained from the Carboniferous Limestone at the small Once-a-week quarry (Ashford), though this has planning permission only until 2011 and at Hazlebadge (Bradwell) permitted to 2017. Natural stone is also obtained as a minor product from selected major limestone quarries, notably Ballidon which serves the industrial limestone and aggregates markets. Total limestone output for building stone was about 1,500 tonnes in 2007.
65. More detailed information on building stone generally is contained within the section dealing with Policy MIN3 on Local Small-Scale Building and Roofing Stone.

Policy approach

66. Our preferred approach to building and roofing stone is informed by competing environmental and economic considerations and we will only support local small-scale proposals. Additional large sites will be considered under this policy and as such will only be permitted where the exceptional circumstances set out in MPS1 are met. The policy approach in MIN3 is designed to only support sites designed to meet the specific needs of the National Park, for example where this would help repair traditional buildings of local distinctiveness, historic buildings or conservation areas.

Other MineralsGeology, availability and likely future supply pattern

67. The National Park also contains a number of other minerals including coal, silica sand, calcite, barytes and lead. However as there is no existing or known likely future interest in exploiting these minerals (except for calcite), no specific mention of these is made in the Core Strategy; if any proposals do come forward they will be dealt with under policy MIN1. No licences have been issued in the National Park for new mineral-related technologies such as coal bed methane extraction or underground coal gasification. If any future proposal is made for such emerging technologies, any surface development required will be assessed against the major development and landscape policies in the Core Strategy.
68. Mineralised veins running through the Carboniferous Limestone of the Peak District have been of economic importance for centuries. Lead has historically been the major mineral worked, but currently the primary interest is in fluorspar. In addition, calcite is worked at Moss Rake on Bradwell Moor. Lead and barytes are also likely to be obtained from fluorspar workings, in varying proportions, as secondary materials (typically 3-4,000 tonnes of lead and 20-25,000 tonnes of barytes annually, compared with 60-65,000 tonnes of 97% acid grade fluorspar). The Authority considers that policy is only required for fluorspar, which is the focus of Policy MIN2 set out in the next section.

69. Small-scale Calcite workings will continue to be addressed by Policy LM8 of the Peak District National Park Local Plan as this policy is not being replaced by the Core Strategy.
70. The National Park has not seen the production of recycled or secondary aggregates and as the area is not considered to have developments, opportunities and/or projects likely to produce material which can be utilised for recycled or secondary aggregates the Core Strategy does not set out a policy position on such an issue. National planning policy is considered to give a sufficient policy framework without addition.

Restoration

71. The restoration of mineral workings is a significant opportunity to achieve National Park objectives for achieving amenity (nature conservation) after-use for the sites, enhancing landscape and biodiversity and providing recreational opportunities, as well as those of landowners, mineral companies and local people. The National Park Management Plan observes that restored sites may provide opportunities for increased biodiversity, geodiversity and cultural interest.

Policy context

72. An overview of national policy on restoration is provided in MPS1²². Authorities must take account of the opportunities for enhancing the overall quality of the environment and the wider benefits that sites may offer, including nature and geological conservation and increased public accessibility, which may be achieved by sensitive design and appropriate and timely restoration. They must also consider the opportunities for developing new woodland areas and providing networks of habitats. More extensive policy on restoration and its practicalities is set out in MPG7²³, which defines the scope of after-uses of surface mineral workings as including agriculture, forestry and amenity (including nature conservation).

Applying restoration policy in the Peak District

73. The restoration of mineral workings is a significant opportunity to achieve National Park objectives for enhancing landscape and biodiversity and providing appropriate amenity/recreational opportunities, as well as those of landowners, mineral companies and local people. The restoration objectives would be expected to vary in different areas of the Park. The National Park Management Plan notes that restored sites may provide opportunities for increased biodiversity, geodiversity and cultural interest. It also stipulates that policies should be adopted for the restoration or re-use of mineral sites to maximise opportunities for biodiversity and access and recreation, as appropriate.

