



**CUMBRIA AND THE LAKE DISTRICT NATIONAL PARK  
JOINT ANNUAL LOCAL AGGREGATES ASSESSMENT 2013**

**SUPPORTING INFORMATION**

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## 1. Introduction

1.1 Aggregates are basic raw materials for the construction industry. Before the recession, annual sales of them were equivalent to nearly 4 tonnes per head of the population. Without them, houses, schools, hospitals, factories, offices and roads could not be built or maintained. They can be split into two main groups:-

- Primary aggregates. These are crushed rock and sand and gravel, which are extracted directly from the ground at quarries (land-won aggregates) or dredged from the sea (marine dredged aggregates).

Depending on their geological source, each of these can have different properties or characteristics that can be important for their end-use. Important examples from Cumbria, are two types of crushed rock that are used for surfacing main roads because of their high or very high skid resistance properties.

- Alternative aggregates. These are alternatives to primary aggregates and are regarded as more sustainable. They can be split into two sub-groups:-
  - Secondary aggregates are a by-product of other mining or quarrying operations or of other industrial processes. Important examples in Cumbria, are slate waste and old blast furnace slag banks. Nationally, they can also include colliery spoil, china clay waste, incinerator ash and pulverised fuel ash from power stations.
  - Recycled aggregates are produced by recycling construction, demolition, excavation and other wastes. They can include crushed concrete, bricks and glass, old railway track ballast and the surface layers removed from roads during roadworks (road planings).

*(The terms “secondary” and “recycled” aggregates are sometimes used interchangeably)*

1.2 It can be easy to underestimate the importance of aggregates to the economy and to our quality of life, because they tend to be high volume relatively low cost materials. They are at the start of the supply chain for the construction industry and their true value lies in their eventual end-use.

1.3 The British Geological Survey used figures for 2003 to illustrate this point. At the start of the supply chain, sales of aggregates in 2003 were around £1.7 billion; at another step up the supply chain, sales of selected value-added products (ready mixed concrete, concrete products, building mortars and coated roadstone) were around £3.8 billion; whilst at the top of the supply chain, the Gross Value Added of the construction industry was £61.5 billion.

1.4 Until the late 1970's, sand and gravel were the predominant source of aggregates. Their proportion of total aggregates has declined since then, with crushed rock now the main source, and the market share of alternative aggregates has increased substantially.

- 1.5 It is relevant to consider what uses are made of the aggregates and the extent to which they are substitutable for each other. Information about these matters, as presented by major aggregate producers, is set out in the Competition Commission's November 2012 working paper, as part of its investigation into the Aggregates, Cement and Ready-Mix Concrete Market<sup>1</sup>. A summary of the information is set out in Appendix 4.

## **2. The Managed Aggregates Supply System**

- 2.1 Since the 1970's, there has been a national Managed Aggregates Supply System (MASS), which can demonstrate a successful track record in maintaining sustainable supplies of these essential construction materials. The MASS has been based on regular econometric model-based national estimates of need for aggregates projected forward for 15 years, which were then apportioned to regions. In each region, there was a Regional Aggregates Working Party (RAWP), which apportioned the regional figure of need for aggregates to the producing sub-regions.
- 2.2 Cumbria was a member of the North West Regional Aggregates Working Party. This made apportionments to four sub-regions. These were a) Cumbria (including the Lake District National Park), b) Lancashire (including Blackpool and Blackburn with Darwen), c) Cheshire (since 2009 this has been the two unitary authorities of Cheshire East and Cheshire West and Chester) and d) Greater Manchester, Merseyside and Warrington. Map 1 shows these sub-regions and, where relevant, the constituent unitary local authorities.
- 2.3 The North West, as a whole, meets only around half of its aggregates consumption from within the region. Cumbria helps to meet the needs of other parts of the region, but much of the shortfall is met from other regions, for example, quarries in Derbyshire and north Wales supplying Greater Manchester.
- 2.4 The Regional Aggregates Working Parties, and their funding by Department of Communities and Local Government (DCLG), ceased with the demise of the Regional Planning Bodies and with the imminent revocation of Regional Spatial Strategies. A north west Aggregates Working Party continued on an informal basis until the replacement Aggregates Working Party was established.
- 2.5 A summary of the sub-regional apportionments to Cumbria that the North West Regional Aggregates Working Party had made, under the system that was replaced by Local Aggregates Assessments, is in Appendix 3.

## **3. The National Planning Policy Framework**

- 3.1 The National Planning Policy Framework (NPPF) sets out new national planning policies in the context of the presumption in favour of sustainable development. It was published in March 2012 and replaced all except one of

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<sup>1</sup> <http://www.competition-commission.org.uk/our-work/aggregates-cement-ready-mix-concrete/analysis/working-papers>

the national Planning Policy Statements (PPSs) and all Minerals Policy Statements (MPSs).

- 3.2 The NPPF has replaced the Managed Aggregates Supply System's previous top-down approach of national apportionments to regions and regional apportionments to sub-regions, with a bottom-up based approach. It requires that mineral planning authorities should plan for a steady and adequate supply of aggregates by preparing annual Local Aggregates Assessments. DCLG has published guidance about these<sup>2</sup>.
- 3.3 The Assessments can be prepared by individual mineral planning authorities or jointly with one or more other authorities. The guidance is that an authority should align itself with neighbouring and other authorities whom it considers appropriate and not feel compelled to work within imposed geographical boundaries or former government office region boundaries.
- 3.4 The Cumbria Local Aggregates Assessment has been prepared as a joint one with the Lake District National Park. Published information about sales and reserves for the quarries in the National Park cannot be separated from those for the county as a whole. It has also been necessary to take account of the high specification roadstone quarries in the Yorkshire Dales National Park.
- 3.5 The Government will continue to publish National and Sub-National Guidelines. This is because it still sees a role for forecasting the provision of aggregates in England, in order to deliver overarching policy objectives.
- 3.6 The NPPF also requires that mineral planning authorities should participate in the operation of an Aggregates Working Party. They should take its advice, and that of the National Aggregate Co-ordinating Group, as appropriate, into account when preparing a Local Aggregates Assessment.
- 3.7 Cumbria's joint draft LAA documents – the 2-page 'headline' document and the more detailed supporting information – were circulated for comment to members of the relevant AWP in March 2013. Members include minerals operators, their trade bodies and Local Authorities in the north west. The documents were also circulated to neighbouring Authorities and the AWP Secretariat. Following receipt of comments from these organisations, the two documents have been updated and revised, as necessary.

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<sup>2</sup> Guidance on the Managed Aggregate Supply System, DCLG, October 2012

## 4. Landbanks

- 4.1 The NPPF requires landbanks of planning permissions to be maintained of at least seven years for sand and gravel and ten years for crushed rock. Landbanks should be based on a rolling average of 10-year's annual sales data, but taking account of other relevant local information. That local information includes using 3-year rolling average sales figures to identify trends in demand.
- 4.2 The sales information is provided by the annual aggregates surveys. The Local Aggregates Assessments should assess all supply options including marine dredged, secondary and recycled sources, as well as primary land-won aggregates.
- 4.3 Paragraph 144 of the NPPF requires that "local planning authorities should, as far as practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks, the Broads, Areas of Outstanding Natural Beauty and World Heritage Sites, Scheduled Monuments and Conservation Areas."

