C A T

The Newsletter of the Cumbria Amenity Trust Mining History Society

Shaft and cage in Sir Francis Level. Photo Chris Cowdery

No. 104 August 2011

Cumbria Amenity Trust Mining History Society
Newsletter No 104, August 2011.

Contents:

Membership, News

Committee meetings. CATMHS Committee meetings are held at the Barrow Mountaineering and Ski Club Cottage at Coniston Coppermines. Most Committee members travel considerable distances in order to attend, a costly business in view of the recent increases in fuel prices. At the last Committee meeting a proposal was carried to change the minimum number of committee meetings per year from 6 to 4, and this will be put to the AGM in December.

Newsletter

It has been suggested that the CATMHS Newsletter might be distributed electronically. There is no intention to cease producing paper copy, but for those who might prefer, it could be emailed as a pdf. An advantage of this is that the pictures would be of better quality than the printed version, and they can also be enlarged. Any member preferring to receive it this way should email the Membership Secretary and Newsletter Editor, membership@catmhs.org.uk

The entire back catalogue is available as pdf's at a cost of £1 per issue for members and £5 for non members. For this service contact the Treasurer, treasurer@catmhs.org.uk

Meets List

By now members should have received the latest Meets List, which runs up to Summer 2012. There is something to suit all tastes and hopefully it will be well supported.

Editor's rant, part 2.

Last time I had a rant about posting the newsletter. Here is another, about printing it.

When I started editing the newsletter in September 2000 with edition No 61, I hoped that I would be able to maintain the standards set by previous editors. I thought that it should consist of about 20 pages, but was concerned that I might struggle to get enough copy to fill it. That has never been the case and it usually runs to nearly 40 pages. I am truly grateful to all those people who contribute articles and information. May you all continue to do so.

In the early days it was a matter of cutting, pasting and photocopying. Everything was black and white except for the colour of the card used for the covers, but now technology has transformed production. In order to get best value I print it all on a desktop inkjet printer which involves printing about 4,000 A4 sheets for each issue, collating them, and stapling them all together. It is very satisfying when it goes smoothly and utterly infuriating when it does not.

I use compatible ink cartridges in an Epson printer, which cost about a fifth as much as the genuine Epson ones. The printer lasts for about four editions, about 18,000 sides before coming up with a message that some parts are no longer serviceable. Shortly after that it stops working, so I replace the printer every year. Each replacement printer is

faster and quieter than the last one, produces better quality print and pictures, and is often cheaper to buy. The ink has got better too although it is still possible to get a duff batch.

The current printer will do about five sides per minute of text and pictures, so 4000 sides take about 14 hours of continuous printing if all goes smoothly. Unfortunately it doesn't always go smoothly. One of the problems is paper pickup when printing double sided pages. The first page is usually fine, but subsequent ones often stick, which drags through several sheets at a time. This means that I have to check each batch, remove the spoiled sheets and print them again. Some pictures use quite a lot of ink and saturate the paper, making the edge crinkly so that it won't pick up at all. It is a good plan to avoid dense pictures near the top of the sheet and I try to arrange the layout so that there are only pictures on one side of each sheet. If I remember to print the black and white text side first, then the picture side is less likely to jam. The glossy cover page is another problem as the glossy side doesn't slide easily over the sheet below. The height of the stack in the printer tray is critical and I have to print the cover in small batches.

From time to time the inkjets become clogged, which results in horizontal banding and/or spoiled colours, and the inkjets have to be cleaned in order to restore the quality. Cleaning is time consuming and uses ink. In order to limit the number of spoiled copies I usually print each page in batches of 35. I had extra problems with the last edition caused by a bad batch of ink which clogged up the inkjets.

When this happens the only thing to do is to clean the inkjets by using the printers cleaning cycle. On this occasion I had to do it a dozen times or more before it would print properly, and on several occasions. It seems that there are pads to absorb surplus ink used during cleaning, and after a while I got a message 'Your printer's ink pads are saturated. Contact Epson Service', and it wouldn't work anymore. As I hadn't been using proper Epson ink I didn't expect Epson to accept responsibility, but I phoned them anyway.

Here's the good part. Within five minutes of beginning the call I got to talk to a proper English speaking person who said 'it's under warranty, we'll fix it free of charge.' I could either take it to their agent in Kendal for repair or, if I paid a £10 courier charge they would deliver a service assured replacement to my house. I opted for the latter, and they told me to package the old machine for collection, retaining all the removable parts, as the replacement would consist of the body only. What actually arrived three days later was a brand new boxed printer, including a complete set of Epson ink cartridges. The ink supplier replaced the faulty batch of cartridges, but I intend to change the supplier anyway. IM.

Keswick Mining Museum Sale

The Museum is now in its twenty-fourth year and after much deliberation Ian Tyler has decided to sell the Museum. It is hoped a suitable buyer and mine fanatic is out there and is willing to take the challenge on board; in the interim everything will continue as normal.

Ruskin Museum, Coniston, Proposed Exhibition 2012
Artist and CATMHS member Jane Foale has held exhibitions of her mineral inspired art at the Theatre by the Lake, Keswick and at Penrith Museum.

Vicky Slowe, Curator of the Ruskin Museum at Coniston has approached her about exhibiting at the Ruskin Museum because of the focus of her art work on mineralogy and mining history. It is currently anticipated that the exhibition will take place from around Easter to October, 2012. It is planned that the exhibition will be in the upstairs exhibition area where there are both wall space and display cabinets. Jane has been spending some time investigating the CAT archive at the Museum and, struck by the diversity and range of material, started to wonder whether there might be an opportunity to show some of it as part of the exhibition.

If an exhibition could be mounted including CAT material alongside artwork, there seems to be an interesting opportunity to present something of the different ways in which people become involved in and excited by mining and minerals. It would also be an opportunity to bring some of CAT's activities more into the public eye. There is much fascinating material relating to the historical side and photographic material of work and activities underground might be used. There is to be a meeting at the Museum in September to discuss the possibilities.

Coniston Barge
The barge Elizabeth, which was used for transporting minerals on Coniston Water before the railway was built, is currently lying on the shore at the Windermere Steamboat Museum. She was built at Waterhead, on Windermere, in 1830 by Watson to transport ore down the lake from Coniston to Nibthwaite for onward transportation to Penny Bridge or Greenodd. She became redundant when the Coniston Railway was opened in 1859, and in 1888 was bought GH Pattinson for sandgetting on Windermere, and was used until 1910 when she was superseded by larger barges.

The original barge is in poor condition, and Ted Gregg of Coniston has been asked to build a model for display purposes. (The Coniston Mine cost book shows that Thomas Gregg, an ancestor of his, was paid to cart ore down from the mine to the Lake Landing.) In order to do so he would like to know more about just how the Barge was travelled down Coniston. The general conception is that the Barge was rowed with sail assist when the wind was favourable, but there is no evidence of any rowing fittings ever having been fitted on the remains of Elizabeth, and he imagines that once she had returned to Windermere she would likely have been towed by steam, though there is no evidence to suggest so. Does anyone have any information?

There is a letter in Kendal CRO from William Rigg to Sir William Fleming dated April 1753*: 'I am told that Jackson has carried a deal of his slate to Conistone Waterhead but non is yet carried down the Water, but am told that Wilson of Bank Ground (who rows the Penny Bridge Companys Boat) gives it out that he is to carry it down very soon …'*

W G Collingwood in 'The Book of Coniston'(1897) p85, refers to slate shipped from Kirkby Quay in sailing boats *'of which there were enough upon the water in 1819 to be described as a scene of bustle and animation.'*

Both of these references pre date the construction of Elizabeth.