Policy approach

74. The Authority wishes to achieve the best balance of benefits from on the one hand a case-by-case approach which is sensitive to the best interests of each individual site and on the other hand strategic benefits from restoration by helping restoration across a network of sites to achieve wider benefits for the Park as a whole. With individual mineral companies and landowners having legitimate interests in the future use of their land, especially where this ties into existing adjacent patterns of land use, a case-by-case approach is to some degree as inevitable as it is necessary. However, where practicable, restoration will be expected to contribute to the strategic objectives of the National Park (either generally or for parts of the Park). These objectives will focus mainly, but not exclusively, on amenity (nature conservation) after-uses rather than agriculture or forestry, and should include a combination of wildlife enhancement, landscape enhancement and recreation. This approach will be applied to each new proposal or where existing sites are subject to mineral review procedures.

²² CLG (2006) MPS1, Minerals Policy Statement 1: Planning and Minerals, paragraph 19, TSO

²³ DoE (1996) MPG7, Minerals Planning Guidance 7: Reclamation of Mineral Workings, TSO

Policy MIN2 - Fluorspar

Geology, availability and likely future supply pattern

75. An overview on the mineral planning interest in fluorspar has been provided by the British Geological Survey²⁴.

76. UK supply of fluorspar ore is currently confined to the southern Pennine orefield, mainly within the Peak District National Park. In the Peak District, fluorspar mineralisation is largely confined to the eastern half of the limestone outcrop. The mineralisation occurs in major east-west veins (rakes) and stratabound replacement deposits (flats) together with some cave infill deposits (pipes). The richest mineralisation is concentrated in the uppermost limestone beneath the overlying cover of Millstone Grit, which acted as a cap-rock to the mineralising fluids. Fluorspar ore working has taken place in the National Park for many years, and the more readily accessible deposits have been worked out. Most existing opencast operations are coming to the end of their extraction periods. The major known deposits which remain to be worked, and which have planning permission, are in underground veins.

77. In addition, research led by Leicester University in 2000-2004, the 'Fiesta' project²⁵, experimented with different ways of identifying underground fluorspar deposits occurring as 'flats' (rather than the more normally accessed vertically-bedded veins) in the limestone. Although it produced no conclusive results, further prospecting for fluorspar may be worthwhile on areas of Bonsall Moor and Bradwell Moor. However, fluorspar deposited in the form of flats would in all probability be worked by opencast methods, and this could be expected to raise significant environmental concerns.

78. UK supply of fluorspar ore is currently confined to the southern Pennine orefield, mainly within the Peak District National Park. Mining in the northern Pennine orefield in Durham ceased in 1999: known accessible resources there appear to be largely worked out (though some dormant sites remain), and there has been no operator interest in resuming activity over the last decade. However the Authority has sought the safeguarding of the fluorspar resource in Durham to ensure its protection from sterilisation to allow for future possible extraction, this matter is now being considered by Durham Council.

79. Recent production and consumption rates of fluorspar have been as follows²⁶:

	2005	2006	2007
Total UK consumption	56,150 tonnes	53,845 tonnes	48,222 tonnes
Domestic sales	56,417 tonnes	49,676 tonnes	44,939 tonnes
Net imports	0 tonnes	4,169 tonnes	3,286 tonnes

The UK production rate in 2008 dropped further to 36,801 tonnes. The main fluorspar producing countries are China, Mexico, Mongolia and South Africa, world production in 2007 was 5.7 million tonnes with 57% coming from China. UK production in 2007 therefore accounted only for 0.8% of world production.

80. In the Peak District, fluorspar mineralisation is largely confined to the eastern half of the limestone outcrop. Fluorspar ore working has taken place in the National Park for many years, and the more readily accessible deposits have been worked out. The principal

²⁴ British Geological Survey (2010) Mineral Planning Factsheet: Fluorspar, See also the Factsheets on Barytes (2006) and Calcite (2004)

²⁵ The findings comprise a set of html (web-site) files on CD. These consist of narrative text (equivalent to 110 A4 pages in a Word document) and numerous diagrams and photographic illustrations

