

DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

**Towards a Minerals Local Plan:
Spring 2018 Consultation**

**Site Allocations:
Revised Initial Site Assessment
Aldwark/Brassington Moor
Background Information Paper**

December 2017

1. Purpose of this Paper

- 1.1 The purpose of this Paper is to set out the sources of information that have been used to carry out the Revised Initial Assessment of the promoted extension to Aldwark/Brassington Moor Quarry.

2. Sources of Background Information

- 2.1 Sources of information for Assessment:

Derbyshire and Derby MLP Questionnaire for promoted sites

Revised Initial Assessment Maps, December 2017 (Maps showing site location, resource, noise and dust indicator zones, public rights of way and transport features, water designations, nature and heritage assets, landscape character, predictive agricultural land)

Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

Documents relating to Planning Application CM3/1205/156 Extension to Brassington Moor Quarry granted 10 December 2007.

3. This Section is set out to reflect the Assessment Criteria contained in Table 1.

Table 1: Assessment Criteria

Economic Criteria

Criteria 01 Need for Mineral

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

CM3/1205/156 Extension to Brassington Moor Quarry, Environmental Statement, Non-Technical Summary, December 2005

CM3/1205/156 Extension to Brassington Moor Quarry, Report of Strategic Director – Environmental Services to Planning and Control Committee 10/12/2007

Is there an identified need for additional reserves to maintain supply throughout the Plan period?

- 3.1 The Company has submitted detailed evidence¹ to justify the need for additional reserves of Low Cadmium Limestone at Aldwark/Brassington Moor quarry. Current reserves of this quality will last until 2025 at the worst case scenario and 2031 at the best. The new mineral reserves will not be required until the latter part of the Plan period.
- 3.2 The Company produces dried, milled and classified calcium carbonate powders and granules. These are crucial raw materials for the production of animal feed, glass, sealants and adhesives, mastics, plastics and rubber. It also produces bright (white) dusts for precast concrete products and significant volumes of agricultural lime. By-products from these mainstream products are also sold for construction uses. Recent production rates have averaged just below 1mt split equally between industrial and aggregate uses.
- 3.3 Some of the products produced require exacting specifications of mineral which impacts on the suitability of reserves at the quarry. Of particular importance for animal feed products are reserves that are low in cadmium,

¹ Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

iron and lead which occur at different locations and depths throughout the quarry.

- 3.4 Prior to 2002, there was no limit on the amount of cadmium contained within animal feed products but an EU Directive , subsequently exposed into UK law introduced a limit of 2 parts per million. As a result, extensive 3 dimensional mapping of the Brassington Moor reserve based upon geochemical quality has been undertaken to assess the likely remaining reserves of low cadmium limestone in the quarry. As this involves the interpolation and weighting of borehole data, it has produced a range which varies from 18% to 32% of the overall remaining reserve (20.4mt). If production levels continue as present for the foreseeable future, this means that the quarry has between 3.7 and 6.5 mt of low cadmium reserves, which would last until either 2031 in a best case scenario or 2025 at the worst. An intermediate case would be 2028. In any of these eventualities, additional planned reserves would be required before the end of the plan period and preferably before 2025.
- 3.5 A key factor in establishing the need for additional reserves at the quarry is to understand the nature of the geology of the quarry and the way in which it is worked. The quarry provides approximately one hundred different products to customers often tailor made to individual specifications. Information taken from planning application CM3/1205/156 to extend the quarry granted in 2007 is helpful.
- 3.6 The Company state that the limestone is natural occurring in horizontal beds each layer having a varied composition and a thickness from 15mm to 1,500 mm. Vertical faults and other anomalies increase the complexity and stone characteristics. The weather has a strong influence on quality variations and contamination and may degrade a high quality zone by several measures.
- 3.7 Every tonne of stone lifted from the quarry face contains the full range of stone types to some degree. To deal with these complexities there is a continual quality monitoring and matching control system that streams from the deposit to each plant and its end use.