### Primary land-won aggregates

- 4.4 In Cumbria, including the Lake District National Park, permitted reserves of **crushed rock** at the end of 2012, were 123 million tonnes (Mt), 10-year average annual sales had been 2.95 Mt, representing a **landbank of 35 years**, which would be until 2047.
- 4.5 For land-won **sand and gravel**, permitted reserves at the end of 2012 were 10.59 Mt, 10-year annual average sales had been 0.69 Mt, representing a **landbank of 15.3 years**, which would be until 2027.
- 4.6 For crushed rock, it is, however, considered to be necessary to separate the high and very high specification roadstones from aggregates for general use. These aggregates are used in road, especially motorway, building and maintenance and have a national and regional market. It is not anticipated that the demand will fall in the near future. Due to the way sales were reported at the time, it is not possible to derive annual average sales for these special aggregates over a ten year period, but eight year figures can be used. This is not considered to alter the overall conclusions that can be drawn.
- 4.7 The reserves of the **high and very high specification roadstones** at the end of 2012 were 13.77 million tonnes, 8-year average sales had been 0.68 million tonnes/year representing a **landbank of 20.2 years**, which would be until 2032.
- 4.8 Reserves of aggregates for more general use, on the basis of 10-year sales figures, represented a **landbank of 40.8 years** for **limestone**, which would be until 2052, and of **21.9 years** for **sandstone and igneous** rock, which would be until 2034.
- 4.9 The landbanks are, therefore, comfortably in excess of the minima that are

required by national policy. The annual mineral survey figures, on which the above figures are based, are shown in Tables 1 and 2 of Appendix 1.

- 4.10 In connection with those figures and the other relevant local information, it is of particular relevance to the Local Aggregates Assessment that the most recent Cumbria sales figures for sand and gravel are around 33% lower than the 10-year average and around 15% lower for crushed rock.
- 4.11 An issue, which has implications for the landbanks, is the expiry dates of the planning permissions for the quarries. These are set out in the Tables in Appendix 2. They may cause issues in connection with maintaining supplies to markets beyond Cumbria as early as the mid to late 2020's.
- 4.12 Another requirement of the National Planning Policy Framework, is that mineral planning authorities should ensure that competition is not stifled by large landbanks of permitted reserves bound up in very few sites. By inference, this means landbanks held by few mineral companies.
- 4.13 This has been made increasingly difficult by the succession of mergers and acquisitions within the minerals industry over the years. These have significantly reduced the number of mineral companies operating nationally. However, in Cumbria, the control of reserves is not limited to a very few sites or operators.

#### **Marine dredged aggregates**

- 4.14 The amounts of marine dredged aggregates that are landed in the north west have been falling over several years and have always been less than the authorised extraction rates. In 2011, the total marine aggregates extraction rate from all licensed areas off the coast of the north west was 314,098 tonnes. This is less than one quarter of the authorised extraction rate of 1.33 million tonnes/year (see Table 3, Appendix 1 for full figures).
- 4.15 There is a large licensed area for marine dredged aggregates in Morecambe Bay, approximately twenty miles off the coast. Since 2004, around 10 to 25,000 tonnes/year of sand from this area have been landed at Barrow docks. Small amounts are also provided by harbour channel maintenance activities at other ports and harbours, such as Workington.
- 4.16 In 2011, 12,333 tonnes of marine dredged sand was landed at the Port of Barrow. This figure continues the general decline in landings at Barrow; in 2010, the figure was 15,592 tonnes, and in 2009, the figure was 23,111 tonnes. The figures for 2012 are due out in September 2013 and this supporting information will be updated at that time.
- 4.17 There would appear, therefore, to be considerable potential to increase the substitution of marine dredged sand for that which is land-won. In recognition of this, Cumbria Minerals and Waste Development Framework Core Strategy Policy 15, states that planning permission will be granted for developments at appropriate locations that would enable increased use of marine dredged aggregates (subject to being environmentally acceptable). A similar policy is

included in the draft Cumbria Minerals and Waste Local Plan.

### **Alternative aggregates**

- 4.18 There are ten main processing plants producing alternative aggregates from quarry waste, recycled or reused materials (see list in Appendix 2). Some of these are on industrial estates, others at aggregate or building stone quarries or landfill sites. Building stone quarries are listed in Appendix 2. It is understood that few of the slate quarries, that are predominantly sited in the National Park, provide significant quantities of waste material that can be used for aggregates.
- 4.19 It has proved difficult to obtain information, in which there can be confidence, about the amounts of alternative aggregates that are produced. Figures obtained for recent years have been around 200,000 to 300,000 tonnes/year, but these are considered to be underestimates. No realistic figures can be provided about reserves of alternative aggregates because of what they are.
- 4.20 The Mineral Products Association (MPA) has estimated that the proportion of aggregates supply accounted for by recycled and secondary aggregates has increased, and that this trend could be expected to continue. Figures quoted to the Competition Commission were an increase from 10% in 2000 to 28% in 2011. In connection with this trend, reference was made to various government initiatives relating to sustainable housing and to the National Planning Policy Framework, which provide strong support for the development of secondary and recycled aggregates operations.
- 4.21 The Cumbria Minerals and Waste Development Framework Core Strategy, requires sites to be identified to ensure that at least a quarter of aggregate needs can be met by alternative aggregates. That policy is continued in the draft Cumbria Minerals and Waste Local Plan, which proposes that aggregate quarries, non-inert landfills and suitable industrial estates are appropriate locations for such facilities. A list of all operators will be included in the Local Plan.

## **5. The relevant local information**

- 5.1 Table 2 in Appendix 1 and paragraphs 4.4 to 4.8 above, show that the landbanks for Cumbria comfortably exceed the minimum required by the NPPF. It is relevant that the calculation of the current landbanks is based on the 10-year annual average sales figures.
- 5.2 Those 10-year figures do not reflect the impact that the recession has had on sales of aggregates. It seems most unlikely that the landbanks will only last for those estimated numbers of years, but will last longer. The DCLG guidance for local information includes the use of 3-year rolling average sales figures to identify trends in demand. That approach had already been adopted in the Cumbria Minerals and Waste Development Framework Core Strategy Policy 13.
- 5.3 The 3-year rolling annual averages of sales 2010 to 2012 are 3.07 Mt/year

crushed rock and 480,000 tonnes/year of land won sand and gravel. These are around 13% and 30% respectively lower than the 10-year average. The figures do not yet indicate any significant upturn in need for aggregates. Unless and until this happens, the reserves figures represent landbanks of around 40 years for crushed rock and 22 years for sand and gravel, which would be until 2052 and 2034 respectively, both beyond the Local Plan periods of 2025 (LDNPA) and 2028 (Cumbria County Council).