In the Coniston Cost Book No2, 1838 – 1840, there is a reference to Thomas Gould, Joseph Gibson, William Harker and George Collinson loading boats, and several references to Benjamin Dixon boating ore from the Hall to Nibthwaite, but no indication of how it was done.

The Coniston Barge Elizabeth

The Windermere Steamboat Museum was founded in the 1970's by builder George Pattinson. It has one of the world's most important collections of vessels generic to one location – including the oldest mechanically-powered boat, the UK's first twin screw steam yacht, the oldest boat on the Lloyds register and one of the first motorboats.

The site is currently closed to the public whilst conservation works are carried out on the boats and plans for the redevelopment of the site are progressed. The Lakeland Arts Trust has recently been awarded a grant of £7.4 million by the Heritage Lottery Fund. They hope to re-open to the public in 2015, but in the meantime it is possible to arrange individual and group visits to view the project. www.steamboats.org.uk

IM.

Wales weekend, 7th – 8th May, Llanberis and other copper mines

Attendees:	Chris Cowdery	John Ashby
	John Cameron	Mark Waite
	Tony Holland	Roy Fellows
	Jon Knowles (ML)	Richard & Mrs Hewer (Surface only)

This is a continuation of the exploration detailed in NL 102 to which the reader should refer for reference. Infamous adventurer Roy Fellows was invited on this meet since it was his uploading of an Eldon Pothole Club report onto the Intranet which originally awakened the author's interest in the exploration of the Llanberis site.

Saturday

Since the last report the Welsh team had made a further 3 visits to the mine, and after a further two pitches attained the adit level on the 16th October 2010. Fortunately all of the subsequent descents had been drier than the original descent in July 2010. The workings deserve considerable respect since almost all of the floors are false and the timbering is very old. When exploring a side level on the 5th March 2011 the author was installing a rope in preparation for crossing a section of fallen floor and put his foot through a hole in what was thought to be a solid floor. Fortunately the remainder of the floor was solid and a rope was swiftly clipped to.

King Arthur in the stope on the Drainage Adit horizon

The drainage adit gives access to the inside of the grill beside the path and it was sobering to look out whilst standing in waist deep water knowing that your car was only 100 yards away horizontally but that it would take a 100+ metre prussick and a climb back down the hillside to get there. The adit contained a number of interesting artefacts these being:-

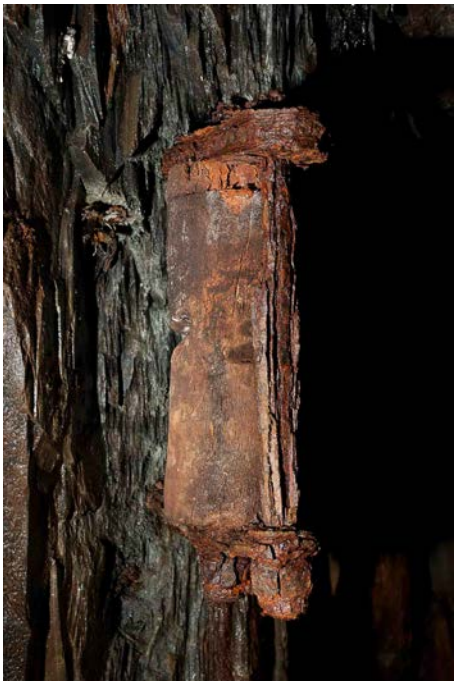
1. A massive (approx. 0.45m x 0.45m x 3m) hollowed out wooden timber which was assumed to have been part of a rag and chain pump.

John Cameron stands beside what is assumed to be the remains of a rag and chain pump.

Looking into the bore of the pump.

2. A roller mounted on the side of the level between the adit mouth and the main stope which must have either been used to guide a rope which would have been used for winding or pumping.

3. A strange wooden part ring which nobody has any idea what its purpose was.



Roller

Unknown object.

4. A shaft in the floor adjacent to the pump which was easily disguised by mud in the water as Chris found out to his cost.

5. A flooded stope continuing downwards.

Detail on unknown object

After some indecision by a number of potential attendees a total of 7 underground explorers, together with Richard & Eileen Hewer, assembled promptly in the car park and then slogged up to the adit. The descent to the adit proceeded quickly although some moaned of short re-belays whilst Roy decided not to descend all the way on the pretext that his light would blind the others . . .

During the exploration of the adit level Chris tried to explore the flooded shaft but only got a short distance.

Whilst ascending, the visitors explored the biggest sub-level whilst Chris and the author headed straight to surface to start rigging the western workings in preparation for Sunday.

Total tackle required for the descent is:-

1 x 33 m rope	2 x 30 m rope
1 x 50 m rope	1 x 60 m rope
1 x long rope protector	2 x short sling
1 x long sling	1 x medium sling
30 x 10 mm hangers	33 x krabs
too short (sic) re-belays	

Saturday Night
This was spent at Snowdon Ranger Youth Hostel and at the Cwellyn Arms, where a liquid and boisterous evening was had by most attendees, despite the legendary "Russian" service. On returning to the Hostel it all proved too much for Ashby who fell asleep on the floor leaving his pint to be drunk by Mark and the author. The exceptions were messers Fellowes and Holland who were apparently sharing a tent in Llanberis but we are unable to provide further details in the Newsletter due to a super injunction.

Sunday
The plan on Sunday had been to descend the western workings, however the previous descent had highlighted the extreme danger of this route and it was planned to re-rig to provide a safer descent. Despite two attempts by the author at the head of big pitch a safe descent could not be found that would attain the bottom within the day. Due to this the attempt was abandoned and the team moved over to Dyffryn Ogwen to look at the Cwm Ceunant Copper Mine, as named in Bick's The Old Copper Mines of Snowdonia, although other than a simple section no other information is included.

The mine lies at an elevation of approx. 350 m at SH626637 (park near Tai-newyddion) and is a small working on three levels, the lowest of which is blocked with the upper two being open. Roy has provided the following information which originated from the BGS in 1924

CEUNANT COPPER MINE, LLANDEGAL

Levels in Cwin-Cemant, and about 6oo ft. above the "Old Road' on the west side of the Nant Ffrancon, and 21 miles by road from Bethesda Station (L. and N.W.R.).

Maps:-One-inch New Series Ordnance, io6 ; Old Series geological, 78 S.E. ; six-inch Carnarvonshire, 12 S.W.

The country-rock consists of flaggy-grits of Cambrian age.

For the following particulars we are indebted to Mr. G. J. Williams, H.M. Inspector of Mines.

There are three levels, the lowest being in the mountain-side about 1,250 ft. above the Afon Ogwen. The lowest level has collapsed; the second is timbered and was driven by overhead stoping. It is unsafe to go far in. The vein in it measures about 11/4 ft., dips N.N.E. at 80 degrees and has a gangue composed of quartz cementing a slate breecia. A large rock has blocked up the top level. The levels are about 6o ft. vertically apart. The lode consists for the most part of ironpyrites with some cheleopyrite.

Williarn Willims, in 1802, describes several localities in the Nant Ffrancon where copper ores had been and were then being worked. He instances the trial_made on Maes Caradoc, Blaen-y-Nant, Cwm Bual, Cwm Graianog, and Ceunant. Near Blaen-yNant a large body of mineral matter resembling molybdena was discovered; at Cum Bual a mass of Soap Rock, and mixed iron and
copper sulphides elsewhere. But most of these ventures seem to have failed.

