

EXTRACTS FROM THE 2000 PLANNING APPLICATION
COVERING LONGSTONE EDGE WEST CONSOLIDATION PROPOSALS 375

PEAK DISTRICT NATIONAL PARK AUTHORITY	
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GLEBE MINES LTD

LONGSTONE EDGE

Application to the Peak District National Park Authority for a consolidating planning permission to continue the extraction of vein mineralisation by opencast and underground methods together with the crushing and sale of limited quantities of limestone overburden with the restoration of the exhausted workings by the import of processed mineral waste tailings, including the surrender of a consented area, including the surrender of a consented area, variation of conditions and a small extension area, together with a supporting statement and environmental appraisal

SECTION A – Application and Supporting Statement

INTRODUCTION

Longstone Edge is a prominent limestone escarpment extending for 2.5 miles in an east-west direction approximately 2 miles north of Bakewell. It is extensively covered by old planning consents for extraction of the vein minerals via dump removal, opencast and underground workings issued prior to 1982. Longstone Edge was therefore subject to the Environment Act Review of Old Mining Consents.

It was listed as an Active Site in February 1996, at which time there were 2 principal operators, RMC and Laporte Minerals. A joint scheme of working was submitted on 1.4.97 with additional information (following PDNPA requests) on 31.7.97 & 18.11.97. On 31.2.98 the PDNPA accepted the scheme with the proviso of the substitution of their own scheme for Backdale at the east end of the site.

RMC appealed against this determination. Bleaklow Mining (freeholder of Backdale and much of the eastern end of Longstone Edge) won a Judicial Hearing to establish their right for a say in the decision process. Bleaklow Mining then had a Judicial Review which decided that the PDNPA Approved Scheme should be rescinded for lack of an Environmental Impact Assessment.

Since February 1998 when the PDNPA approved the RMC/Laporte Scheme of working, both these operators have withdrawn from the site. RMC withdrew following the failure of their part of the scheme and Laporte effectively withdrew when they closed their business in October 1999.

The former activities of Laporte Minerals, based at Cavendish Mill, have been resurrected by Glebe Mines who have acquired the assets from Laporte PLC. Glebe Mines wish to continue extracting vein minerals from the Longstone Edge vein system as an important part of their ore supply to Cavendish Mill.

The Glebe Mine proposals are a continuation of the Laporte Minerals operations:

- Continued *opencast* extraction in the central part of Longstone Edge
- Continued *underground* extraction on a limited scale from the western part of Longstone Edge
- Continued *restoration* of the eastern part (and later the other areas) by backfilling the voids with tailings from Blakedon Hollow mixed with on-site limestone waste.

Following a careful review of the assets acquired from Laporte PLC, the new operators of Glebe Mines have decided to limit the areas of Longstone Edge where they need planning consent to those parts which they wish to operate, be it extraction, restoration or transport.

Consequently this Consolidation Application is being submitted to establish an updated scheme of working for the total vein mineral future of Glebe Mines on Longstone Edge.

Throughout the life of Cavendish Mill (which was opened in 1965) it has relied heavily on Longstone Edge as a major source of its crude ore supply. The 'Mill was designed to process ore from a variety of sites throughout the Derbyshire Orefield but the two most important sites have been the underground reserves from Hucklow Edge Vein and the surface and underground reserves from Longstone Edge.

On-going exploration coupled with careful analysis of past production records have enabled the Company to identify considerable reserves of ore which still remain in situ within the application site. Despite having been worked by early opencast and later underground mining, the principal area of Bow Rake/High Rake and Arthurton West and the Beeches still contain up to 1,200,000 tonnes of ore reserves and potential resources, supplemented by approximately 500,000 tonnes of underground ore within Watersaw Rake and its off-shoot veins.

The economic exhaustion of the Longstone Edge deposits is desirable for the following reasons:

- Its proximity to the processing facility at Cavendish Mill, which can be accessed principally by private haul road
- To enable its final restoration, by backfilling with the tailings waste from Cavendish Mill and on-site waste limestone
- It reduces the extraction and transport from alternative sites more distant from Cavendish Mill

Despite the cessation of fluorspar processing by Laporte Minerals due to loss of their business to foreign imports, the UK users of acid grade fluorspar still wish to use the high quality Derbyshire material. Letters of support from our 2 main customers are attached in appendix 1.