²⁶ BGS (2010) Mineral Planning Factsheet: Fluorspar

operations recently have been on Longstone Edge near Bakewell, with both opencast workings and underground mining, all controlled by the firm which operates the country's only processing plant at Cavendish Mill near Stoney Middleton. With the working out of opencast sites on the western end of Longstone Edge nearly complete and a proposed hold on the working of the eastern end of Longstone Edge, there is now a transitional phase. Glebe Mines has recently applied for planning permission to develop an opencast site at Tearsall Farm, which has just been issued. Glebe Mines is also at an advanced stage of reopening the major underground reserve contained in the vein structures below Hucklow Edge, Bretton Edge and Eyam Edge, accessed via Milldam Mine at Great Hucklow. Some opportunities exist within Derbyshire outside of the National Park and the Authority will be pressing that these be considered through the Derby and Derbyshire Joint Minerals LDF.

81. Fluorspar ore dug from the ground in England is processed to produce acid-grade fluorspar (over 97% CaF_2), and reserves in the ground are accounted for in terms of the amount of acid-grade fluorspar they can supply. The principal permitted reserves of fluorspar ore available are from Milldam Mine (probably well over 2 million tonnes). In addition there remain permitted reserves of at least half a million tonnes from Watersaw Mine, the underground mine on Longstone Edge where operations have recently ceased but nevertheless remain available for working until 2015, when the current planning permission expires. Tearsall is expected to supply about 121,000 tonnes of fluorspar ore per annum (over a six year extraction period)²⁷. There are inferred resources of fluorspar within the 1952 planning permission area on the eastern end of Longstone Edge which Glebe Mines propose to hold off working for a temporary period if the Tearsall proposal is approved. In addition, fluorspar is produced as a secondary product at a number of other quarries on the Carboniferous limestone and sent to Cavendish Mill for processing. Outside the National Park, fluorspar ore is available from Pateley Bridge aggregates quarry in North Yorkshire, and a very small amount of vein mineral (mainly barytes) is supplied from Slinter Top Quarry in Derbyshire. There are also extant permissions for fluorspar remaining in Durham. Finally, the reprocessing of tailings arising from the operation at Cavendish Mill may be able to provide about 300,000 tonnes of fluorspar ore (although the BGS Minerals Planning Factsheet reports that this may be upto 420,000 tonnes), though permission will be required to gain access to this material.
82. Ineos Fluor previously acquired the local firm Glebe Mines Ltd to ensure its supply chain. Almost all the output from Cavendish Mill was sent to the company's chemical plant at Runcorn, which requires an average of about 50,000 tonnes of acid-grade fluorspar each year (Average total UK consumption 2005 to 2007 was 52,739 tonnes). In the current transition period between sources, Ineos Fluor had been unable to supply from Cavendish Mill the full quantity of fluorspar it needs. As a result it has imported modest quantities of fluorspar in 2006, 2007 and 2008. Large quantities of fluorspar, such as the approximate 50,000 tonnes to replace production from Cavendish Mill, are most unlikely to be available on the open market in the short term²⁸: Most sources of fluorspar around the world have been acquired by producers to guarantee their sources, while China (one of the major exporting countries) has constrained its foreign sales due to rising domestic demand. A study for Ineos Fluor argues that if fluorspar supplies can no longer be obtained from the southern Pennine orefield, the likelihood is that the fluorochemical industry in England will be reduced in size or even cease altogether, due to the difficulty and cost of obtaining imports²⁹.
83. In February 2010 Ineos announced the sale of its fluorine chemical plant at Runcorn to the Mexican-owned chemical producer Mexichem; however Glebe Mines remains under Ineos

²⁷ Planning Application Figure

²⁸ British Geological Survey (2008) The need for indigenous fluorspar production in England

²⁹ Roskill Consulting Group Ltd (2007) INEOS Fluor: an evaluation of the strategic requirement for fluorspar mining in the UK

ownership. The impact that this will have upon the future activities of Glebe and the UK fluorspar industry remains unclear at this time, although Glebe Mines are in the process of acquiring an initial agreement with Mexichem to supply the Runcorn plant at least in the short term.