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After flogging up to the site we entered the middle level and bolted a drippy descent to the lower level. The tackle needed is:-

1 x 30 m rope	5 x 10 mm hangers	
1 x rope protector	2 x slings	7 x krabs

On attaining the lower level a number of artefacts were found these being:-

1. Some lengths of “Thomas Hughes” rail and a loose sleeper. For readers not familiar with this is type of track work, it was contrived by Thomas Hughes, foreman platelayer at Penrhyn Quarry and consisted of round wrought iron bars 1.5 – 1.75 inch in diameter. Each bar had a 90 degree elbow forged at each end to enable them to be inserted into cast iron sleepers having 4 round holes. This type of rail was first used in 1852. This crude track was used at Penrhyn to provide short temporary lines from the main line running along each gallery up to the working face. It beauty was that it could be easily moved as the workings developed.

2. A wagon which was almost submerged under water and was quickly lost to sight as we explored.
3.
4. A wooden box the purpose of which was unknown.

After re-ascending to the middle level, Mark led the team in-bye where most of the floor had collapsed and it was necessary to balance on one of the rails which had been left hanging in space. This gave access to a wet shaft up, which contained some nice malachite staining. Returning to surface the team climbed the tips to the upper level. Here progress is soon blocked by a shaft down (clearly the shaft seen on floor 2).There is a way on beyond the shaft at a higher level although it would have taken more time and tackle to access this and therefore a return visit is required.

Thomas Hughes Sleeper

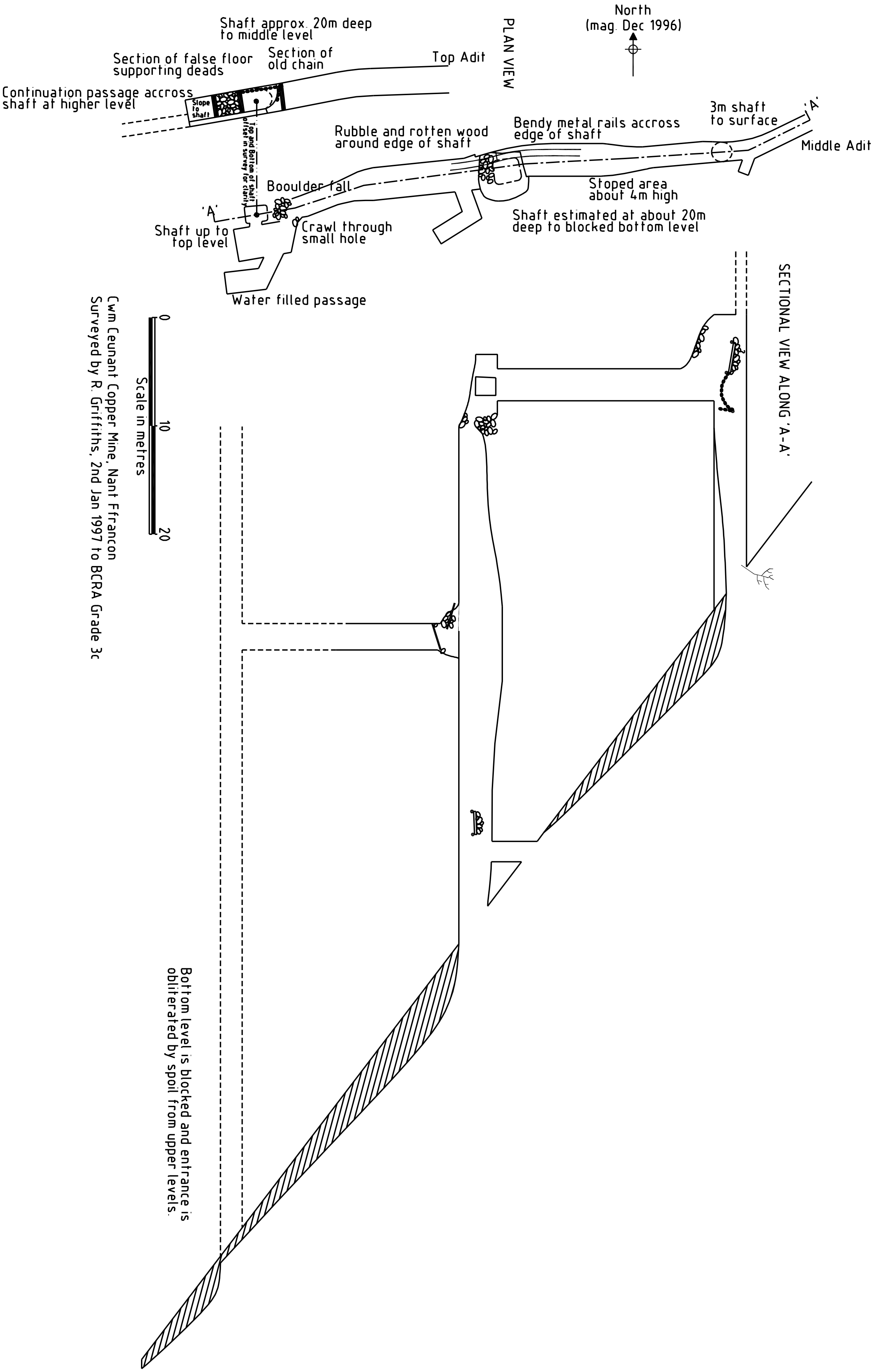
End of Thomas Hughes Rail

Wagon

General view of the site from below.

A section drawing is attached. This is an annotated version of one generated by Robin Griffiths with whom the original copyright resides.

Jon Knowles

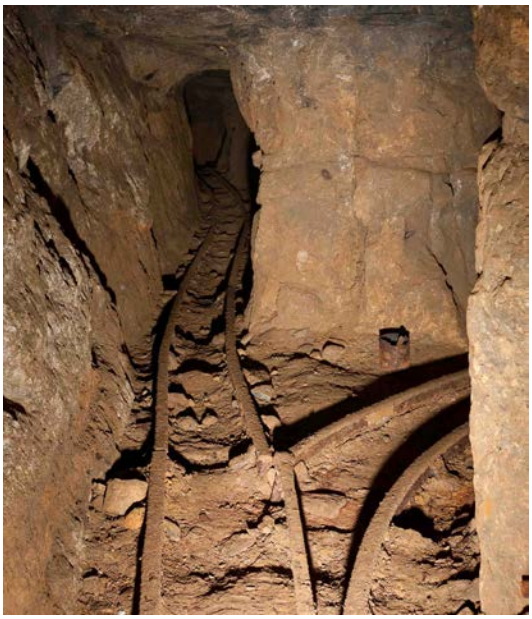


North
(mag. Dec 1996)
PLAN VIEW
Shaft approx. 20m deep
to middle level
Section of false floor
supporting deads
Section of
old chain
Top Adit
Continuation passage accross
shaft at higher level
Stope to shaft
Top and bottom of shaft offset in survey for clarity
3m shaft
to surface
'A'
Middle Adit
Rubble and rotten wood
around edge of shaft
Bendy metal rails accross
edge of shaft
Booulder fall
Stoped area
about 4m high
'A'
Shaft up to
top level
Crawl through
small hole
Shaft estimated at about 20m
deep to blocked bottom level
Water filled passage
SECTIONAL VIEW ALONG 'A-A'
0
10
20
Scale in metres
Cwm Ceunant Copper Mine, Nant Ffrancon
Surveyed by R. Griffiths, 2nd Jan 1997 to BCRA Grade 3c
Bottom level is blocked and entrance is
obliterated by spoil from upper levels.