Glebe Mines was established in November 1999 to continue the processing business based at Cavendish Mill. Although it is a smaller operation than that run by Laporte Minerals, there is already a strong demand for its products. The long held view that fluorspar is a nationally important and rare mineral resource has been reinforced by this support for Cavendish Mill products.

PDNPA Policies

Any potential development within the National Park must acknowledge the 'Authority's prime aim of conservation and enhancement. By the use of a carefully designed working scheme and restoration programme, vein mineral extraction can be undertaken without prejudicing these guidelines.

Because Longstone Edge has been an active vein mineral site for over 40 years, this proposal does not entail an extension of work into areas not already consented for mineral extraction. The only changes involve an alteration in the style of working to enable the deposits to be totally extracted.

The principal purpose of this application is the continued extraction of the fluorspar vein mineralisation. The only remaining economically extractable deposits of this rare resource to be found are in the Peak District National Park. It is therefore considered to be in the public interest for the continued working of this major deposit on Longstone Edge.

Limestone extraction is necessary due to the depth of working required and the hade of the vein both requiring extensive safety benching. Previous underground extraction has failed to fully extract the deposit and the remaining deposit of high grade fluorspar can only be extracted in this manner.

Due to the major extraction area of Bow Rake/High Rake being below the surrounding ground level and therefore only visible from the adjacent track, the development will have minimum visual impact. Included in the application is a carefully landscaped restoration scheme. This will ensure the final integration of the site in to the surrounding environment, whilst retaining an acknowledgement to its mining history.

The inclusion of parts of the continued working area within the Natural Zone is not believed to be prejudicial to their conservation status. These areas have previously been worked in recent years. Restoration will be undertaken in a manner which is appropriate. Discussions will take place with the 'Authority's ecologists to establish the correct planting and aftercare scheme for these workings.

Surrender of Consented Area

The current underground planning consent west of Watersaw Mine was granted in 1977 and extends to the northern end of Longstone Moor for the potential extraction of the veins below the Idles. Following negotiations between the MPA and Laporte Minerals in the 1980s existing surface working rights were surrendered to ensure the preservation of the area as a prime example of lead mining industrial archaeology. At this time the underground rights were maintained.

In the late 1990s this area was included within the Schedule of Ancient Monuments on the grounds of the same reasoning which gave rise to the withdrawal of surface mining rights. In preparing this application there have been discussions with English Heritage and as a result the Company have decided to withdraw any mining proposals from this zone.

Included within this application there is therefore a surrender of all mining rights within the area of the Scheduled Monument.

Surface Working Scheme

The application site includes three individual extraction areas, Bow Rake/High Rake, Arthurton West and the Beeches.

The Beeches will continue as a small scale operation and effectively be a separate venture from the other 2 pits.

Bow Rake/High Rake and Arthurton West will be worked as a joint venture. To maintain a continuous supply of ore to Cavendish Mill, one site will provide the bulk of the ore requirement whilst the other is undergoing safety bench development. By alternating this pattern it should be possible to achieve the required tonnage of ore to Cavendish Mill whilst keeping the limestone removal activity to a minimum. However it is the intention to concentrate on ore extraction from Arthurton West initially to enable this site to be completed and restored as soon as possible. See table 1 on page 11.

The working schemes for Bow Rake/High Rake and Arthurton West are therefore very similar.

High Rake /Bow Rake

The current phase of extraction began on a small scale approximately 4 years ago. During continued extraction there has been an on-going exploration programme revealing a large amount of mineral not extracted by earlier opencast or underground mining. The quality of this ore is very good and justifies the proposal to extract the vein, even though a considerable amount of host limestone will have to be liberated.

The deepest part of the deposit is 90 metres below the surface, at the eastern junction of Bow Rake and High Rake. However generally the mineral is no more than 60 metres deep.