- 5.4 The relevant local information that has to be considered in the Local Aggregates Assessment includes broader spatial planning issues that could affect the need for mineral extraction. The Cumbria Economic Ambition<sup>3</sup> and the Britain's Energy Coast initiatives in west Cumbria should be considered. Specific examples are: possible nuclear new-build; regeneration schemes that are proposed for Barrow-in-Furness, Whitehaven and Workington; nuclear decommissioning at the Sellafield complex; improvements to transport links; housing renewal; recovery of house building rates; higher environmental performance standards for buildings; and proposals for improved flood defence works.
- 5.5 The Cumbria Local Enterprise Partnership (LEP) is currently drawing up multi-year Strategic Economic Plans, which will identify economic growth investment priorities for Cumbria that Local Growth Fund Resources and other funding will support. Continuing dialogue with the County Council's Economic Development Team, the Lake District National Park Authority and with those organisations who facilitate such projects, such as the LEP or Britain's Energy Coast, will help to identify expected development peaks.
- 5.6 There are uncertainties about the locations of the markets that are served by the Cumbria quarries. Whilst Regional Aggregates Working Party reports indicated that 59% of sales of sand and gravel from Cumbria's quarries were within the North West Region and over 14% were to adjoining Regions and Scotland, just over a quarter of sales were to unknown destinations. By contrast, the reports indicate that 86% of crushed rock sales were within the North West. The three quarries in Cumbria that supply high and very high specification roadstones, have a national market, but specific projects for which these minerals are used, cannot always be easily identified. Further co-operation with both operators and adjoining regions, will help to identify imports and exports in more detail.
- 5.7 The relevant local information may also need to include the implications of policies for areas outside the Local Plan. For example, the NPPF (paragraph 144) says that the maintenance of landbanks for non-energy minerals should be from outside National Parks. The greatest impact on Cumbria, would be the loss of provision of high specification roadstones from the Yorkshire Dales National Park, for which Cumbria may be expected to take up the shortfall to the national market. YDNPA officers do not see this as a problem in the near future; several of their relevant quarries are intending to develop rail links and the operators would not invest in such expensive infrastructure without the aim of operating in the long term. Continuing dialogue with YDNPA will keep this particular situation under review.

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<sup>3</sup> MWLP Evidence Base document reference LD208

- 5.8 Policies for European Wildlife Sites may also lead to closures or constraints on quarries within or adjacent to them. An example of the latter is Force Garth dolerite quarry in Durham, which provides an exceptionally hard and durable roadstone aggregate.
- 5.9 It is difficult to see how the loss of, or reduced production from, such quarries could be completely made up from less environmentally sensitive locations. Reports by the British Geological Survey have highlighted the issues that these matters raise on a national basis<sup>4</sup>.

## **6. The Cumbria Minerals and Waste Development Framework 2008 to 2020 and draft Minerals and Waste Local Plan 2013 to 2028 and the Lake District National Park Local Plan 2010 to 2025**

- 6.1 These development plan documents provide other local information that needs to be considered in the Local Aggregates Assessment, and that Assessment also needs to inform their preparation.
- 6.2 The Minerals and Waste Development Framework (MWDF) Core Strategy and Generic Development Control Policies were adopted in April 2009. The draft Minerals and Waste Local Plan was published for consultation in February 2013, with a consultation period until 8 April 2013.
- 6.3 The National Park Local Plan Core Strategy was adopted in October 2010. Its Allocations of Land (Local Plan Part 2) and Minerals Safeguarding Areas (Local Plan Part 3) were submitted to the Secretary of state in March 2013.

### **Operational quarries**

- 6.4 There are fourteen operating crushed rock quarries within Cumbria; two of these are partly within the Lake District National Park. Limestone, igneous and sandstone rocks are quarried. In addition to producing aggregates, four of the limestone quarries supply industrial markets, mostly for burnt lime.
- 6.5 There are eleven operating sand and gravel quarries; none of these are within the Lake District National Park, but an Area of Search, adjacent to the National Park boundary, for Peel Place Quarry is proposed in the draft Cumbria Minerals and Waste Local Plan 2013-2028.
- 6.6 The quarries are listed in Appendix 2, which also includes maps showing their location.

### **Demand and supply**

- 6.7 The location and size of Cumbria, its dispersed settlement pattern and its pattern of road and rail networks, have implications for how it meets its needs

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<sup>4</sup> Aggregate resource alternatives: options for future aggregate minerals supply in England, Open Report OR/08/025; The need for indigenous aggregates production in England, Open Report OR/08/026; Managing aggregates supply in England: a review of the current system and future options, Open Report OR/08/042. British Geological Survey and Mineral Industry Research Organisation, 2008

for minerals. Not only does the county as a whole tend to be self-sufficient, but there are also recognisable areas within the county, which have traditionally met their own needs from local sources.

- 6.8 As the maps show, the locations of Cumbria's quarries are not dispersed uniformly around the county, because of geology. There are very few hard rock quarries in the north of the county and only one sand and gravel quarry in the south.
- 6.9 Traditional supply patterns within the county have been that:-
- the Carlisle area is supplied with sand and gravel from the "Brampton Kames" glacial deposits (Kirkhouse, Low Gelt and Faugh quarries) and from Cardewmires Quarry river sands.
  - Allerdale and north Copeland have been supplied with sand and gravel from the Abbeytown ridge (Aldoth, High House, Overby and New Cowper quarries); and with crushed rock from Moota, Tendley and Eskett quarries.
  - parts of Copeland have been supplied with sand and gravel from Peel Place Quarry.
  - Roosecote is the only sand and gravel quarry in the south of the county and it mainly supplies the Barrow area, as do Goldmire and Stainton crushed rock quarries.
  - Low Plains and Bonnie Mount quarries supply Eden with sand and gravel; Hartley, Helbeck and the Shap quarries supply crushed rock.
  - Holme Park and Sandside quarries supply crushed rock in South Lakeland.
  - Elterwater Quarry (Lords) supplies slate waste.
- 6.10 Three of the crushed rock quarries have specialised national and regional markets; these are Ghyll Scaur, which is the only operating quarry in England that produces very high skid resistance roadstones, and Roan Edge and Holmescales, which produce high skid resistance ones. The extrusive igneous rocks that are quarried at Ghyll Scaur have very limited occurrence outside the Lake District National Park and North Pennines Area of Outstanding Natural Beauty.
- 6.11 An assessment of how much aggregate Cumbria would require for its own needs is regarded as the starting point of the relevant local information. This is followed by an assessment of the location of its quarries in relation to serving potential markets within and outside Cumbria.
- 6.12 Because of geology, other parts of the northwest and other parts of the country rely on supplies of aggregates from Cumbria. The county has traditionally supplied far more sand and gravel and crushed rock than it needs for its own use. There are doubts about the extent to which that can continue in the longer term.