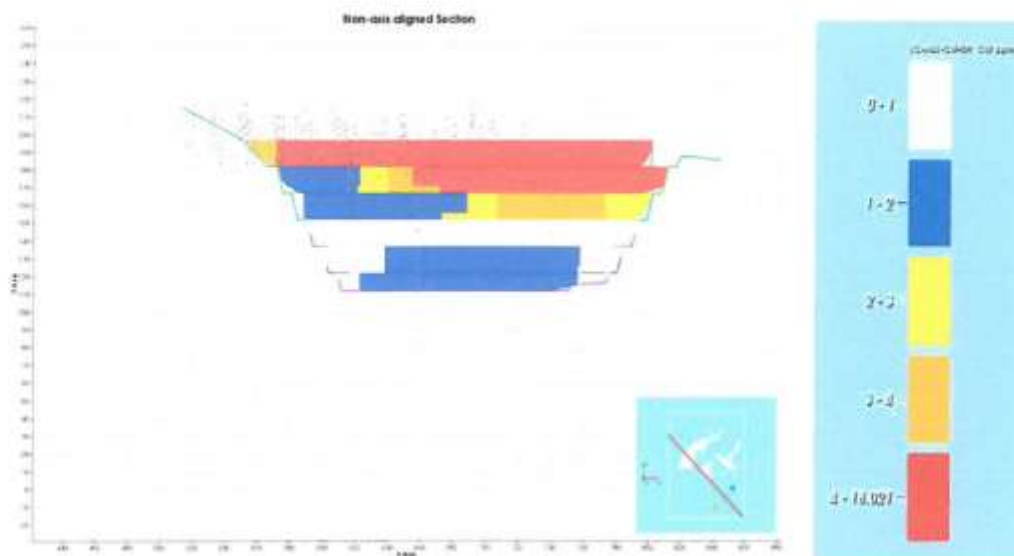
- 3.8 The Company states that 'Quarry selection is selective to feed Grade A stone to A grade requirements and B grade to B grade and so on but the resource is unpredictable. For example, the next blast or the weather can change and A grade becomes C grade and then another A source has to be found. It is important that A streams are not wasted on D need but often D must be quarried to reach A. Stone must not be left behind as it is a valuable resource.
- 3.9 There must be choices of working places and, therefore, working benches in significantly different qualities of resource. Without choices there will inevitably be a waste of A streams on D and E needs and the customer portfolio will be reduced because enough A cannot be found. Historically, the business has been developed using the benefit of three or four different quarries in each of which may be two extraction benches are working. Typically, this allows 6 or 8 choices of source stone.....it is not practicable to open more than two benches per quarry.

Criteria 02 Quality/Yield of Mineral

Source of Information: Map 1 Site Location and Resource, Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

Has the operator provided sufficient information about the quality/yield of the resource?

- 3.10 In recent years, detailed geological mapping of Brassington Moor resource has been undertaken based on geochemical quality. It reviewed all existing and historical borehole and water monitoring data including blast hole logs as well as additional exploratory drilling and logging. The site was mapped in 15m bench heights, 25m x 25m blocks and vertical sections modelled 'inter alia' for critical values of cadmium, iron and lead. The results of this mapping confirm that the best low cadmium reserve lies in the floor of the Aldwark working area as illustrated on the section below.



3.11 The geology and geochemistry of the Aldwark and Pryro quarries is well understood from analysis of exposed working faces and exploratory borehole data. The geology of the immediate environs is also well known vis-à-vis the absence of faulting and the dip and strike of the rock strata. As such, the geochemistry of the promoted allocation area can be reasonably accurately extrapolated from known information. Excavations at Curzon Lodge and Manor Farm further to the south have confirmed low cadmium reserves in the upper levels. Further exploratory drilling within the promoted extension area is programmed for within the next 6 months.

Criteria 03 Use of Mineral Resource

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

Is the end use proposed appropriate for the type of mineral?