To access this ore the host limestone will have to be benched in accordance with standard Health and Safety requirements. Ramp access from the surface will be via the north side of High Rake, adjacent to the private haul road in addition to the current accesses at the east and west ends of the site.

The application area includes a small extension of 1.47 hectares to allow for the extension of the safety benching on the north side of High Rake. Earlier attempts at safety benching 20 years ago near to Betney Cop had transgressed outside the area of consent 1898/9/45, so this area has been included together with a narrow length immediately east which is required for future safety benching. Together these constitute the 1.47 hectares extension.

Currently this area is being worked at the eastern end, by the establishment of the safety benches.

Ore extraction and bench creation will progress westwards along both High Rake and Bow Rake until they reach the western junction of the 2 veins.

West of this junction, there is a residual waste heap from earlier opencasting near Betney Cop. This heap is currently being removed to allow access to the original ground levels and in the process a useful amount of ore is being recovered.

When this area has been cleared the opencut will continue its advance along High Rake towards the old Arthurton opencut adjacent to Betney Cop.

There is very little soil cover within the Bow Rake/High Rake area, but what soil is present will be recovered and used (together with tailings from Blakedon Hollow) to provide a 2 metre high bund alongside the southern boundary of the opencut. This will reduce both the visual and noise impact upon the adjacent public right of way.

Once the current waste heaps have been removed there will be no stocking of any material above ground level (apart from the soil/tailings bund).

Restoration

Backfilling of the adjacent Deep Rake area will be completed within 5 years. Thereafter the restoration will commence on High Rake / Bow Rake and Arthurton West.

A mixture of Blakedon Hollow Dam tailings and Longstone Edge limestone will be used to progressively fill the void. The backfilling will follow the western advance of extraction so providing a steady reduction in the strike length of Longstone Edge which is subject to mineral activity.

Limestone produced by the development of the safety benches will be added to the backfilled tailings, but there is insufficient space in the void for all the stone. Therefore approximately half of the limestone extracted will have to be disposed of off-site.

The tailings and limestone fill will provide sufficient backfill over the 15 year life of the operations to restore the worked areas throughout the whole site, including the current void as well as the proposed working.

Arthurton West

During the late summer of 1999, whilst Laporte Minerals were backfilling a subsidence feature created by Watersaw Mine workings, an unexpected deposit of high quality ore was discovered at Arthurton West.

This mineral lies within an area which was fenced some considerable time ago for safety reasons due to potential subsidence by Watersaw Mine working.

Having completed the backfilling of the subsidence, the surface potential for ore extraction has been investigated.

Located within the area where High Rake and Watersaw Rake are dividing to the west, these 2 veins have been neglected by earlier opencast activities.

By working this divergence in a similar manner to the Bow Rake/High Rake proposal it will be possible to recover a considerable quantity of high grade ore.

The mineral veins continue down to a volcanic horizon at approximately 60 metres depth and are expected to take 5 years to extract.

To access this ore the host limestone will have to be benched in accordance with standard Health and Safety requirements. Ramp access from the surface will be via the north side adjacent to the Watersaw Mine private haul road. Ore extraction and bench creation will progress from east to west.

Currently this area is being worked by shallow extraction but will soon require the removal of some limestone to allow the establishment of safety benches.

Soil will be recovered and used (together with tailings from Blakedon Hollow) to provide a 2 metre high bund alongside the northern and eastern boundaries of the opencut. This will reduce both the visual and noise impact upon the adjacent public right of way.

Once the extraction of the top bench has been achieved there will be no activity and no stocking of any material above ground level (apart from the soil/tailings bund).

The waste limestone removed will be taken to the Bow Rake/High Rake working area for disposal and stocking below surrounding ground levels.

Restoration

Backfilling of the Deep Rake area will be completed within 5 years. Thereafter the restoration will commence on Bow Rake/High Rake and principally Arthurton West.

A mixture of Blakedon Hollow Dam tailings and Longstone Edge limestone will be used to progressively fill the void which should take approximately 3 years to complete.

It is appreciated that the Arthurton West working area lies within the Natural Zone.

This area has been subject to mineral extraction during the last 40 years but nevertheless it is considered that an appropriate restoration scheme can achieve a satisfactory integration into the adjacent parts of the Natural Zone.