- 6.13 Figures for England and Wales for 2009, analysed by the British Geological Survey<sup>5</sup>, show that the population of 55.24 million people 'consumed' 36.53 million tonnes of land-won sand and gravel and 71.82 million tonnes of crushed rock. Those figures equate to 0.66 tonnes/person of sand and gravel and 1.3 tonnes/person of crushed rock.
- 6.14 Those 2009 figures were around 30% lower than in 2005. They mainly reflect the recession and cut backs in major infrastructure projects and in house building and other developments.
- 6.15 On the basis of the 2009 BGS figures, Cumbria, with a population of around half a million people, would need approximately 330,000 tonnes/year of land won sand and gravel and 650,000 tonnes/year of crushed rock. In that year, Cumbria's quarries sold 520,000 tonnes of sand and gravel and 3.07 million tonnes of crushed rock. In other words, over one and a half times as much sand and gravel and nearly five times as much crushed rock as it needed for its own use.
- 6.16 The initial conclusions of the draft Cumbria Minerals and Waste Local Plan are that additional provision would need to be made to maintain, throughout the whole of the plan period:-
- the minimum 7-year landbank (i.e. to 2035), for land won sand and gravel, based on 10-year average sales, and
  - the minimum 10-year landbank (i.e. to 2038) for high and very high skid resistance roadstones, based on 5-year average sales.
- 6.17 Taking account of recent sales figures, it would appear that additional provision for aggregates is not needed urgently.
- 6.18 Using the DCLG Guidance recommended 3-year rolling average sales figures to identify trends in demand, or the 10-year average, the size of the special roadstones landbank<sup>6</sup> would not fall below the 10 year minimum before 2018. This situation will be kept under review.
- 6.19 For sand and gravel, the size of the landbank<sup>7</sup> would not fall below the 7 year minimum before 2021. Again, this situation will be kept under review.
- 6.20 It is considered that, in principle, Areas of Search would be sufficient for any provision that needs to be made in the Local Plan, to ensure that the county landbanks could be maintained. The Lake District National Park's adopted Core Strategy does not identify Areas of Search or Preferred Areas. This situation will be kept under review.
- 6.21 The distribution of the quarry planning permissions, and the reserves in relation to the market areas which need to be served, is also relevant. The county's dispersed settlement pattern and its transport routes also have to be

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<sup>5</sup> Collation of the results of the Aggregates Minerals Survey for England and Wales 2009, BGS, May 2011

<sup>6</sup> 13.16/0.71 Mt = 18.5 years

<sup>7</sup> 11.48/0.61 Mt = 18.8 years

considered. In addition to the landbanks for the county as a whole, the Cumbria Minerals and Waste Development Framework Core Strategy, therefore, requires consideration of landbanks in local supply areas of quarries. That requirement is continued in the draft Cumbria Minerals and Waste Local Plan.

- 6.22 The main locational issue is in the south of the county, where the only sand and gravel quarry is Roosecote, near Barrow in Furness. There are limited reserves within the currently permitted extraction area, which was part of a larger earlier permission that has now lapsed.
- 6.23 The owner of the land and the minerals is only prepared to grant licences to continue quarrying at Roosecote on a one year at a time basis. That is not considered to be appropriate for mineral planning and an alternative site needs to be identified to replace that quarry. This is particularly important in terms of “mineral miles”, because the nearest alternative sources of sand and gravel are 40 miles away in Copeland or around 70 miles away in Eden, Carlisle and Lancashire.
- 6.24 In the west of the county, the only sand and gravel quarry is Peel Place, near Gosforth. That has limited reserves within its current planning permission and further provision needs to be made.

### **Site Allocations**

- 6.25 Having taken account of the above matters, the draft Minerals and Waste Local Plan identifies the following Preferred Area and Areas of Search:-
- the high and very high specification roadstones,
    - M17 Ghyll Scaur Quarry
    - M30 Roan Edge Quarry
  - sand and gravel in the west and south of the county,
    - M12 Roosecote Quarry
    - M15 Peel Place Quarry
  - a possible local supply area shortfall for limestone.
    - M33 Moota Quarry

All of these quarries are shown on the maps in Appendix 2. The draft Local Plan also proposes Mineral Safeguarding Areas for resources of aggregates that have been identified on the maps produced by the British Geological Survey. The Lake District National Park proposes Minerals Safeguarding Areas in their draft Local Plan, part 3.

- 6.26 At earlier stages of the Minerals and Waste Development Framework, provision was made in draft policies for extensions to some of the other sand and gravel quarries. That draft provision has been largely overtaken by the grant of planning permissions and no longer needs to be made.
- 6.27 An exception is site M8 in the draft Local Plan, Cardewmires Quarry near Dalston. In the interests of maintaining the landbank throughout the Plan period, it is considered appropriate to retain the Area of Search that was

previously identified for a possible extension to that quarry in the north of the county.

- 6.28 Site M6 in the draft Local Plan, which constitutes land between Overby and High House sand and gravel quarries, is also identified as an Area of Search. Although it is unlikely that this area will be needed within the Plan period, it has been identified as a logical extension between the two existing quarries.
- 6.29 It is possible that there may be shortfalls of supplies of crushed rock in some local areas. The only possible example that has been brought to the County Council's attention is Moota limestone quarry, which is located on the A595, between Cockermouth and Aspatria. An Area of Search for a relatively small potential extension is identified in the site allocations policies. This could be considered for release if a shortfall in the quarry's supply area can be demonstrated and/or it would secure the most effective use of resources.
- 6.30 At Silvertop Quarry, near Brampton, site M10 in the draft Local Plan, it is possible that an alternative area for quarrying would have less impact on the setting of the Area of Outstanding Natural Beauty than part of the land within the current planning permission. An Area of Search is proposed in the site allocations policies.
- 6.31 Although there are five crushed rock quarries whose permission will run out by 2028, two have current applications submitted (Flusco and Shapfell) and a third (Moota) has been given a screening opinion for an extension, and it is expected that an application will come in before the end of 2013. The two 'problem' quarries are Holme Park (permission until 2023) and Sandside (2020). It is likely that neither of these will request a physical extension, though they may require a time extension, if reserves are not fully worked out towards the end of their permissions.
- 6.32 Although there are considerable reserves at Holme Park Quarry, it is located in a very sensitive area; a National Nature Reserve and SSSI lie in the centre and there are several surrounding Limestone Pavement Orders. Sandside Quarry is situated in a constrained site, within the Arnside & Silverdale AONB, and it is unlikely that a lateral extension could be accommodated. The situation at both of these quarries will be monitored throughout the Plan period and the LAA updated, as necessary.
- 6.33 NPPF paragraph 143 states that planning authorities should safeguard existing, planned and potential rail heads and wharfage in their Local Plans. At present, two potential rail heads have been identified in the draft Local Plan. Site AL32 at Siddick, near Workington, was put forward originally as a rail head for a conveyor link to a coal extraction site. Although the coal extraction site is not an allocation, the rail head could still be used for other, economically viable, mineral or waste operations in the area. Site M31 at Salthouse, near Millom, is also identified. It is currently used as a temporary, night time, loading facility for Ghyll Scaur Quarry, in relation to projects at the Low Level Waste Repository near Drigg.
- 6.34 It is intended that a list of all existing rail heads will be added to the draft Local

Plan. The Lake District National Park do not have any rail heads, but two within the county serve Lake District quarries and these need to be safeguarded.

- 6.35 No wharves have been identified in the draft Local Plan, but it is intended that a list for marine and riverine landings will be added to the Plan. There are no wharves in the Lake District National Park, as there is only a very small coastal section on their boundary.

### **Catchment areas**

- 6.36 There are varying views about the catchment areas for individual quarries. The information provided by major aggregate producers to the Competition Commission (see paragraph 1.5 above and footnote 1) suggests that catchment areas of around 30 miles are realistic or up to 50 miles in rural areas.
- 6.37 To date, the County Council's policy has tended to use more localised areas than these, partly in relation to the objective of reducing "minerals road miles". From the customer's point of view, the relatively low value of aggregates per tonne means that transport tends to be a high proportion of their cost. The Competition Commission has indicated that it plans to do further analysis of catchment areas.