3.12 NPPF acknowledges that since minerals are a finite resource and can only be worked where they are found it is important to make the best use of them to secure their long term conservation. Promoters of sites are expected to submit evidence to justify that the end use of the mineral is appropriate for the type of

mineral resource. The Brassington Moor reserves produce highly specified high purity low heavy metal products for markets such as animal feeds, glass, sealants and adhesives, plastics and rubber as well as agricultural lime and bright (white) products for specialised pre-cast concrete products. These end uses are considered to be entirely appropriate for a deposit of this quality.

Criteria 04 Location of site to Market Areas

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

CM3/1205/156 Extension to Brassington Moor Quarry, Environmental Statement, Non-Technical Summary, December 2005

Is the site appropriately located in relation to the market areas it is intended to serve?

- 3.13 Section 2 of the ES provides a history of the site. It states that the market area served by Brassington Moor Quarry is 30 to 40 mile radius for aggregates. Higher specification products such as Precipitated Calcium Carbonates (PCCs) are supplied world-wide. The Company state that 85% of industrial grade limestone for animal feeds, glass, sealants and adhesives etc. are quarried here in Derbyshire by only four companies. Longcliffe supplies 30% of the Derbyshire tonnage with the balance coming from two UK based multinational companies, Tarmac and Omya and a further minor component supplied by Ben Bennett. The Company state that Tarmac's Ballidon quarry is scheduled to close in 2030 which will leave only three and without Longcliffe there would be a virtual monopoly which cannot be desirable economically and raises major issues with regard to production capacity from a reduced number of suppliers.

Criteria 05 Existing Infrastructure

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

Is there existing infrastructure that would be utilised by the proposed operation to process the mineral?

- 3.14 The production of high purity limestone products requires significantly more plant processes than for a typical aggregate quarry comprising over 100 plant items such as crushers, mills, driers, classifiers and storage silos. The Brassington Moor quarry complex benefits from many decades of investment in site infrastructure and has established processing plant facilities that have been developed over many years. An approximate estimate of the cost of a new equivalent production facility would be in the order of £50m.

Criteria 06 Conservation of Resources

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

If the site wasn't allocated is it likely that the site would remain unworked due to its location/scale?

- 3.15 The information provided at criteria 05 shows the cost of developing processing plant for industrial minerals. Even though the extension area is large scale if this site isn't worked as an extension to the existing quarry it is unlikely to be worked in the future.

Criteria 07 Employment

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

Would the proposal create new jobs? Would the proposal lead to the retention of jobs at a currently operational site? Would the proposal create new jobs but lead to job losses elsewhere?

- 3.16 Working of the site would enable a continuation of the operation leading to the retention of 175 full time jobs at the existing quarry and 30-40 semi-permanent contractors.

Criteria 08 Duration of Mineral Extraction

Source of Information: Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

What is the intended timeframe for working the site?

- 3.17 Working the site is a very long term proposal well in excess of 30 years. The extension to the quarry would yield approximately 38 mt of reserve generating between 6.8 and 12.2 mt of low cadmium reserves.

Social Criteria

Criteria 09 Visual Intrusion

Source of Information: Map 2 PROW, Site Visit

What is the visual impact on sensitive receptors?

- 3.18 The site has some visually sensitive receptors and/or some parts of the site will be visible from them. Whilst there are no sensitive receptors close to the proposed extension area, it will be visible from a number of locations around the site that will allow for views of parts of the area. These include some properties in Aldwark and Ible, local footpaths, recreational trails including the High Peak Trail and the Limestone Way, and the local road network. These impacts will also be in the context of the existing quarry already exerting significant adverse visual effects on surrounding visual receptors.

Criteria 10 Noise

Source of Information: Map 3 Noise Indicator Zones, Site Visit

What is the impact of noise on sensitive receptors?

- 3.19 The site has no or few noise sensitive receptors within 200m of the boundary of the site and some within 500m. Residential and industrial uses are located at Manor Farm which lies some 350 metres away to the south of the site. The villages of Aldwark and Longcliffe lie just beyond 500 metres away to the north and south west respectively.

Criteria 11 Dust

Source of Information: Map 4 Dust Indicator Zones, Site Visit

What is the impact of dust on sensitive receptors?