Devis Mine, Grinton, 25th June.

Chris Cowdery (ML), Jon 'Roger Bannister' Knowles, Mark Waite, John Ashby, Steve Brown (NP) and Capt. Aird (retd). Steve Brown fortunately got stuck in traffic and returned home (NP = Not Present).

The group rapidly* moved up Cogden Gill to the entrance to Devis Mine. The intention had been to rig two pitches to enable a circular trip if numbers were high enough, but it was decided that one pitch would suffice. The pitch (Pearsons Sump) was rigged from Robinsons level. Part way down, the sump breaks into a level resplendent with large quantities of 1ft gauge rail still in place. Devis mine is renowned for its myriad natural passages, thus the group branched into the South Cave series to give access to Wyvills Level. The South Cave series has potential for taking circular routes, but the ML decided to take a direct route. Wyvills level is no longer accessible from the surface. After taking lunch, the group moved through Wyvills to enter the East Cave series, which contains considerable amounts of graffiti dating from 1859 -1860, from miners exploring the natural passages looking for galena.



Devis mine, 1ft gauge iron rail

After a brief photographic stop at Graffiti Corner, the group noted the passages gradually reducing in size until they are flat out crawling and thrutching with 90 degree bends. Noises of dissent were building to a crescendo, thus our athletic superhero and John Ashby bottled out and waited for the expedition squad to finish their tour. The final stretch of cave passage to DH4 chamber can be best described as 'tight' with a particular squeeze which would have challenged even the fittest 10K marathon-man (were he not already sat waiting!). Fortunately our resident retired commercial airline pilot passed through without a murmur. It is testament to either the tenacity or desperation of the original miners that they reached this point without the luxury of decent clothing or electric lighting.

Devis Mine, Pearsons Sump

DH4 inspected, CC, MW and JA (retd) returned to the others and found our way back to Wyvills level, noting some bonus graffiti not seen on the way in. A flawless return through South Cave took the group back to Devis, whereupon a short exploration of the levels revealed that we weren't going to cover everything. Travelling outbye, MW and the ML took a look at the Central Maze before following the rest of the group to the surface.

The historical record says little about Devis. Perhaps the most interesting note from Dunham is the comment 'Another series of caverns marked on the primary geological survey map is shown linking these workings with those of Crina Bottom Mine, at the Red Beds horizon' [Dunham, Geology of the Northern Pennine Orefield, 1985, vol 2, pg 110]. Dunhams discussion of the Cranehow Bottom Old Vein [Dunham, pg 177-178] describes the vein from Keldheads mine northwards towards Devis, and states 'Near the boundary (Ellerton), natural caverns seem to have been cut which formed a link with the workings considered to be on the same vein from Devis Hole Level where there was a drive on it, running 370m South from Wellington Vein, with flot workings in communication.' It isn't clear from Dunham whether this connection allowed an underground transit from Devis to Keldheads Mine, a distance of 3.75miles, in fact, the geological cross-sections on pg. 177 suggest some vertical discrepancies.

*possibly not fast enough for our Leeds 10K superhero Jon Knowles.

Gunnerside Gill, 26th June

By Sunday, Jon Knowles was clearly not only smarting from his caving experience the previous day, but also missing not being in charge. This latter point was easily rectified by instigating a mutiny, whereby JA (retd) and MW accompanied Jon on a visit to the Sir Francis engine in spite of the Meets List stating 'exploring Gunnerside Gill (probably excluding the Sir Francis Level)'!

The group travelled together to the Sir Francis Level entrance, and marvelled at the fabulously restored portal. The splitters kitted up, dropped down the short shaft, and disappeared up the level, leaving the ML and JA in the glorious June sunshine.

JA and the ML ascended the valley side and soon reached Bunton Level. A quick exploration revealed some wooden rails still in place (1ft gauge), and hundreds of yards of perfect tunnel with more usual gauge rail on the sole. Both major forks end in collapses, presumably where shafts are passed. The ML felt that some determined digging would pass the blockages as the condition of the roof is excellent for whole level to the blockage.

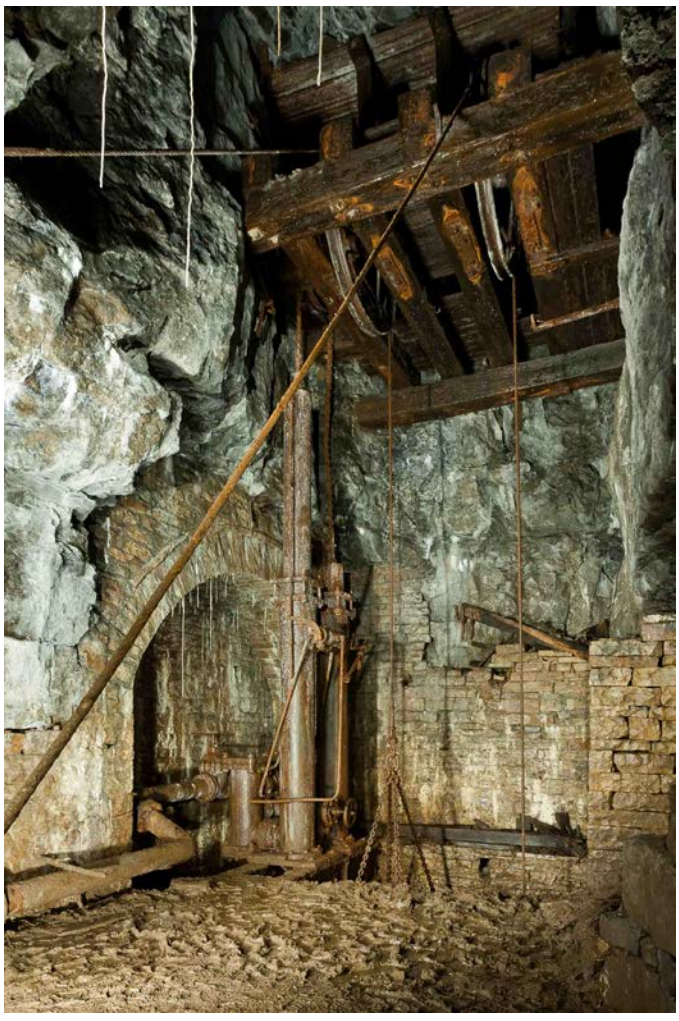
Returning out-bye found a family with two young lads who were very intrigued by the portal. JA took the lads on an impromptu trip; when returning to day, the two lads had clearly very

much enjoyed their trip, in spite of having wet feet! The ML explained the mine and buildings to the parents.

Dressed ore from the Sir Francis dressing floors was carted up hill to the Bunton level, trammed along the level, dropped down a hopper into Hard Level, and trammed out to Hard Level Gill. The ore from the Old Gang company was smelted at the Old Gang mill (adjacent to the Hard Level portal), and the ore from the A D Company was transported down the valley to the Surrender mill! This complicated process was deemed cheaper than transporting overland.

The ML and JA then crossed the valley to the Priscilla level. According to the survey, the Priscilla level had once a connection to the Sir Francis level via a 42 fathom rise from the Sir Francis. This rise was put in because rumours had suggested that payable ore remained when the Priscilla level was closed, so the rise from the Sir Francis level gave an opportunity to verify the rumour. It turned out not to be true! Not much remains accessible on the Priscilla level, as a shaft close to the entrance has collapsed, and further in-bye a dig has failed so far to pass a collapse.