Suppliers and users

84. Almost all fluorspar operations in the Peak District are controlled by Glebe Mines Ltd, which operates the country's only processing plant at Cavendish Mill near Stoney Middleton. In addition, fluorspar is produced as a secondary product at a number of other limestone quarries on the Carboniferous limestone and sent to Cavendish Mill for processing, notably from the site serving Hope Cement Works. Outside the National Park, fluorspar ore is available from Pateley Bridge aggregates quarry in North Yorkshire, and a very small amount of vein mineral (mainly barytes) is supplied from Slinter Top Quarry in Derbyshire. There are currently no active fluorspar operations outside the Peak District.
85. Almost all the output from Cavendish Mill was sent to the chemical plant at Runcorn, this is used almost entirely in the manufacture of hydrofluoric acid, which is both an important chemical in its own right and also the basis for manufacturing a range of fluorine-bearing chemicals. From fluorspar Ineos manufactured products such as refrigerants for supermarkets and for car air conditioning, medical propellants used in asthma inhalers and intermediate products used to produce non-stick cookware (Teflon ®) and waterproof breathable fabrics (Gore-Tex ®). The Ineos Fluor plant at Runcorn has been sold to a Mexican company Mexichem who are believed to control their own fluorspar extraction operations in Mexico; Glebe Mines has not been sold and is still within the overall Ineos family of companies. However as a result of the plant sale, long-term demand for UK extracted fluorspar is now somewhat uncertain and is likely to be the subject of change during the plan period. In terms of planning to meet the objectives of MPS1 in relation to the indigenous supply the Core Strategy has been developed on the basis of the UK consumption of about 50,000 tonnes per annum.

Recent history of supply

86. The principal fluorspar operations recently have been on Longstone Edge near Bakewell, with both opencast workings and underground mining. Working of the opencast sites on the western end of Longstone Edge (Arthurton West (Extension), High Rake and Bow Rake) is nearly complete. Another major resource over the years, Dirlow Rake on Bradwell Moor, has also largely been worked out (by a series of operators and sites along its length). Glebe Mines has recently been granted planning permission to develop an opencast site at Tearsall Farm near Wensley, which includes a restriction on working the Longstone Edge East site for a temporary period. Glebe Mines was also at an advanced stage of re-opening the major underground reserve contained in the vein structures below Hucklow Edge, Bretton Edge and Eyam Edge, accessed via Milldam Mine at Great Hucklow: this will operate along with the underground mining at Watersaw on Longstone Edge, however the recent sale of Ineos Fluor to Mexichem has introduced uncertainty into these longer term plans. Due to difficulties of availability, the world price of fluorspar doubled in the five years to 2007, and may well continue rising after the recession. This has underpinned the scope for deep mining once again to be economic. Fluorspar has also been obtained by reworking the material in tailings lagoons close to Cavendish Mill, making better use of what was previously waste material.
87. Until recently, Glebe Mines purchased fluorspar and other vein minerals from small-scale 'tributers': operations which targeted modest veins in the limestone on a short term basis. However, these have now largely ceased, as Glebe has sought to phase out these supplies in favour of extracting mineral itself. Prolonged efforts to control damaging operations at other sites through negotiation, planning enforcement action and the Courts has also brought to a halt highly contentious workings at Backdale and Wagers Flat on Longstone Edge East and Smalldale Head on Bradwell Moor, where in each case the proportions and/or amounts of limestone and fluorspar sold was at issue.

88. In the current transition period between sources, Ineos Fluor had been unable to supply from Cavendish Mill the full quantity of fluorspar it needs. As a result it has imported modest quantities of fluorspar. What will happen now the plant is owned by Mexichem is not yet known in full detail.

Sites with permission: active and dormant

89. There are no other major sites with planning permission which could provide significant quantities of fluorspar. There are, however, a number of planning permissions relating to inactive underground sites at Hazelbadge and Netherwater Mines (between Great Hucklow and Bradwell, to the northwest of the Milldam deposit), though these are considered to have no economic potential. The only quarry in the Derbyshire County Council area actively contributing a very small amount of mineral is Slinter Top, noted above. No fluorspar has been provided from Balleye quarry, though drilling to test for the presence of fluorspar has been undertaken.

