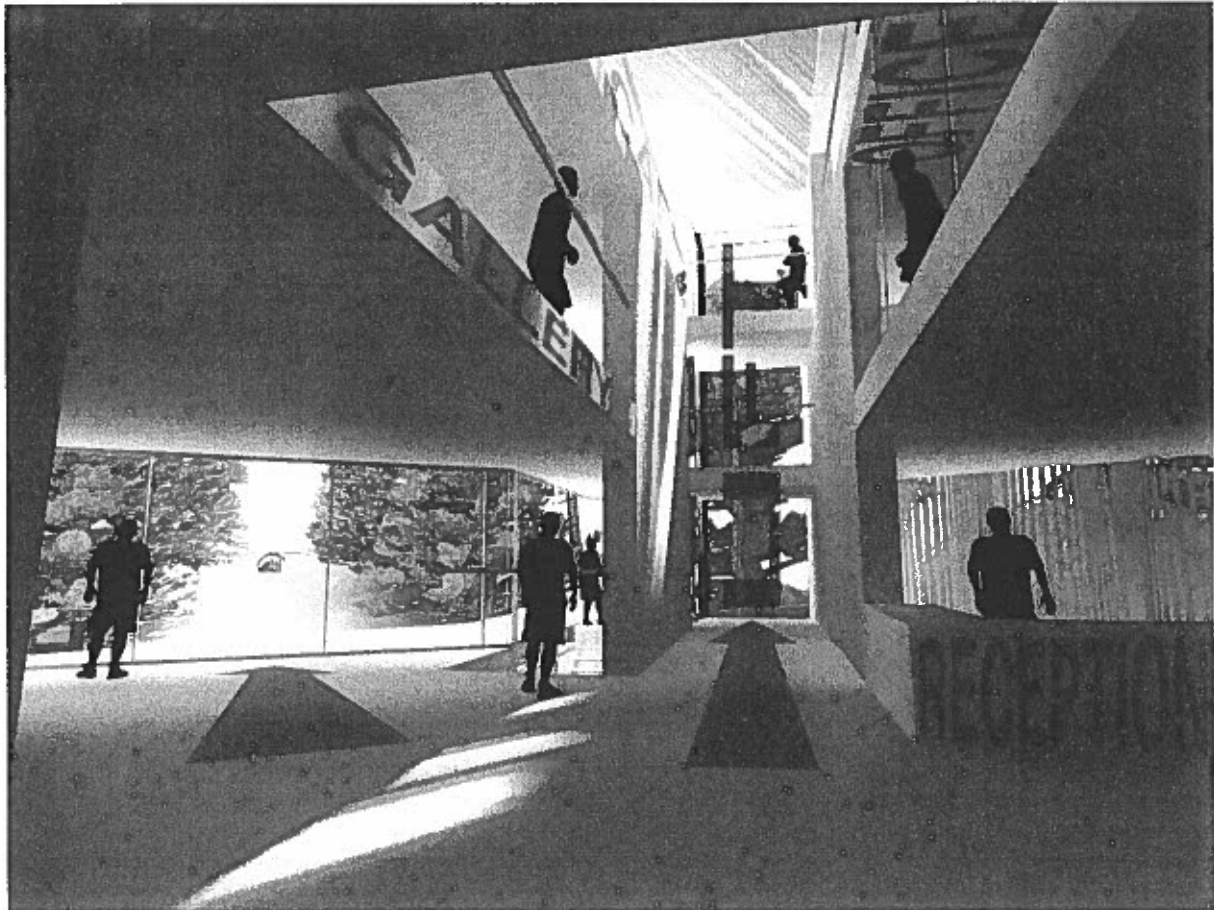


The Bid Goes In

The bid to the Heritage Lottery Fund to develop Killhope which we discussed in the last newsletter was submitted by Durham County Council at the end of August.



Artist's Impression of the Reception Area for the New Visitor Centre

Image by Park and Page

Ian Forbes handed the document, signed by Rachael Shimmin, Corporate Director of Adult and Community Services, to Steven Hughes, grants officer at the HLF offices in Newcastle on August 29th.