### **Economic climate**

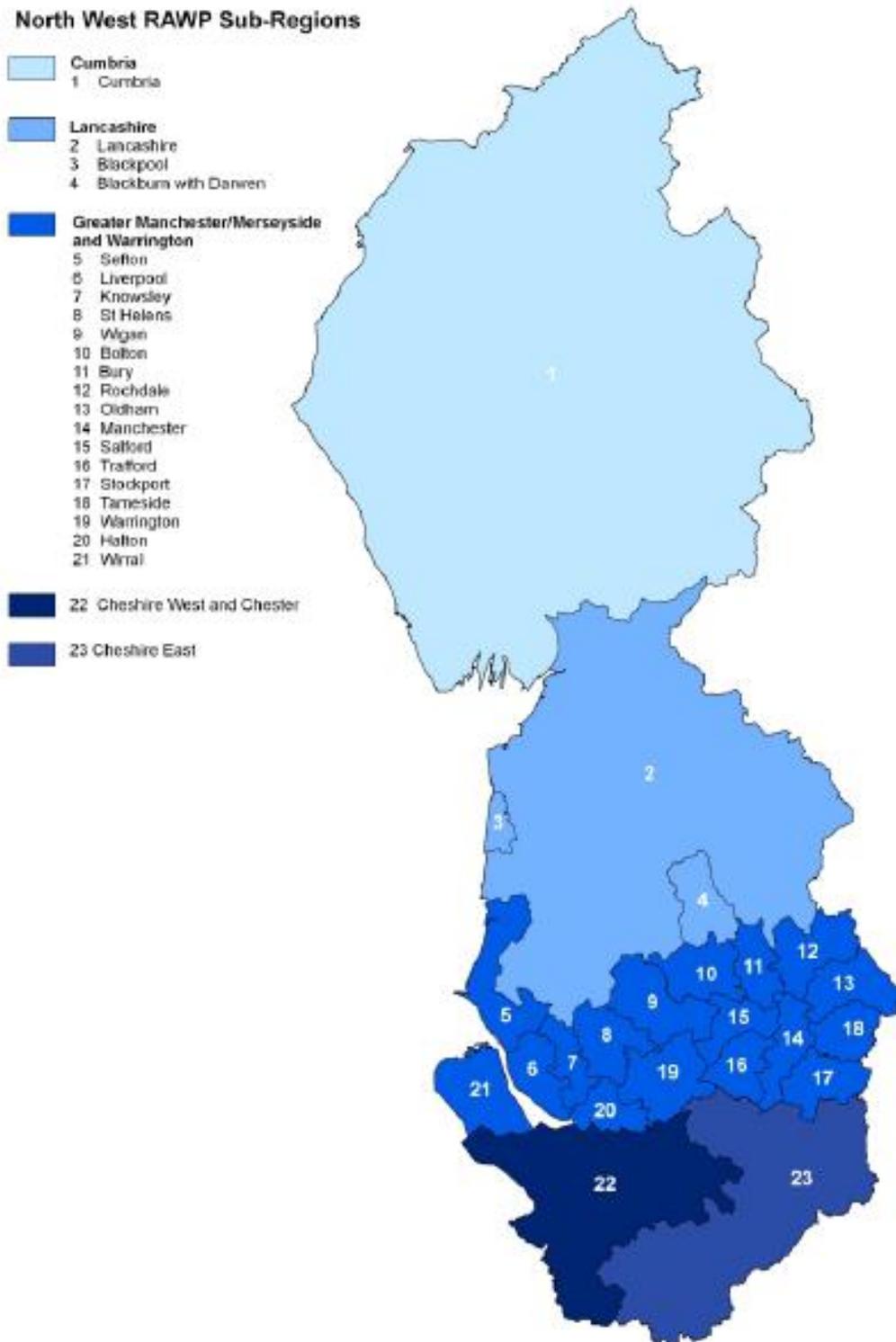
- 6.38 There are no obvious indications at present that construction activity, and its consequent need for aggregates, will pick up rapidly. This situation will be monitored in the annual Local Aggregates Assessments, by using a rolling 3-year average of annual sales to identify signs of an upturn.
- 6.39 The possibility of Cumbria-specific increases in demand has already been mentioned in paragraph 5.3. There is no commitment to those developments but, if they were to happen, their implications would be able to be anticipated in advance through the lead-in time for construction.
- 6.40 It is not considered that the implications of such possible major developments can be addressed in the Minerals and Waste Local Plan at this time. The position with regard to them, and to any consequent need to review policies, will be addressed in the annual reports on the performance of the plan.

### **Minerals policy**

- 6.41 The joint Cumbria LAA will be used as an Evidence Base for the county's two Local Plans, whose strategic policy for minerals is:-
- to make provision for a steady and adequate supply of minerals;
  - to balance the economic potential of Cumbria's mineral resources with the protection of the environment, and with prudent use of them in environmentally sensitive ways; and

- make provision to enhance the scope for using alternative re-used or recycled materials.

### MAP 1



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## **APPENDICES**



## AGGREGATE SALES AND RESERVES

Table 1

## AGGREGATE SALES FROM CUMBRIA (million tonnes)

Survey year	Limestone	Sandstone and igneous	High spec roadstone	All crushed rock	Sand and gravel	Marine dredged	Secondary and recycled aggregates
2001	3.0	1.1		4.1	0.7	0.03	
2002	2.9	1.1		4.0	0.9	0.04	
start of the period for 10-year averages							
2003	2.6	1.1		3.7	1.0	0.04	
2004	2.8	1.1		3.9	0.8	0.02	
2005	2.6	0.36	0.74	3.7	0.7	0.02	
2006	2.7	0.27	0.69	3.66	0.79	0.02	
2007	2.8	0.53	0.70	4.03	0.87	0.01	
2008	2.7	0.40	0.75	3.85	0.77	0.02	
2009	1.91	0.38	0.78	3.07	0.52	0.02	
2010	2.46	0.41	0.59	3.46	0.53	0.02	
2011	1.84	0.37	0.60	2.81	0.46	0.012	0.294
2012	2.03	0.37	0.55	2.95	0.46	not available	0.212
<b>Average</b>	2.44 (10-year average)	0.39 (8-year average)	0.68 (8-year average)	3.51	0.69	0.02	-
		combined total sandstone and igneous (10-year average)					

**Table 2****CUMBRIA RESERVES AT END OF 2012**

(The required minimum landbanks are 7 years for sand and gravel and 10 years for crushed rock)

	<b>Reserves (million tonnes)</b>	<b>Landbank (years) at 10-year average sales</b>	<b>End date of landbank</b>
Limestone	99.56	40.8	2052
Sandstone and igneous	23.41	21.9	2033
<ul style="list-style-type: none"> <li>• Including high and very high specification roadstones</li> </ul>	13.77	20.2 <i>(using 8-year average sales)</i>	2032
Land won sand and gravel	10.59	15.3	2027