The final destination was Blakethwaite, a rarely visited mine at the top of Gunnerside Gill. The ML and JA reached the mine buildings for lunch, and then proceeded to locate the high level adit. The adit was issuing water, but no way in was possible. A few hours digging would probably lower the water enough to allow entry. A return down the valley was made via the Blakethwaite low level, which was passed by as the ML didn't fancy a 700m wade through thick mud this time. The Blakethwaite low level was driven before 1831. Some notes from R Veitch, backed up by comments from Dunham, indicated that a return trip is necessary. Dunham suggests the presence of an underground shaft, the Blakethwaite Engine Shaft, which housed a hydraulic engine similar to the one in the Sir Francis Level. The ML and JA returned to Gunnerside to discover the Sir Francis Levellers sunning themselves outside the pub.



The Sir Francis Engine

A footnote is to thank John Dale for taking Tony Holland and Roger Ramsden on a trip around Devis on Sunday. The ML believes they all had a good trip.

Carrock Fell Mine

Sixteen working visits have been made to carry out restoration to the portal. Most of this work is now complete with just a few more visits required to tidy up the last of the rock and soil on the ground in front of the entrance. Another silt containment dam is also to be constructed on the Southern Harding Vein from where silts are migrating. These have overwhelmed an existing dam and are deposited all the way along No. 1 level to a depth of approximately 600mm. Since the entrance was leveled in 1988, the depth of silt has been gradually building up, which has resulted from mill slimes being pumped into the abandoned workings on the flank of Coombe Height in the late 1970's.

This picture taken 03.07.11 shows the diminishing pile of material, most of which is being taken back into the mine and used as pack in the area where new timber supports have been installed to replace the rotten collapsed timbering some 10 metres in from the portal. This amounts to between 40 to 50 tonnes and has all been moved manually. Note the cleared channel leading into the mine. This had been silted up prior to us using it as a containment lagoon to catch the dirty water which had leaked past the by-pass dam. This dirty water was then pumped out some 100 metres away onto the surface and tips on a number of occasions during the working day.

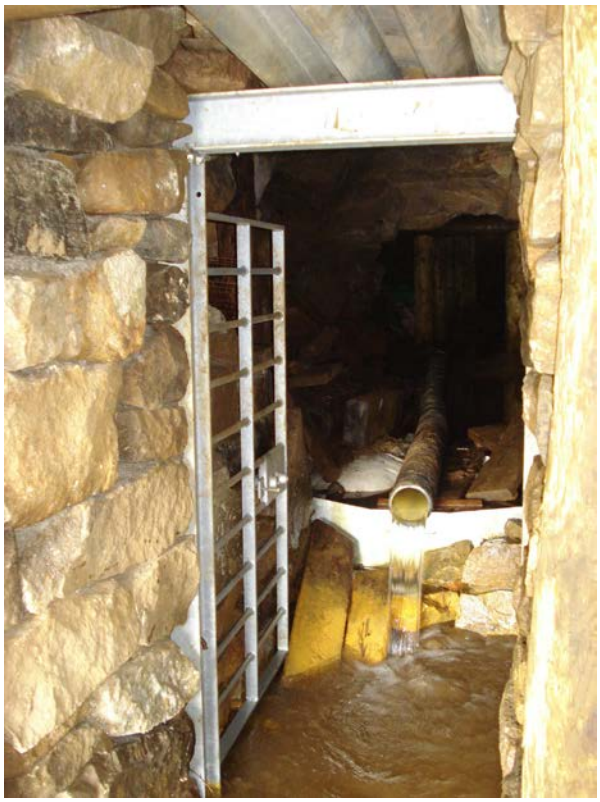
This picture on the left shows the newly reconstructed portal with all of the ground above supported by recycled crash barriers on top of reused rail. Additional

timbering has been used to provide essential support to the ground just in front of the gate. The by-pass pipe was still in operation at the time of this picture being taken. This system has worked very well and prevented any dirty or polluted water reaching Grainsgill beck and it enabled work to continue in relatively dry conditions. Any water that did manage to leak past the containment lagoon had to pass through an existing reed bed which also has a bagged dam wall at the end of it to slow the movement of water through it. The efficiency of this reed bed has impressed us all and just goes to show what a fantastic job these natural filter beds can do.

This picture is showing the dammed (not damned) reed bed which just happened to have the clean by-pass water pipe running through it before discharging into Grainsgill beck. Although the pipe has now been removed, the dam will remain until all work is completed and is now taking the full flow of water coming out of the mine, through the reed bed before finally spilling over it. The various agencies were keen to see this left undisturbed.

Here you can see how discoloured the contained water really is. You can also see the repairs to the retaining wall. The standard to which the original wall was built was never too high and so making a good job of this would have looked out of place. It rained continuously throughout the day

when this task was being undertaken and the rain in this nearly forgotten part of the Lake District always seems to come at you in a horizontal plane.



This is the newly installed gate and silt dam. The gate is a condition of the agreement with the landowner (Dalemain Estate) who kindly gave consent to allow this restoration work to be done. The methods to by-pass mine water around the working area and retain the silt deposits within the mine were discussed at length with the Environment Agency and the LDNPA archaeologists. They eventually approved the task specification and the E.A. recommended leaving the start date until water flows in the spring were sufficiently low, so as to minimize the risks to the water catchment system, i.e. Grainsgill beck and the Caldew river. The by-pass pipe can be seen resting on and discharging over the silt dam and if it all looks a little cluttered, this is because boards, bags etc. are deposited here at the end of the shift. The boards are used as a ramp for barrowing rocks and other material over the dam and on into the pack area.

A dedicated team have worked tirelessly on this for all of the sixteen weeks and it would appear that the final cost of the project could be several hundred pounds under the estimated figure which is being generously funded by English Heritage. Thanks must go to Eleanor Kingston and John Hodgson the LDNPA archaeology and heritage advisors for supporting this project and for liaising with English Heritage, Natural England, the Environment Agency and Dalemain Estate on our behalf.

The Society is indebted to Colin Woollard for his part in writing the Task Specification, which includes the risk assessments and method statements, but also the Annual Inspection Reports required for the 3 year management agreement between English Heritage and CATMHS.

Warren Allison has generously provided the pump and 100 plus metres of lay-flat hose to remove all of the dirty water away from the containment lagoon. This has saved the Society from having to buy these items, which are quite expensive and would not normally get much use.