Reserves

90. Fluorspar ore dug from the ground in England is processed to produce acid-grade fluorspar (over 97% CaF_2), and reserves in the ground are accounted for in terms of the amount of acid-grade fluorspar they can supply. The principal permitted reserves of fluorspar ore available are from Milldam Mine (probably well over 2 million tonnes). In addition there remain permitted reserves of at least half a million tonnes from Watersaw Mine, the underground mine on Longstone Edge where operations have recently ceased but nevertheless remain available for working until 2015, when the current planning permission expires. Extension will also be needed to the current permission at Milldam Mine which expires in 2013. Tearsall is expected to supply about 121,000 tonnes of fluorspar ore per annum (over a six year extraction period).
91. There are inferred resources of fluorspar within the 1952 planning permission area on the eastern end of Longstone Edge, the extent of which will need to be proven and the method of working determined through the stalled Mineral Review process. Finally, the reprocessing of tailings arising from the operation at Cavendish Mill may be able to provide about 300,000 tonnes of fluorspar ore, though permission will be required to gain access to this material, and this is partially dependent upon how much of the tailings is utilised for restoration of other former sites. This gives an overall potential resource of about 2.9 million tonnes, although this could be more or indeed less, in total will give about 58 years of supply at the current UK average consumption rate of approximately 50,000 tonnes per annum. Although new permissions will be needed to secure access to most of these resources over the plan period.

Alternative sources

92. Mining in the northern Pennine orefield in Durham ceased in 1999: known accessible resources there appear to be largely worked out (though some planning permissions remain at dormant sites), and there has been no operator interest in resuming activity over the last decade. However the National Park Authority has sought Durham Council to consider safeguarding these resources in their LDF, which is still being considered by them.
93. Large quantities of fluorspar, such as 50,000 tonnes to replace production from Cavendish Mill, are most unlikely to be available on the open market in the short term³⁰: most sources of fluorspar around the world have been acquired by producers to guarantee their sources, while China (one of the major exporting countries) has constrained its foreign sales due to rising domestic demand³¹. A study for Ineos Fluor argued that if fluorspar supplies can no longer be obtained from the southern Pennine orefield, the likelihood is that the

³⁰ British Geological Survey (2008) The need for indigenous fluorspar production in England, Open Report OR/08/27

³¹ BGS (2010) Minerals Planning Factsheet: Fluorspar

fluorochemical industry in England will be reduced in size or even cease altogether, due to the difficulty and cost of obtaining imports³². This is the recent experience elsewhere in Europe; the main fluorspar-producing countries are China, Mexico, Mongolia and South Africa. China is the dominant producer accounting for about 57% of the total, but it continues to restrict exports³³. It is unknown at this stage what implications that the sale of Ineos Fluor to Mexichem will have on the worldwide availability of ore and whether there continues to be a long-term demand for indigenously produced ore to be utilised within the UK fluorochemical industry.

94. These findings and recent changes have significant implications for fluorspar planning in the Peak District. To sustain the current fluorochemical industry, centred on Runcorn (now run by Mexichem), Cavendish Mill would need to supply at least 50,000 tonnes of acid grade fluorspar annually. A significantly lower supply, sustained over a length of time, may threaten part or possibly all the fluorochemical industry, unless supply from other countries can be sourced.
95. As fluorspar is increasingly worked out, and consequently lower grade mineral in the ground is targeted, there is a challenge to find this quantity of mineral and particularly to obtain it in an environmentally acceptable way. The National Park Authority doubts that the quantity of fluorspar required by the fluorochemical industry can be obtained from opencast workings in the Peak District, and certainly not in an environmentally acceptable way on an ongoing basis. The only sources capable of this are underground mines, topped up by limited quantities supplied from other incidental sources. Fortunately, the rising world price of fluorspar (which doubled in the five years prior to the recession) provides a financial buffer to obtaining the mineral from more costly underground sources.
96. There are additional problems in the absence of realistic substitutes for fluorspar or fluorine, and the difficulty of recycling or reuse due to fluorspar being largely consumed in the manufacture of products. Alternative products may be practicable in the medium term, just as the banning of ozone-depleting CFCs (chlorofluorocarbons) led to the development of alternative propellants which avoided the use of chlorine and reduced the use of fluorine. However, over the period of this Core Strategy, there is little merit in relying on strategic changes to demand as a means of resolving the indigenous supply problem, although it must be recognised that this issue has an international market dimension, particularly given the sale of the Ineos Fluor plant at Runcorn to Mexichem.