Heritage Lottery Fund trustees will make a decision in December, and if this is a green light, we will have fifteen months to add all the detail for a Round Two bid in March 2010.

This is a hugely exciting time for Killhope, because if all goes to plan the museum will be transformed.

The transformation will not just be a new building – the building is very much a means to an end. The end we are working towards is to reinvigorate Killhope for the twenty-first century and to make sure that the museum is valued by, and is important to, the next generations of museum goers.

We will be working with lots of people – including of course the Friends of Killhope – over the next year and a quarter to make sure that the new Killhope is the museum that they want.

Killhope is already a wonderful place to visit and to learn about and experience mining history. We don't want to change that special Killhope feeling and atmosphere – we want to add to it.

We also think it is very important to continue and expand the excellent work the museum has been doing with people who don't see museums as their natural habitat. Everyone at the museum gets enormous pleasure and satisfaction from making a real impact on peoples' lives. This is the driving motivation behind the desire for change at Killhope – so that we can do more and do it better.

We will keep you in touch as the project develops, but this architect's impression gives you a feel of what the new facilities at Killhope might look like when they open in 2012.

Ian Forbes

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Westgarth Forster – Sopwith's Copy

Ian Forbes

Roger Bade, to whom I am extremely grateful, alerted me to an auction in London recently in which a copy of Westgarth Forster's "Section of the Strata" (1821 edition) was for sale. As many readers will know, Forster's "Strata" was the first published systematic account of the geological sequence of the lead measures and coal measures of North East England, and the second, 1821, edition contains useful descriptions of ore-dressing and smelting operations.

Roger very kindly offered to go and examine the volume himself, and he duly reported back to me that it was in good condition. What had interested Roger, an interest which I enthusiastically shared, was that this book contained the bookplate of Thomas Sopwith F.R.S. – the chief mining agent for W.B. Lead. It thus linked together two very well known figures from our area and our industry.

I was in a meeting at the time of the auction, so Louise Moore, Killhope's clerical officer, took the heavy responsibility of sitting in the Killhope office and bidding on the phone on behalf of the museum. And Louise was as delighted as I was when she was able to tell me that we'd got the book.

Following the auction, several members of the Friends of Killhope committee have suggested that the Friends may be able to reimburse the museum and buy the volume themselves. If the committee approves this course of action I thank them on behalf of Killhope, for this is an important acquisition, and I am very pleased indeed that it is now at Killhope – and – we hope – will be displayed in the new building in due course.

An Apology from the Temporary Newsletter Editor

Please accept my apologies for the delay in sending out this newsletter. Unfortunately this was unavoidable due to a family bereavement.

Reminders

Many thanks to all the contributors who continue to send in articles - it would not be possible to produce a newsletter without your support. The deadline for the next newsletter is the **31st January 2009**. Please send articles to dickgra@aol.com via email if possible or mail to Margaret Graham, Wingrove House, Wingrove, Rowlands Gill, NE39 1DT.

Archiving

The Archive Team will be meeting on Friday's starting around 10.30 am from the 7th November and would be pleased to welcome anyone who would like to join the friendly informal group.

A Message from your Membership Secretary

The last page of this newsletter is the renewal form for 2009. Any cheques received will be held until early January 2009. It would be useful if anyone wishing to alter their type of membership would inform me before the membership cards are printed. Thank you for your continued interest.

The Pennine miner's measure of value

David Scott

Part 1

In his seminal, "Geology of the Northern Pennine Orefield", Vol 1, 1948, Dr Dunham makes special mention (p129) of the London Lead Co's meticulously kept mine plans and the manner in which the varying richness of a given mine's orebodies was indicated. Thus an area of mined out ground that returned less than 10cwts/fthm of dressed galena in a condition suitable for the smelter was coloured yellow; values ranging from 10-16cwts/fthm were shown in red, and greater than 16cwts/fthm in blue. The following table does not hit these cut-points of 10 and 16cwts/fthm exactly but they are sufficiently close for practical purposes. The reason for the small differences was the desire to keep the galena band widths in convenient fractions for the sake of clarity rather than calculating down to 32nds which would have had the opposite effect.