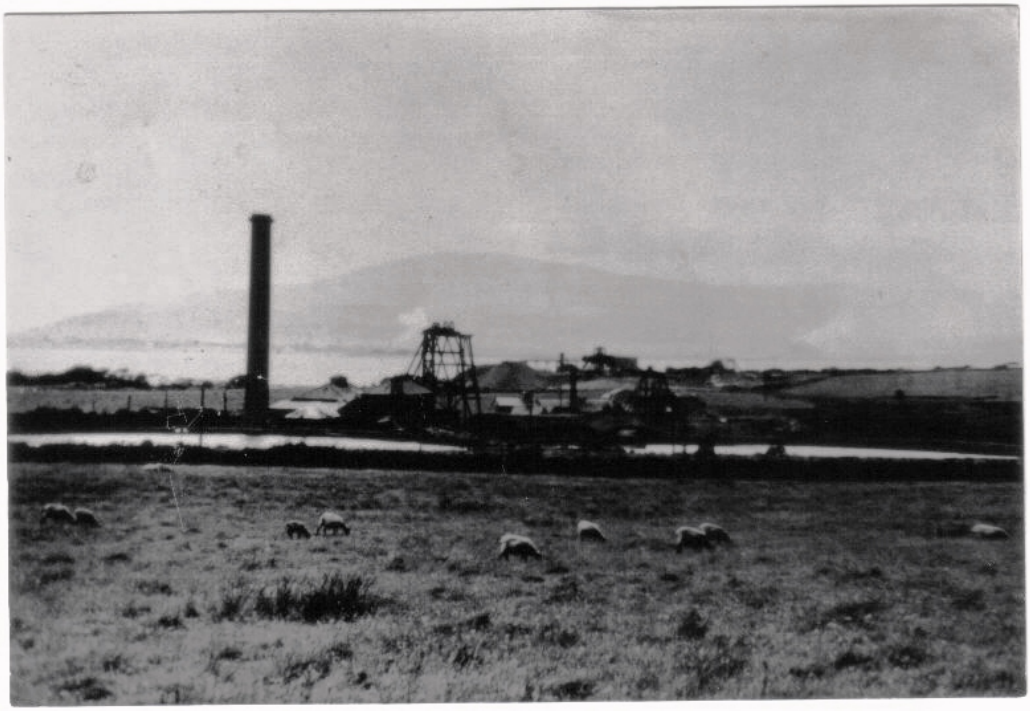
Pete Blezard has put in a heroic effort (when he is not on holiday), Andrew Woollard and John Brown just get on with it. Unfortunately Peter Sedgewicke has been unable to participate this time due to his old war wound, which he does not like to talk about. He assures us he will be back.

Mike Mitchell, Clive Barrow and Ian Matheson have given their usual support and often provide a public relation role, trying to explain to passers by what is being done. One difficult question that Mike did not find easy to answer was, why do most of these Nerds have beards?

This is a view looking out-bye at the newly installed timbering. These are 8" rounds and set onto the sole of the level using a temporary coffer dam to allow the digging out of the silt and preventing it from running in before the leg is put in place. The pipe containing the clean mine water can be seen running out along the floor, which is in fact sitting on 600mm of silt. The left hand side is now almost filled with rock brought in from outside and will help to stabilize and make safe this area and at the same time, lose the waste material from outside to return it to its previous state.

John Brown

Violet Pit

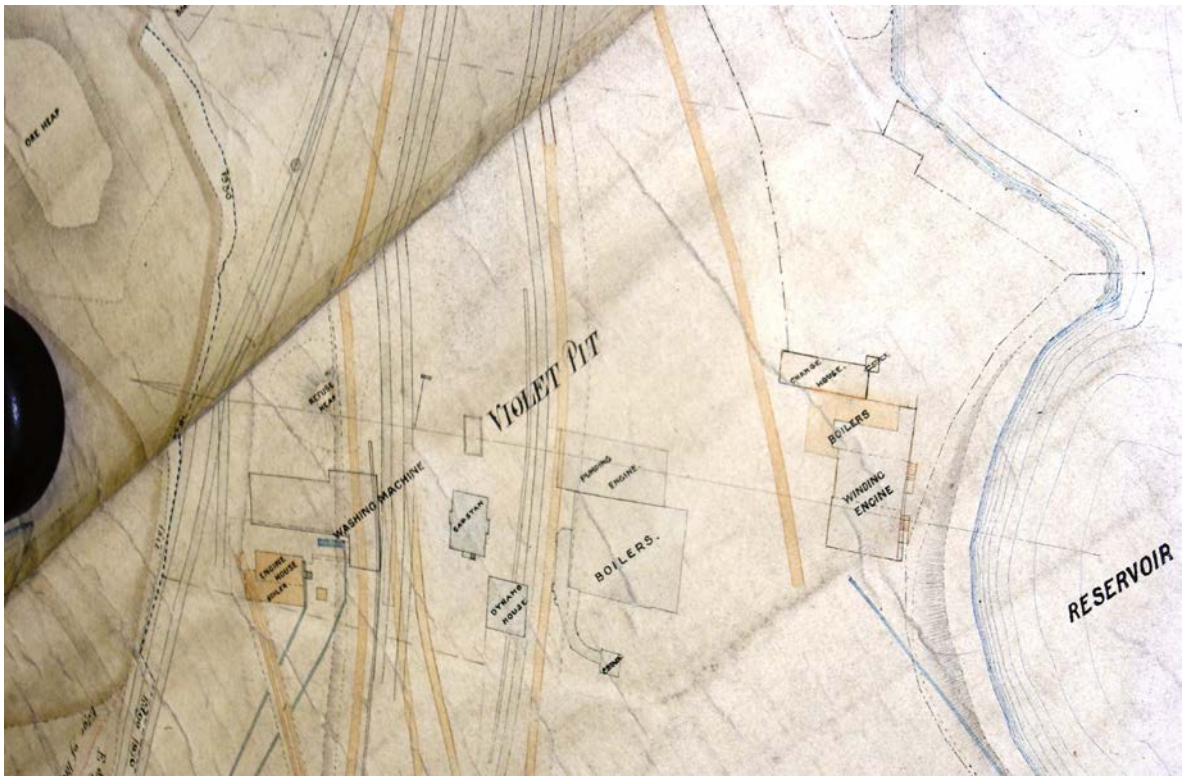


This photograph was lent to me by Peter Burton, warden of Sandscale reserve. It is labelled "Roanhead mines, Violet pit in the foreground, before 1940".

The deposit was worked from about 1875, initially from Paddy pits (Roanhead No 2 and 3), then from Wilfred (No 17) and Betty (No 18). Between 1882 and 1889 there was a phase of development which saw Wilfred and Betty pits replaced by Kathleen (No 19), Violet and Rita pits. Presumably Violet and Rita would have been No 20 and No 21 but the numbering seems to stop at 19. Another development in this period was the privy at Kathleen pit. The fact that the privy is still standing despite subsidence and neglect indicates just how solidly a brick ****house was built.

Another phase of development began in 1903 with the installation of a Hathorn Davey pumping engine. The engine probably came from Yarlside No 10 or 11 which had recently closed. The plan was for Violet pit to be the main pumping station and Rita pit the main winding pit. Kathleen would be retained as a reserve pumping station. The pumps driven by the Hathorn Davey engine consisted of 3 X 18 ¼ inch bucket lifts from 740 ft to 639 ft, 2 X 17 ¼ in ram pumps from 639 ft to 359 ft and 2 X 17 in ram pumps from 359 ft to surface. They did not work until 1912 when the engine at Kathleen pit "came indoors". A new boiler house was built with new boilers from Yates and Jackson and a dynamo house was built to provide lighting.

The mine plan, Z2938, shows the arrangements of buildings on the site. This extraordinary surface plan was drawn up in 1883 and revised up to 1939. Fifty six years of use and 70 years of storage have faded the colours but it remains as a detailed record of Roanhead mines.



Part of mine plan Z2938 reproduced courtesy of Cumbria Archives and Local Studies Centre, Barrow.

The deposit was worked out in May 1930 but the Hathorn Davey engine continued to run to keep the water out of Nigel pit. It was July 1942 before the engine was dismantled and the shafthead taken down after the closure of Nigel pit.

The photograph shows a reedy, boggy field and some worthless sheep in the foreground, exactly as it remains today. In the centre there are the cooling ponds and the headframe of Violet pit. Rita pit is in the background and Nigel pit is on the horizon, silhouetted against the estuary. The subsidence crater, hidden by the lie of the land, is between Violet and Rita pits and Kathleen pit (out of frame on the right). It is now known as Rita pond and is home to some very large carp.