Role in the National Park

97. There is no national policy specifically on fluorspar working. The general objectives of MPS1 apply, requiring exceptional circumstances to justify major mineral working in the Peak District. This also includes one objective on supply which has particular relevance to fluorspar: "aim to source mineral supplies indigenously, to avoid exporting potential environmental damage, whilst recognising the primary role that market conditions play"³⁴. Parallel issues raised in association with reducing the demand for fluorspar imports include the extent to which the UK should 'live within its means' and 'reduce carbon footprint'. The absence of any national planning policy on fluorspar places the onus on the Development Plan to resolve the issues raised by the demand for fluorspar working.
98. The Authority acknowledges that major proposals for underground fluorspar ore mining may be able to demonstrate some of the exceptional circumstances in terms of policy in MPS1, in view of the limited availability of alternative sites in England, and the importance of fluorspar to the English economy. There is, in principle, scope for carrying out underground operations in a way which constrains damage to the environment of the National Park to an acceptable level. The importance of the fluorochemical industry may

³² Roskill Consulting Group Ltd, October 2007, INEOS Fluor: an evaluation of the strategic requirement for fluorspar mining in the UK

³³ BGS (2010) Minerals Planning Factsheet: Fluorspar

³⁴ CLG (2006) MPS1, Minerals Policy Statement 1: Planning and Minerals, paragraph 15, TSO

well be considered sufficiently exceptional to continue to supply fluorspar ore, as a departure from the regional policy to run down the supply of minerals from the National Park, provided that individual schemes can be developed in an environmentally acceptable way, which the Authority will interpret to mean by underground mining.

Policy approach

99. Most of the higher grade fluorspar ore in the Peak District, which is capable of being worked by opencast methods in an environmentally acceptable manner, now appears to have been largely worked out. The Authority does not consider that it would be acceptable for the industry to attempt to move into increasingly sensitive areas or to work progressively lower qualities of deposit (in increasing quantities) to obtain its target quantity of acid-grade fluorspar by opencast methods. Therefore, if the fluorspar ore industry in England is to survive, and the fluorine industries which rely on it, there must be a transition to predominantly working fluorspar from underground mines. The Watersaw Mine on Longstone Edge, and especially the Milldam Mine at Great Hucklow, give access to considerable resources of high grade fluorspar ore, both of which the National Park Authority considers can be operated in an environmentally acceptable way. This Core Strategy therefore aims to oversee the transition from an industry which in the past decade has operated principally by opencast working to one which relies heavily on underground mining. Glebe Mines the current operator has indicated that it is looking towards long term and substantial investment in underground mining operations at Milldam Mine and the upgrading of facilities at Cavendish Mill, but requires supportive planning policy to deliver this: the proposed policy aims to provide such support.

100. Opencast mining of fluorspar ore will in future be resisted. Such proposals would in all probability be considered 'major', probably by their size and almost certainly by the sensitivity of their likely locations. They would also be unlikely to be able to demonstrate compliance with all the exceptional circumstances set out in MPS1³⁵, due firstly to the availability of the option of underground mining which could be expected to have less environmental impact, and secondly to the considerable foreseeable difficulty of working likely sites in an environmentally acceptable manner. However, the reworking of existing tailings lagoons remains an option, which the Authority will support where the environmental and ecological impacts can be appropriately mitigated. Lagoon nos. 1 and 2 are the principal source remaining, though this would require planning permission to be reworked. The Authority will also support the retention and continued operation of tailing lagoons associated with the Cavendish Mill Plant, where the impact on the environment and ecology can be appropriately mitigated and where it can be demonstrated that no realistic and viable alternative method of treatment is available.

101. No evidence has been provided by other parties to justify any areas of search being identified for future mineral extraction, nor has any evidence been articulated to show that there are any areas of potential future opencast working that may be environmentally acceptable and that meet the exceptional circumstances criteria set out in MPS1.