**Table 3****Marine dredged sand landings in the North West at the end of 2011**

<b>Area landed</b>	<b>Tonnes landed (actual)</b>	<b>Tonnes permitted</b>
Barrow	12,333	-
Liverpool	238,880	-
Penrhyn	53,302	-
Other (to south west region)	9,583	-
<b>Totals</b>	<b>314,098</b>	<b>1,325,000</b>

source: The Crown Estate, September 2012

## APPENDIX 2

## DETAILS of CUMBRIA QUARRIES

## Crushed rock quarries

Number on map	Expiry date	Notes	Number on map	Expiry date	Notes
1 Moota	31 December 2016	Planning application for extension expected 2013	8 Sandside	30 June 2020	
2 Eskett and Rowrah	30 September 2034		9 Shapfell (Hardendale)	31 December 2018	Current planning application to deepen
3 Flusco	31 December 2015	Current planning application to extend to 31 December 2032	10 Silvertop	21 February 2042	
4 Goldmire	21 February 2042	Also construction waste recycling to 31 December 2014	11 Stainton	21 February 2042	Planning application 5/10/9001
5 Hartley	21 February 2042	The site was mothballed at the end of 2008. Current Environment Act application for new planning conditions	12 Tendley	31 December 2029	
6 Helbeck	21 February 2042		13 Shap Beck #	21 February 2042	
7 Holme Park	31 December 2023		14 Shap Blue #	21 February 2042	31 December 2034 for deposit of mining waste on land east of the A6
			15 Shap Pink*	21 February 2042 (mothballed)	Within the National Park

# The extraction areas for these two quarries are within the Lake District National Park

\* Shap Pink Quarry is principally for dimension stone, but some quarry waste has been used for aggregates

**Sand and gravel quarries**

<b>Number on map</b>	<b>Expiry date</b>	<b>Notes</b>	<b>Number on map</b>	<b>Expiry date</b>	<b>Notes</b>
1 Aldoth	restored by 31 December 2013	Quarry worked out	8 Kirkhouse	28 July 2023	
2 Bonnie Mount	31 December 2014 Restored by 31 December 2015		9 Low Gelt	31 December 2019	
3 Brocklewath	31 August 2021		10 Low Plains	30 September 2011	Application for an extension to 2033 refused planning permission
5 Cardewmires	31 December 2025 Restored by 31 December 2026		11 New Cowper	31 December 2012 Restored by 31 December 2013	Quarry worked out
6 Faugh No. 1	30 June 2014	Mothballed at present	12 Overby No. 2	31 December 2026 Restored by 30 September 2027	
Faugh No. 2	31 December 2022	Recent permission	13 Peel Place	26 April 2015	Planning application 4/04/9011
7 High House	Restored by 31 December 2021		14 Roosecote	Restored by 31 August 2016	

### High and Very High Specification Roadstone Quarries

Quarry	Expiry date
Ghyll Scaur	31 December 2021
Roan Edge	31 December 2038
Holmescales	21 February 2042

### Building/roofing stone quarries in the Lake District National Park (2008)

**Active sites** (where activity had occurred during the previous 12 months)

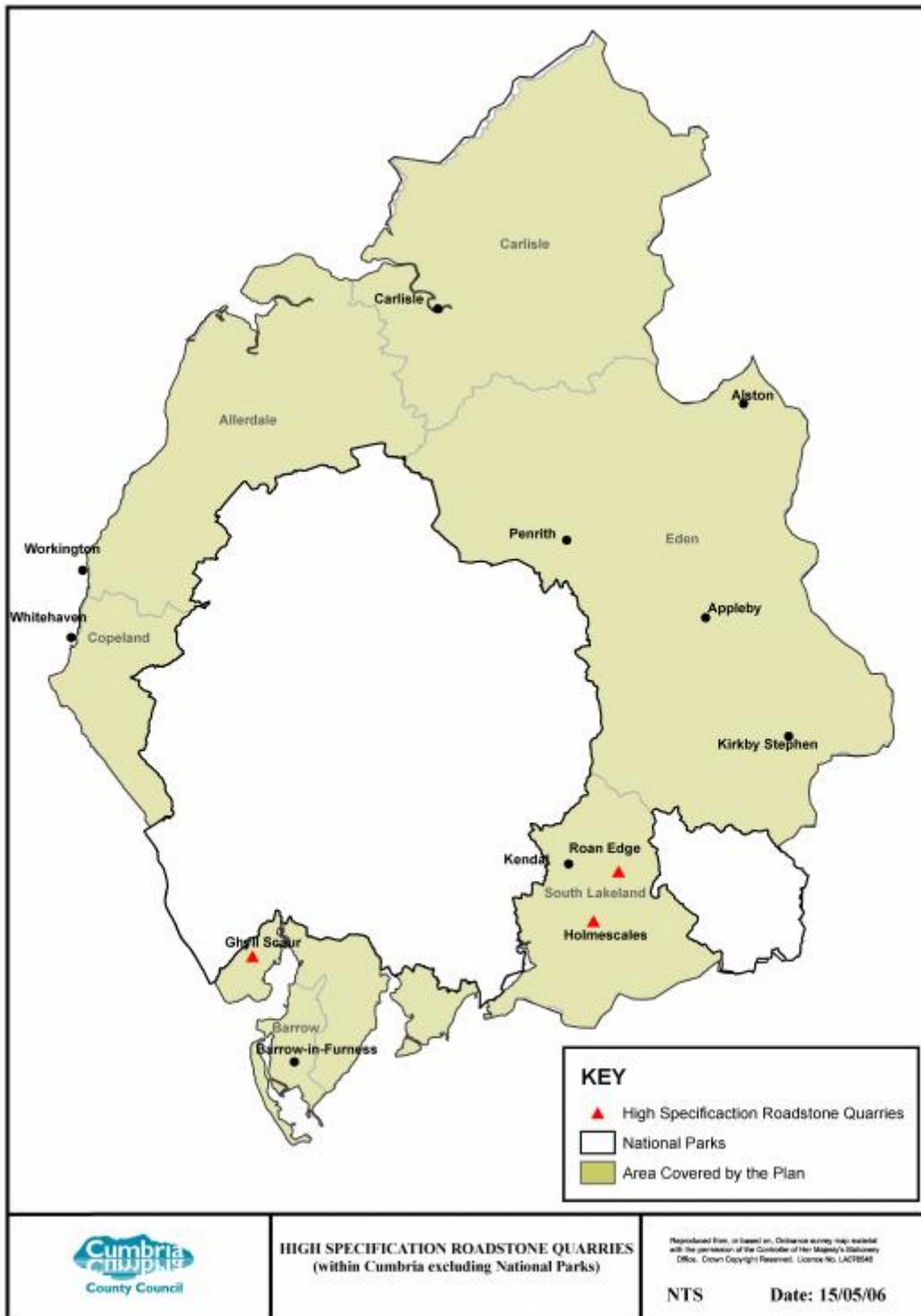
Location	Geology	Expiry date
Brathay (Brathay Quarries) Brathay Park	Slates, blue-black, Silurian, Brathay Formation	March 2018
Petts (Pets) Ambleside	Volcaniclastic sandstone and breccia, Ordovician, Seathwaite Fell Formation, Borrowdale Volcanic Group	31/12/2015
Broughton Moor Broughton-in-Furness	Slates, olive green to light green, Ordovician, Seathwaite Fell Sandstone Formation, Borrowdale Volcanic Group	21/02/2042
Bursting Stone (Coniston)	Slates, blue-grey, Ordovician, Seathwaite Fell Sandstone Formation, Borrowdale Volcanic Group	31/12/2030
Elterwater (Lords) Langdale	Volcaniclastic sandstone and breccia, Ordovician, Seathwaite Fell Sandstone Formation, Borrowdale Volcanic Group	2017
Low Brandy Crag (Brandy Crag) Coniston	Slates, silver grey and green, Ordovician, Seathwaite Fell Sandstone Formation, Borrowdale Volcanic Group	30 November 2026
Peatfield (Hodge Close Quarries) Coniston	Volcaniclastic sandstone and breccia, Ordovician, Seathwaite Fell Formation (Borrowdale Volcanic Group)	31/10/2018
High Fell (High Fellside, High Tilberthwaite) Coniston	Volcaniclastic sandstone and breccia, Ordovician, Seathwaite Fell Sandstone Formation, Borrowdale Volcanic Group	31/03/2024