Peter Sandbach.

Dify Iron Furnace

During a recent Mid Wales holiday we had an opportunity to visit the water powered, charcoal fuelled iron furnace situated about 12 miles north of Aberystwyth on the A 487. The site is administered by CADW, the historic environment service of the Welsh Assembly Government.

The furnace was built in 1755 by Ralph Vernon and Edward & William Bridge. Vernon retired between 1765 & 1770 and the Bridges were bankrupt in 1773. Ownership then passed to Kendall & Co., West Midland iron masters and when the original lease expired in 1796 it was run by "Bell & Gaskell. This firm included Thomas Bell who had managed the furnace for the Kendalls. The furnace ceased pig iron production after about 50 years, some time before 1810. Some years after this, the original water wheel was replaced by the present 30ft diameter one, in order for the building to be used as a saw mill.

Conservation by CADW began in 1977 & included some excavation, consolidation of the fabric, repointing of some of the walls, reconstruction of the top part of the furnace stack and replacement of some timber buckets & spokes of the water wheel.

Work has recently started (2011) on an electric generation scheme via the water wheel. A new sluice gate has been installed in the leat, new axle & bearings fitted to the water wheel and much new electric cabling was visible on the site. Little information was available regarding this scheme and it wasn't clear if it was intended to operate 24/7 or perhaps only for special occasions.

The site is open to the public & information is available on several display boards, in both English and Welsh. Access is limited to the periphery of the buildings and no contact details

or leaflets were available. Information, often repeated, is available on a number of web sites including:

a) www.cadw.wales.gov.uk c) www.bbc.co.uk / dyfi
b) www.rcahmw.gov.uk d) www. Wikipedia – dyfi furnace

Conjecture!

As I looked at the site information boards and the web pages I thought about the following:

a) There were no iron ore deposits locally to Dyfi, ore must have been imported.
b) There was a reference to ore being supplied by sea from CUMBRIA.
c) For about half of its 50yrs life Dyfi was operated by "KENDALL & Co.", described as "West Midland iron masters with extensive interests scattered across Staffordshire, Cheshire, Scotland & the LAKE DISTRICT".

These facts led me to a possible family link with Duddon Furnace. Duddon 1736 was originally a joint venture between the Cunsey and Backbarrow companies and the partners included EDWARD KENDALL of Stourbridge, which is in the West Midlands. This company developed into JONATHAN KENDALL & Co., and the furnace was managed by William Latham, with sales managed by Jonathan Kendall. William Latham's sons, Richard & Joseph, renewed the lease at Duddon in 1790 and they continued until 1828 when they sold out to Harrison Ainslie & Co. Duddon closed in 1867.

This possible link via the Kendall family requires further investigation.

John Helme.

Lake District Mining Forum.
Summary of minutes of meeting held on 18th February 2011, at LDNPA Office, Kendal.
Present: J Hodgson Graham Standring, Holly Bewitt-Pike, Ruth Garrett (LDNPA), Andrew Davison (English Heritage), John Malley (NT), Stuart Cresswell (MoLES), Mike Mitchell (COMRU), Warren Allison, Peter Fleming, Mark Simpson, Ian Matheson (CATMHS) Apologies: Donald Angus (MoLES), Peter Bardsley (EA), Eleanor Kingston (LDNPA), Sheila Barker (CATHMS), Jamie Lund (NT) Ian Hebson (MoLES), Ian Tyler (MoLES).

Matters arising: A list of keyholders for Lucy Tongue Level has been circulated. Graham Standring will be keyholder in place of Scott Henderson. A sign has been provided by the NT at the Glencoyne entrance, warning that the Lucy Tongue entrance is locked.

Nothing has been done regarding No 1 Level at Force Crag. There has been some movement 150 metres inside the level. It will be reopened as part of the work to be carried out, but if it collapses fully then an alternative entrance will have to be used

Reports:
LDNPA: John Hodgson reported that Historic Environment was unaffected by spending cuts, but Eleanor Kingston had started her maternity leave. The National Park rangers are to be re-organised commencing April 1st and numbers reduced from 12 to 8. Two rangers haven't got jobs. New area boundaries have been determined, and management rangers will be appointed for the whole of the Park to deal with Commons, Farmers and Lakes. Weekends will be covered by volunteers.

The Coniston Copper Mines and Penny Rigg Mill Conservation Management Plans have been published and recommended conservation actions will be used in applications. A meeting with the Commoners has been held and there were no objections, providing full funding is provided. £400,000 is required and there is concern that it will be affected by spending cuts. It will take a year to get agreement and funds may have to be staggered over 10 years. Additional funding may be needed and the Heritage Lottery Fund may be used for shortfalls. A discussion ensued regarding priorities, several members suggesting that Penny Rigg Mill was at greatest risk in the short term. The fact that it was not scheduled or listed means that emergency repairs could be carried out without obtaining consent, but more funds might be available if it were scheduled. Warren Allison suggested that CATMHS should obtain costings for selected jobs.

John Hodgson had asked the Dry Stone Walling Association for help to conserve the coping stones on the Old Engine Shaft wheel pit at Coniston, and may request assistance from CATMHS.

Carrock Mine. CATMHS is waiting for drier weather to begin work and expects to start in March. A base line survey has been completed. It is noted that the wall of the dressing plant is now at risk.

Silver Gill. A site meeting is scheduled for next Tuesday John Hodgson would like to see the project carried out this year.

Graham Standring reported that some mineral permits have been issued recently and that geologist David Green has moved away and would be missed.

National Trust: Force Crag. The Environment Agency are involved in Contaminated Land Consultation. ENTEC are on site, taking samples and carrying out analysis.

Consent has been applied for planned installation of a pilot treatment plant taking water from the discharge from Level 1. The installation would be in place for 12 months and tanks installed out of sight in the bothy building. Water scour from Level 1 has caused concern and consent is requested from EH to consolidate a bypass flume. If the pH of the water is outside acceptable limits then composting reed beds will be required to treat it.

Water quality from metal mines is to be monitored nationally as for coal mines by the coal authority.

Newlands Valley. The Environment Agency are sampling more sites, notably at Yewthwaite mine, Goldscope, Helvellyn Gill, Tilberthwaite, and Brandlehowe. . There is concern regarding zinc levels particularly at Gate Gill, Threlkeld, where levels of circa 14 tons per annum are worst in the UK.

CATMHS
The Tilberthwaite dig has broken through into the continuation of the level, where rails were found still in place and a bogey. There is a second blockage after 300 meters or so. The new ground is being surveyed and photographed. The level is gated, but a recent attempt to break in has been noted. A notice has been put in place saying that the level leads to a collapse and no further work is to be carried out until next year. Research is being done at CRO Whitehaven on records relating to early mining records at Tilberthwaite.
Ian Matheson reported that that photographs and transcriptions of the Barratt Letter book, which was sold away at the Hext sale, have been edited and digitised. They are available in a printed format or as pdf's on CD
An application for an exploratory dig on Sebastian Level at Coniston has been submitted.

MoLES: There is an active meets program, but little exploration, as both Ian Hebson and Ian Tyler have been out of action. Nothing more has been done at Yewthwaite mine.
Ian Tyler is keen to dispose of his mining museum, but so far has been unable to find a buyer.

COMRU: Nothing to report, except an exciting trip down the Force Crag mine stopes during a search for a missing woman.