³⁵ CLG (2006) MPS1, Minerals Policy Statement 1: Planning and Minerals, TSO

Policy MIN3 – Local Small-Scale Building and Roofing Stone

Geology, availability and likely future supply pattern

102. The southern Peak District around Stanton Moor is an area of key importance for the supply of Carboniferous Millstone Grit. Here there is a concentration of active sites (Birchover, Dale View and New Pilhough quarries) and intermittently worked sites (Stanton Moor and Wattscliffe quarries), collectively with a significant output of sandstone in a variety of hues and textures. The large majority is sold for use outside the National Park rather than to serve the repair and maintenance of vernacular structures in the locality. Dale View may be the largest building stone quarry in England. There is a range of other sandstone quarries around the National Park producing building stone, with active sites at Chinley Moor (Hayfield), Shire Hill (Charlesworth), Stoke Hall (Grindleford), Wimberry Moss (Rainow) and Canyards Hill (Bradfield) which produces building stone from the ganister deposit. All serve a variety of local and more remote markets. The range of sites reflects the varieties available within the sandstone/gritstone deposits.
103. Building and walling stone is also obtained from the Carboniferous Limestone at the small Once-a-week quarry (Ashford), though this has planning permission only until 2011, and at Hazelbadge (Bradwell) permitted to 2017. Natural stone is also obtained as a minor product from selected major limestone quarries, notably Ballidon which serves the industrial limestone and aggregates markets. Total limestone output for building stone was about 1,500 tonnes in 2007. Many of these sites produce large quantities of building stone and proposals for extensions to these sites would be more likely to fall within the scope of Policy MIN1 rather than this policy which is focussed purely upon the supply of small-scale building and roofing stones to meet local needs within the National Park as part of the conservation and heritage considerations set out in Annex 3 of MPS1.
104. There is a shortage of sandstone roofing slates. Seven broad types of slate have been identified, but none are reliably available from existing sites within the National Park. There is also a risk that a shortage of limestone for use as dimension and walling stone will arise.
105. A significant aspect of the landscape quality of the National Park is the use of traditional stone materials in the built environment. The use of local materials and building methods gave each place its special vernacular characteristics, and this distinctiveness can be sustained as long as repair, maintenance, extensions and new buildings continue to use sympathetic stone building materials. Due to the variety of stone types originally used, and the large number of local quarries used to supply them, matching currently available materials to those used in older buildings can be a challenge. In 1996 the Authority was a commissioning body of a major research project into the potential to re-establish the roofing slate industry in the region, the results of which remain the most comprehensive analysis of known sources of these sandstones³⁶. A further national project into sources of building and roofing stone is being spearheaded by English Heritage, with Derbyshire as a key initial area for study; the results are expected shortly. Wider background information relevant to mineral planning on building and roofing stones is available from a range of publications³⁷.

Suppliers and users

106. The natural stone known to be in greatest shortage is sandstone roofing slates, known collectively in the southern Pennines as grey slates. There is a wide variety of types of stone slate and therefore potentially a demand for opening a selection of sites. The only site permitted for stone slate production in the National Park is at Bretton, near Foolow. An

³⁶ Peak Park Joint Planning Board, English Heritage and Derbyshire County Council (1996) The grey slates of the South Pennines

³⁷ See for example: Symonds Group Ltd (2004) Planning for the Supply of Natural Building and Roofing Stone in England and Wales, ODPM; and British Geological Survey (2007) Mineral Planning Factsheet: Building and roofing stone

Map 4 – Mineral Sites Within the National Park (As at 2003)



Appendix 4 – List of Mineral Sites within the Peak District National Park⁵⁵ (as at April 2010)