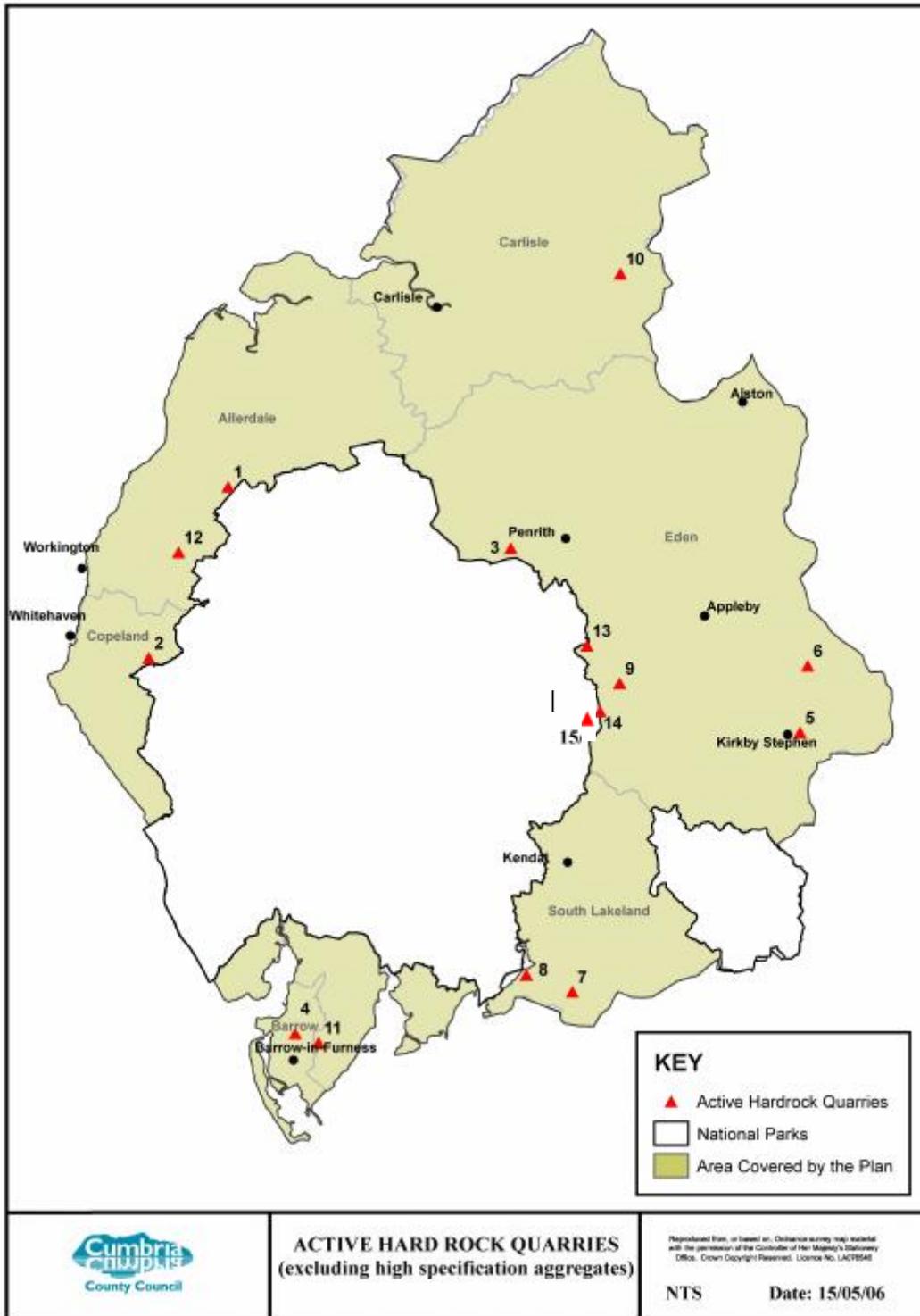
### Building/roofing stone quarries in Cumbria outside the National Park

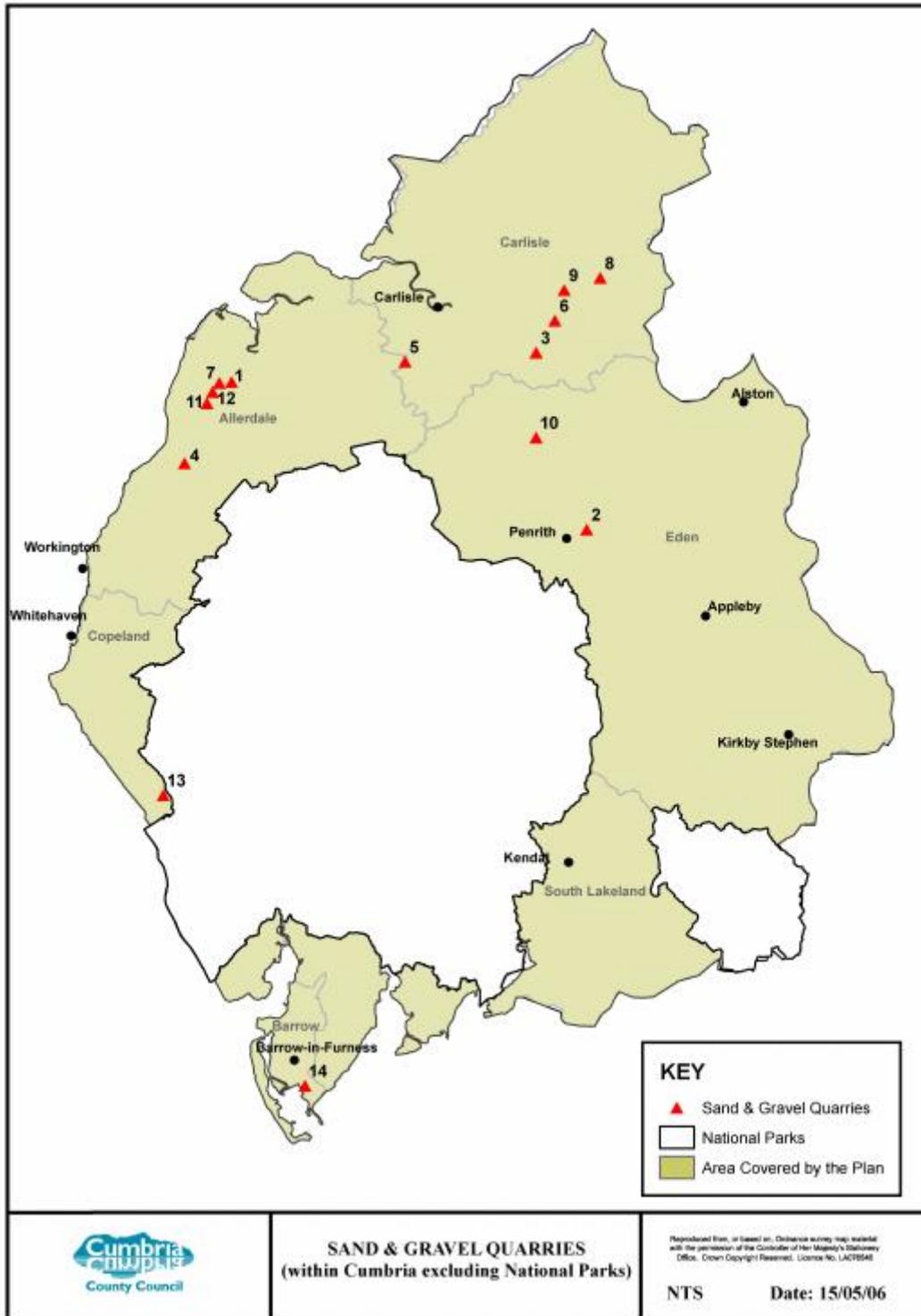
Quarry	Expiry date	Quarry	Expiry date
Bank End	2042	Larchwood	30 September 2007
Baycliff Haggs	21 February 2042	Leipscic	20 December 2022
Birkhams	31 July 2015	Pickering	26 February 2013
Bowscar	10 January 2025	Red Rock Canyon	
Brownrigg Fell	31 July 2021 Restored by 31 July 2022	Rooks	31 October 2017
Crag Nook	21 February 2042	Scratchmill Scar	30 January 2016
Flinty Fell	31 December 2024	Snowhill no 1	Restored by 31 May 2017
Grange	Restored by 29 January 2016	Snowhill no 2	Restored by 31 May 2015
Kirkby Slate	21 February 2042	Talkin Fell	3 February 2011
Lambhill	30 January 2021		