English Heritage: Andrew Davison reported that EH is still in existence, but that they had received a 32% cut in Government funds and a 10% cut in staffing. The grant budget would be cut by a third, but it was hoped to mask this loss by partnership schemes, notably with the HLF, who now have more money available, as contributions to the Olympics tail off.

The core purposes of EH are:

- Scheduling
- Responding to planning applications
- Funding Heritage at Risk (especially relevant to mining sites),
- Archaeological surveying and recording of sites

In order to obtain funding from English Heritage it is essential for a site to be scheduled, or at least to have a high grade listing. It has the best chance if the site is on the Heritage at Risk Register.

A.O.B. Graham Standring reported that a net 30m X 5m had appeared above Carrock Beck, perhaps to prevent hound dogs falling in.

Next meeting: 10.00 am, Thursday 14th July at the Ruskin Museum, Coniston.

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY

Committee Meeting held on the 21st March 2011 at the BMSC Hut at Coniston, starting at 6.00pm.

Agenda.

1 Apologies for absence
2 Minutes of the last meeting
3 Matters arising
4 Secretary's Report
5 Treasurer's Report
6 Membership Sec. & Newsletter Reports
7 Meets Report
8 RA forms
9 John Barratt Cost Book
10 Publications
11 Library Report
12 New projects
13 Publicity Officer Report
14 Coniston Coppermines & Quarries
15 GPS
16 Mines Forum meeting
17 Date and Venue of next committee meeting
18 AOB

Present: J Aird (JA), W Allison (WA), J Brown (JB), I. Matheson (IM), M Mitchell (MM), P. Fleming (PF), M. Simpson (MS), A. Wilson (AW) & C. Woollard (CW).

The meeting commenced at 6.10 pm. 9 committee members attended.

1 Apologies for absence: Sheila Barker (SB), Mark Scott (MSC).

2 Minutes of the last meeting

The minutes of the committee meeting held on Monday 17th January had been previously circulated to members. It was **PROPOSED** by WA and **SECONDED** by JA that the minutes be signed by the Chairman as a true and correct record of the proceedings. This was carried unanimously.

3 Matters arising

3.1 Item 3.2 JA - Planning Permission Parrock Quarry. The permission is for extraction from the tips of building stone, on weekdays only. PF reported work has started and had seen them working on Sundays. JA had checked the planning consent and they were not permitted to work on Sundays.

3.2 Item 3.3 IM - A copy of the JB letters is now in the Library

3.3 Item 3.4 WA - This list has now been given to the archivist.

3.4 Item 3.5 WA – ADC has been contacted and agrees that both the Coniston OM leaflet and LMH need updating. He suggests that the LMH should be re-written in a soft back edition. It was agreed that there should be a copy of the original disc placed in the Library and it was also agreed to look for someone who will take on the re-writing.

3.5 Item 9 WA has now given the Archivist a list of details of items bought at the auction for placing in the Library. IM suggests that many of these cost books should go to a proper conservator and copies should be made. JA has photographed all apart from those for Strontian and Threlkeld Mines and these were considered to be too delicate and agrees that they should all be placed with a book conservator, but recommends waiting for a response from Cumbria Archives before going ahead with this. The photographs are all stored on 8 CD's and are in Tiff and PDF formats to make it easier to read.

4 Secretary's Report SB had nothing to report.

5 Treasurer's Report

JA had circulated his report to members for the period 18th January to 21st March 2011 and asked that his expenses of £284.46 be approved. WA proposed that this is accepted and this was seconded by IM.

6 Membership Secretary & Newsletter Editor's Reports

6.1 IM reported there had been 8 new members recently and 9 members had failed to renew. JB agreed to speak to two members who were known to him about renewing their subscriptions.

6.2 NL - IM asked for contributions to the next newsletter which is due out in May.

6.3 Mike Gill of NMRS has arranged to send us a copy of his paper on Grassington Mines (extracts from John Barrett's letters).

7 Meets Report

7.1 JA – Reported on the Grasmere meet, apparently there is a 60' shaft in the grounds (information from Dave Bridge) of the old blacksmith's shop (now a holiday cottage). JA feels that this would be worth another visit and will bring this up during the next compilation of the meets list.

7.2 WA – reported on the Silvergill meet which had gone extremely well.

8 Risk Assessment Forms
Nothing to report.

9 John Barratt Cost & Letter Books
The Archivist now has the list of items bought at the auction.

10 Publications Nothing to report.

11 Library
The Archivist's report had been circulated to committee members: We had acquired a copy of the E H Scordale report. Full details to be seen in the newsletter.

12 New Projects

12.1 Reported on Carrock Fell Mine by JB – Three visits have now been made to the site. The first visit saw maintenance work to the walls and fences around the open stopes on the Harding Vein, and work to seal the entrance to the blind heading close to the beck on the Smiths Vein. Photographs and a survey were done before closing this off. The last two visits have seen No.1 Level portal almost cleared of boulders and soil. Plans to install the bypass dam and pipe for the next visit were worked out. CW spoke briefly about the requirements for the purchase of a pump for this project, but he said that the amount of leakage would have to be identified before deciding upon the type of pump required. The dirty water would have to be pumped up onto the grassland to disperse the silt particles, but if the volume is high then pumping across to the Emerson Vein would be the only option. WA has a pump for this purpose and has donated 100 metres of lay-flat pipe. MM proposed making £1000.00 available for the purchase of a pump and JA seconded this. MM pointed out to the committee that there is some lay-flat pipe at Mandalls store which could be used.

12.2 – Report on Silvergill by WA. Another site visit was made on 22nd February and those present were CW, WA, John Hodgson (JH, LDNPA), and two representatives from EH. JH requires a professional archaeologist to be present to oversee and sketch whilst CATMHS attempts to open the level. This will have to be funded by CATMHS and quotes from NPHT at £2325.00 + V.A.T., Minera at £4490.00 + V.A.T., Green Lane Archaeology at £2410.00 + V.A.T., Oxford Archaeology North at £2669.00 + V.A.T. have been received and NPHT was the preferred option. It had been suggested that CWAAS be approached for a grant towards the cost of the work. JA proposed we accept the NPHT bid and apply for the CWAAS grant This was seconded by WA.

12.3 JB – Tilberthwaite Horse Crag Level - work will continue at a later date.

12.4 PF – All the preparatory work on Sebastian Level is in progress.

13 Publicity Officer Report
MSc was unable to attend and had nothing to report.

14 Coniston Mines & Quarries

14.1 JA – The approach to Arête Chamber has now been secured and steel cables have been installed. LWM will need a serious clean out of debris and unblocking of the drain. The pipe could be extended to prevent further blockages. This is a job for the summer.

14.2 IM – Middle Level incline has been severely eroded and needs some conservation work.

15 GPS Nothing to report.

16 Mines Forum Meeting Representatives from CATMHS were; PF, IM, MM, MS and WA. Minutes will be circulated by The LDNPA. The date of the next meeting is 14th July

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18 Any Other Business

18.1 PF, IM, MS and WA all visited Whitehaven records office and searched records on 'The Well Known Coniston and Tilberthwaite Coppermines in North Lancashire'. Further research will continue.

18.2 IM – The CAT cordless drill batteries have now come to the end of their life and asked the committee what should be done. JA recommended buying new batteries and also if the drill had any value, looking at the possibility of selling it on E-bay and return the money to the funds.

19 Date and Venue of Next Meeting
Monday 6th June 2011 at the BMSC Hut, Coniston at 6.00 pm.
There being no further business the meeting closed at 8.05 pm. JB 10/04/2011

CUMBRIA AMENITY TRUST MINING HISTORY SOCIETY