Whilst it is appropriate to leave residual low level cliff features as part of the Deep Rake and Bow Rake/High Rake restoration work, the Arthurton West workings are better restored to match the original ground levels.

However, it is considered that the method of re-establishing the flora is best decided by discussions between the Company and the Authority's ecologists at an appropriate future date.

The Beeches

This area has been subject to at least three phases of extraction during the last 40 years. Due to its exposed location on the flank of the escarpment each period of

extraction has been followed by immediate restoration to a grass sward suitable for continued grazing by the tenant farmer.

Following exploration drilling and trenching in 1997 economic reserves of residual mineral were identified and consequently a 700 metre strike length of proposed working was planned.

During the last 2 years the western half of this length has been extracted and restored.

The remaining eastern end of the Beeches will be extracted by similar shallow working during the next 3 years. It will not be as visually intrusive as the part just completed because the escarpment slope is not so steep and therefore the 2 metre high soil bund will reduce the impact of site activities. Working will be from east to west.

Extraction will be to a maximum depth of 15 metres. Waste production is anticipated to be minimal and will be stored in temporary 3 metre high mounds alongside the active workings.

Restoration will be by backfilling this waste together with Blakedon Hollow tailings prior to soiling and seeding. The restoration profile will be a return to original ground levels.

Access will continue to be via the existing haul route up onto Longstone Edge and thence to Cavendish Mill along the private haul road.

Underground Working Scheme

Modern underground fluorspar mining was commenced in the early 1960s from the Sallet Hole Mine site in Coombsdale. The old lead miners' adit was re-driven to gain access to the vein at depth. Exploitation progressed both east along Deep Rake and west along High Rake.

Because the potential strike length of High Rake was so extensive, in the mid 1970s a second access point was developed at the Longstone Moor Compound to the south of Longstone Moor farm. Initially known as Sallet Hole No.2 Mine this project was designed to work both the western part of High Rake and the Watersaw Rake. In later years it has been called Watersaw Mine.

The majority of ore which can be economically won by underground working from the Sallet Hole Mine has been extracted.

The main thrust of future underground work will be to the west of the Longstone Moor Road crossing of High Rake. However there will be investigations towards workings on Strawberry and Brandy Bottle Veins to the north of High Rake and also under the Beeches on the south side of High Rake. Any extraction within these areas would be of a small scale in relatively narrow veins resulting in limited subsidence effects at the surface.

Underground working at Watersaw Mine has only recently re-commenced after being stopped last year. The main purpose is to develop the extraction in a westerly direction along Watersaw Rake. In the short term there will be residual working of the current parts of Watersaw Mine which still contain reserves.

Secondary access and a ventilation route are currently available via the Red Rake Shaft at the eastern end of Deep Rake (and the Sallet Hole Adit could theoretically be used in emergency). However with the future direction of working being to the west of the Watersaw Compound, it will be necessary to obtain a new secondary access on Watersaw Rake. This will best be achieved by construction of a shaft within an extracted part of the vein. Concrete pipe sections would be placed vertically in the open stope to create a shaft, completed by careful backfilling. The only surface evidence would then be a safety fence approximately 5 metres square around the grilled opening. Such an operation cannot be realistically planned until development and initial extraction has commenced. It is therefore proposed to enter discussions with the MPA at the appropriate time in the future.

Details of the underground development and layout cannot be decided until the workings are nearer the area. However it is intended to provide annual reports to the MPA which will include both details of work done and work proposed for the following year. The basic style of mining will be the same as has been undertaken throughout Longstone Edge. Parallel access tunnels on at least 2 horizons will be driven at a maximum distance of 20 metres from the vein in the host limestone. Extraction of the mineral will be via frequent cross connections into the vein. These horizons will probably be at depths of 30 and 60 metres below the surface. The decision as to whether the tunnels are on the north or south side of the vein can only be taken at the development stage of the mining. Indeed it is quite common for such tunnels to frequently change from one side of the vein to the other so as to remain in the better ground conditions for mining.