- 3.20 The site has no or few dust sensitive receptors within 100m of the boundary of the site and some within 400m. Residential and industrial uses are located at Manor Farm which lies some 350 metres away to the south of the site. The villages of Aldwark and Longcliffe lie just beyond 500 metres away to the north and south west respectively.

Criteria 12 Dust – Air Quality/Human Health

Source of Information: DEFRA Air Quality Management Areas Map 2017

What is the impact of dust on air quality/human health?

- 3.21 There are villages lying within 1km of the site and therefore there is the potential for wind-blown dust to be transported to sensitive receptors. There are, however, no Air Quality Management Areas within 1km of the site which would indicate existing air quality issues.

Criteria 13,14,15,16 Transport

Source of Information: Map 5 Transport, Letter from Longcliffe Quarries Ltd containing additional supporting information dated 20 October 2016

What are the traffic and transport impacts of the proposal?

- 3.22 A full transport assessment would be required as part of any planning application as there appears to be an increase in the number of HGVs leaving the quarry complex than envisaged as part of the planning application to

extend the quarry in 2007. The explanation from the Company explains that these extra journeys tend to be in smaller loads. It is important to accurately establish the HGVs movements to/from the site and whether the extension will lead to any anticipated increases.

- 3.23 Information from the Company states that, the Brassington Moor quarry complex generates 200 loads per day (400 in-out movements). This has risen from the levels of traffic at the time of the last planning application in 2007, primarily due to an increase in production in response to the closure of a number of quarries in the locality. Ivonbrook quarry has closed (output 300,000 tpa, Middleton Mine has closed (output 150,000 tpa), Ballidon Quarry is operating at two thirds of historic capacity and Dene Quarry operates intermittently. Brassington Moor has also been using a larger number of smaller HGVs because it has been moving large volumes of low value materials as part of the development of new working areas within Pyro Quarry.
- 3.24 A Traffic Assessment undertaken in 2011 as part of the ROMP review of Bone Mill quarry (also operated by Longcliffe Quarries) planning permission identified no significant issues with the movement of HGV traffic in the locality and concluded that it had sufficient capacity to accommodate an increasing rate of production from the quarry.' The Company adds that 'this confirms that the increased production from Brassington Moor over the last decade has had little impact on the operation of the local road network, probably because it is simply replacing traffic that historically was associated with other sites.'
- 3.25 The County Council as Highway Authority has concerns about the junction of the B5036 and A5012 in terms of emerging vehicle visibility, it also has concerns about the number of HGVs which travel west along the Via Gellia to join the A6 at Cromford causing congestion and negative impacts on the Conservation Area. It would be concerned if there were to be a significant increase of HGVs at this location.

Environmental Criteria

3.26 Criteria 17, 18, 19 Water Environment

Source of Information: Maps 6, 7, Environment Agency data

3.27 The site lies in flood zone 1 which has the lowest probability of flooding.

The site lies within groundwater source protection zone 1 which are the most important zones to protect from harmful development.

The site lies on a Principal Aquifer which require the greatest protection from harmful development.

3.28 Criteria 20,21,22,23 Ecology

Source of Information: Map 8 Ecological Assets

3.29 Criteria 24, 25, 26, Landscape

Source of Information: Map 9 Landscape Character Type Areas

3.30 Criteria 27, 28, 29 Historic Environment

Source of Information: Map10 Heritage Assets

Revised Initial Assessments of the impact of working the site on Ecology, Landscape and the Historic Environment have been undertaken by the County Council's Conservation and Design Section.

3.31 Criteria 30 Best and Most Versatile Agricultural Land

Source of Information: Map11, DEFRA's predictive agricultural land classification map 2001

The site lies within an area where there is a low likelihood of bmv land (less than 20% of the land is likely to be bmv).

3.32 Criteria 31: Conformity with other local plans (policies and allocations)

Source of Information: Derbyshire Dales District Local Plan (pre submission draft August 2016)

The site is in conformity with the pre submission draft Derbyshire Dales District Local Plan August 2016.