### Alternative aggregates – main processing plants

- 1 - Silvertop Quarry, for recycling inert construction waste
- 2 - Flusco Quarry, for materials recycling including aggregates
- 3 - Roose Quarry, for recycling construction materials
- 4 - Goldmire Quarry, for construction waste recycling operations
- 5 - Roan Edge landfill, for recycling inert wastes
- 6 - Hespian Wood landfill, for aggregates recycling
- 7 - Derwent Howe slag bank, for slag extraction and recycling of wastes
- 8 - McKays/Phillip Carruthers/Derwent Recycling, Lillyhall Industrial Estate, for recycling construction and demolition waste
- 9 - Harry Barker Properties, Greenscoe, for construction waste recycling
- 10 - Kingmoor Marshalling yards, for rail sleepers and ballast recycling







### SUMMARY DETAILS OF THE NORTH WEST REGIONAL AGGREGATES WORKING PARTY SUB-REGIONAL APPORTIONMENTS TO CUMBRIA

- 1 Until 2010, the sub-regional apportionments to Cumbria of the North West Regional Aggregates Working Party (NW RAWP) were 700,000 tonnes/year of sand and gravel and 4.1 million tonnes/year of crushed rock.
- 2 In 2010, a new national assessment of need for aggregates was published with revised apportionments to the regions. This reflected the general decline in aggregate sales since 1997, which became much more pronounced following the financial crisis in 2007. The assessment was not able to take full account of the continuing recession.
- 3 The Mineral Products Association has reported that, nationally, sales are currently at their lowest level since the 1960's, with 2012 figures significantly lower than 2011. In Cumbria, as elsewhere, this downturn is due entirely to the economic situation and not to any shortfall in permitted reserves or constraints on their availability. The fall in sales is due to the fall in major infrastructure projects, house building and other developments.
- 4 The 2010 assessment provided a revised and lower apportionment to the north west region as a whole. However, the NWRAWP attempted to increase the Cumbria apportionment of sand and gravel to 880,000 tonnes/year. Cumbria dissented from this.
- 5 The reasons for dissenting were that:-
  - if there was a shortfall within the north west region, it would be in Merseyside and Greater Manchester;
  - those conurbations are so far away that they are unlikely to be supplied by quarries located in the north of Cumbria;
  - Cumbria quarries are also supplying nearer markets which are outside the north west region;
  - those sales could not be reflected in the NWRAWP apportionment and would be in addition to it; and
  - a Sustainability Appraisal relating areas of demand to areas of supply within the north west had not been undertaken for the proposed higher figure.
- 6 With regard to the crushed rock apportionment to Cumbria, surveys show that the 4.1 million tonnes figure had never been reached; this is despite the large landbank, and implies that the apportionment was over estimated. The 10-year annual average sales figure is 3.75 million tonnes. The 2010 revised apportionment was 4.02 million tonnes, which is still higher than in most recent years and the 10-year average.
- 7 The system of apportionments to regions and then to sub-regions has now been replaced by one based on Local Aggregates Assessments. In

preparing these, mineral planning authorities are required to take the advice of the re-constituted Aggregates Working Parties and the National Aggregates Co-ordinating Group.

## SUMMARY DETAILS OF AGGREGATE END-USE AND SUBSTITUTABILITY

1. This is a summary of information that the major aggregate companies provided to the Competition Commission's investigation into the aggregates, cement and ready mixed concrete market (<http://www.competition-commission.org.uk/our-work/aggregates-cement-ready-mix-concrete/analysis/working-papers>)
2. General construction, which is construction applications other than the production of ready mixed concrete, concrete blocks and asphalt, and is described as mostly sub-base and structural fill, accounts for around half of the aggregates used in GB. The main aggregates used for this are crushed rock (45 to 50%) and recycled and secondary aggregates (40 to 50%), with sand and gravel only a small proportion (5 to 10%).
3. Ready mixed concrete accounts for around 20% of aggregates used in GB. The main ones used are sand and gravel (60 to 65%) and crushed rock (25 to 30%). Use of recycled and secondary aggregates is low (5 to 15%).
4. The manufacture of concrete products accounts for around 10% of aggregates used in GB. The main aggregates used are sand and gravel (50 to 55%) and crushed rock (30 to 40%). Use of recycled and secondary aggregates is low (5 to 15%).
5. The manufacture of asphalt accounts for about 12% of aggregates used in GB. The main aggregate used is crushed rock (70 to 75%), sand and gravel accounts for 5 to 15%. Recycled and secondary aggregates account for around 10 to 20 %, but it seems likely a large proportion of this is recycled road planings with their high bitumen content.
6. With regard to substitutability, the Commission's November 2012 working paper suggested that:-
  - there is wide scope for using recycled and secondary aggregates for general construction in low specification applications;
  - there is little use of sand and gravel in general construction, even in regions where sand and gravel are prevalent;
  - for ready mixed concrete and concrete products, the use of sand and gravel or crushed rock appears to be largely influenced by geology and availability. Gravel or crushed rock can be used and the sand can be either that which occurs naturally, or it could be manufactured by washing crushed rock fines;
  - there is more limited scope for using recycled and secondary aggregates for other applications, such as ready mixed concrete and concrete block manufacture;
  - blends of primary and recycled and secondary aggregates can be used in several applications.