<u>Site Name</u>	<u>Date of Latest Permission</u>	<u>Mineral Type</u>	<u>Aggregate Producing Site</u>	<u>Site Status</u>	<u>Aftercare Due Date (if known)</u>
Arbor Low		Vein Minerals		Active (In Restoration)	
Arthurton West Extension	2006	Vein Minerals		Active (In Restoration)	2013
Blakemere Pit	2001	Vein Minerals		Active (In Enforcement)	
Castlegate Lane	2003	Vein Minerals		Active (In Restoration)	2009
Haddon Plantation	1997	Vein Minerals		Active (In aftercare)	2008
Long Rake	1998	Vein Minerals		Active (Not presently working)	2047
Middle Hay	2000	Vein Minerals		Active (In Aftercare)	2011
Milldam Mine	1999	Vein Minerals		Active (Not presently working)	2014
Moss Rake West	1987	Vein Minerals		Active (No working not restored)	2001
Smalldale Head	1951	Vein Minerals		Active (In Production)	2047
Tearsall	2000	Vein Minerals		Active (Awaiting restoration)	2009 (NB Awaiting New Consent)
Watersaw Mine	(see Longstone Edge)	Vein Minerals		Active (Not presently working)	2015
White Rake	2000	Vein Minerals		Active (Awaiting Restoration)	2006
Dirtlow Rake	1997	Vein Minerals & Limestone	Yes	Active (Aftercare)	2011
Longstone Edge East	1952	Vein Minerals & Limestone	Yes	Active (Not presently working)	2047
Longstone Edge West	2006	Vein Minerals & Limestone	Yes	Active (In Production)	
Moss Rake East	1996	Vein Minerals & Limestone	Yes	Active (restoration / enforcement)	2011
Ballidon	2004	Limestone	Yes	Active (In Production)	2046
Beelow (Doveholes)	2002	Limestone	Yes	Active (Not presently working)	
Darlton	1992	Limestone	Yes	Active (Not presently working)	2017
Goddards	1995	Limestone	Yes	Active (In Restoration)	2018
Hazelbadge	2008	Limestone		Active (In Production)	2022
Hope Cement	2006	Limestone		Active (In Production)	
Ivonbrook	1996	Limestone	Yes	Active (In Production)	2017
Old Moor (Tunstead)	1980	Limestone	Yes	Active (In Production)	2045
Once a Week	2005	Limestone		Active (In Production)	2017
Parish	1992	Limestone	Yes	Active (In Aftercare)	2010
Shining Bank	2007	Limestone	Yes	Active (In Production)	2022
Topley Pike	1994	Limestone	Yes	Active (In Production)	2047

⁵⁵ Source of data is from the Peak District National Park internal working database of mineral sites

Site Name	Date of Latest Permission	Mineral Type	Aggregate Producing Site	Site Status	Aftercare Due Date (if known)
Barton Hill	1952	Gritstone	Yes	Active (In Suspension)	2047
Birchover	1952	Gritstone	Yes	Active (In Production)	2047
Bretton Moor	2007	Gritstone		Active (In Production)	2025
Chinley Moor	2009	Gritstone		Active (In Production)	
Dale View	2008	Gritstone		Active (In Production)	2033
Dungeon	1952	Gritstone	Yes	Active (Revocation Pending)	2047
Fulwood Booth	2000	Gritstone		Active (In Aftercare)	2008
New Pilhough	2002	Gritstone		Active (In Production)	2028
Shire Hill	1952	Gritstone	Yes	Active (In Production)	2047
Stanton Moor	1952	Gritstone	Yes	Active (Not presently working)	2047
Stoke Hall	1999	Gritstone	Yes	Active (In Production)	2047
Wattscliffe	2000	Gritstone	Yes	Active (In Production)	2049
Wimberry Moss	2001	Gritstone		Active (In Production)	2047
Wraggs	1996	Gritstone	Yes	Active (In Aftercare)	2010
Canyards Hill (Loadfields)	1957	Ganister		Active (In Suspension)	2047
Hope Cement	2006	Shale		Active (In Production)	

Site Name	Date of Latest Permission	Mineral Type	Aggregate Producing Site	Site Status	Aftercare Due Date
Bakestonedale	1954	Fireclay		Dormant	
Blindside / Loftshaw	1952	Fireclay		Dormant	2009
Hartshead	1996	Limestone	Yes	Dormant	2007
Hillhead	1952	Limestone	Yes	Dormant	
Parsley Hay	1950	Silica Sand & Ganister		Dormant	
Hazelbadge Mine	1951	Vein Minerals		Dormant	
Nether Water Mine	1950	Vein Minerals		Dormant	

Red – Sites shown red are due for completion of restoration and aftercare during the plan period (i.e. upto 2026)

Blue – Sites which are dormant