Under the centre of Longstone Moor there are off-shoot veins from Watersaw Rake which are also likely to be worked. These veins lie within the SSSI and any subsidence created at the surface would be subject to a careful scheme of backfilling to minimise the effect on the limestone heath. This backfilling scheme will be designed following discussions with the MPA and English Nature. However it should be borne in mind that the current consent for this work was in existence prior to the creation of the SSSI.

Limestone Extraction

In order to safely extract the vein mineral, limestone host rock will have to be liberated to provide benches in accordance with modern Health and Safety requirements.

If all this limestone was used as backfill, there would be no room for the deposition of the Cavendish Mill tailings extracted from the Blakedon Hollow Dam. The on-going

removal of this waste is necessary to allow the continued use of Blakedon Hollow as the prime repository of the residue from ore processing at Cavendish Mill. The only alternative would be to seek a further site for another tailings dam, but this is most unlikely to be granted planning approval.

The rate of tailings extraction from Blakedon Hollow is governed by the amount of tailings produced by Cavendish Mill. It is plainly uneconomic to create more void within the dam than is necessary to accommodate the incoming tailings.

At the expected rate of extraction from Blakedon Hollow there will be a considerable shortfall in the restoration backfill for Longstone Edge. There is clearly therefore a need to use the waste limestone to supplement the tailings and to stabilise the surface of the tailings for soiling to take place.

The quantity of limestone required for backfill equates to approximately half of that removed in the course of developing the safety benches.

It is therefore intended to dispose of the other half of limestone produced off-site. The ratio of ore to limestone is 1.2.03.

The most efficient method to achieve this is to crush it on-site by use of a mobile crusher located within the opencut.

The limestone would then leave the site via the private haul road to Cavendish Mill and thereafter by Thunderpit Lane towards either the A623 or the B6465. Principal markets would be to the east of the Peak District.

In the Year-End Company Accounts (which are externally audited) an appropriate provision will be made for all future liabilities, governed by the legislation for accounting standards, FRS12. This provision has to be made to the full value of planned restoration and is a condition of the accounts being passed by the Company Auditors.

Therefore a sum of money will be held in the Company Accounts which is sufficient to complete the restoration of Longstone Edge to satisfy the Planning Conditions.

It is a legal requirement to file our statutory accounts with Companies House and they will be available for inspection by the general public on request.

Private Haul Road

From the north side of High Rake, at its confluence with Strawberry Vein, a private haul road was established many years ago. Known as the Strawberry Vein Haul Road, it has been used to enable mineral traffic between Longstone Edge and Cavendish Mill to travel the whole route without using the public highway. The northern end of this Haul Road joins the Sallet Hole private road at Black Harry Gate and traffic completes its journey to Cavendish Mill along this road.

It is proposed to route all the limestone traffic, the incoming tailings backfill traffic and 90% of the ore traffic over this route except in the severest of winter weather. Due to the steep gradient on the Strawberry Vein Haul Road, it cannot be used when there is excessive snow and ice.

At the end of the development, when extraction and backfilling are completed, the Strawberry Vein Haul Road, between High Rake and Black Harry Gate, will be removed and the area restored to hill grazing to blend in with its immediate surroundings.

Deep Rake Restoration

Mineral extraction on Deep rake, to the east of Bleaklow Gate, ended 2 years ago. Restoration work has commenced with the deposition of Cavendish Mill tailings from the Blakedon Hollow Dam mixed with waste limestone from adjacent workings.

This backfill mixture will continue until the restoration profile illustrated on plan reference LE3/DRb is achieved. This is estimated to take a further 5 years. The resultant land form will retain low level residual cliff features to maintain an acknowledgement to the mining heritage of the area.

Details of the seeding and planting will be made following discussions with the MPA ecologist at the appropriate time.

Sallet Hole Mine Site Restoration

Use of the Sallet Hole Adit for mineral extraction ceased some years ago. The majority of the site has been restored to produce a sympathetic profile which has successfully been seeded and planted with trees.

Some residual buildings still remain and it is intended to remove these during the current year. They will be demolished and profiled prior to covering with tailings suitable for seeding and planting to match the existing restoration work.