There are a number of issues the table presents that need explanation and/or elaboration.

1. There is no suggestion that the mine agent would estimate the value of ground with tape measure in hand and simultaneously making mental adjustments for losses of galena during the washing process – not at all. He would know at a glance from his years of experience as a miner and later as agent what the ground was worth, and so too would the miners whose working place it was. It would have been the same kind of judgment that the blacksmith of old made as he waited for a particular brightness of his hot metal to develop before drawing it from the fire and began forging the piece on the anvil.

2. At first sight it might appear the miner was given a raw deal. He was not paid for the tons of vein he broke or for the waste he had to drill and blast to make sufficient room for working. His wages were based on how many bings (8cwt) of dressed galena he produced clean enough to be acceptable by the smelter: and, the losses of galena incurred during the washing process were his loss too.

On the other hand his contract was for three months. It stipulated a fixed price of so many shillings per bing but, perhaps, after a few weeks into his contract it could happen that the vein widened, the galena content increased and while the vein had been priced at for example 8cwts/fthm it now yielded 16cwts/fthm consequently doubling his wages. It was a gamble of course. It was just as likely that a rich run of ground paying only a low bing rate petered out and the miner was left with only a pittance at the end of his contract. But it must be said the companies of the time did make allowances/compensation for contracts that had run sour. This was not the hard edged management of the coalfields.

3. While the table specifies well defined bands of galena this would not always be the case. For lower values, for instance less than 9cwts/fthm, galena would just as likely be present as discrete clumps of fist size and less, or in broken, discontinuous lenses. There are references from time to time of "brangled ore" and this suggests a mish-mash of fractured and recemented vein mineralization and galena and anything but a clearly defined band.

4. Today's ore grades are measured in an entirely different manner. Values will be quoted in terms of the total amount of metal as determined by chemical assay and expressed as a percentage of the total mass of mineralization and waste over a measured width.

5. These values are shown, columns (g) and (h), over a width of 3'6". They are very low by today's standards and would barely be considered economic unless the mineralization should be near surface, amenable to open pit mining and present in massive quantities over widths to match.

fts/fathom: the North Pennine miner's measure of fathoms.

| | | 3'6" assumed mining width | | | | | | |
|----------------------|--|---|--|-----------------|---|---|-------|----------------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| Width of galena band | Wt. of galena per fathom | Mill recovers 85% galena in terms of lead metal | Weight of dressed galena @ 70% lead metal delivered to smelter | Miner's Measure | Volume of gangue minerals per fathom | Wt. of gangue minerals plus galena per fathom | Pb % | Ag oz/long ton |
| 1/4" | 6 x 6 x 0.25 / 12 = 0.75 cu. ft. = 357 lb PbS = 304 lb Pb | 258 lb | 369 lb. | 3.3 cwt/fathom | 6'6" x 3'5" minus 0.75 cu. ft. = 125.25 cu. ft. | 25,175 lb plus 357 lb = 25,526 lb | 1.19% | 0.07 oz / ton |
| 1/2" | = 1.50 cu. ft. = 702 lb PbS = 608 lb Pb | 517 lb | 739 lb | 6.6 cwt/fathom | 124.50 cu. ft. | 25,727 lb | 2.36% | 0.14 oz / ton |
| 3/4" | = 2.25 cu. ft. = 1,053 lb PbS = 912 lb Pb | 775 lb | 1,107 lb | 9.9 cwt/fathom | 123.75 cu. ft. | 25,927 lb | 3.52% | 0.21 oz / ton |
| 1 1/4" | = 3.75 cu. ft. = 1,755 lb PbS = 1,520 lb Pb | 1,292 lb | 1,846 lb | 16.5 cwt/fathom | 122.75 cu. ft. | 26,327 lb | 5.77% | 0.35 oz / ton |
| 1 1/2" | = 4.50 cu. ft. = 2,106 lb PbS = 1,824 lb Pb | 1,550 lb | 2,215 lb | 19.8 cwt/fathom | 121.50 cu. ft. | 26,528 lb | 6.88% | 0.41 oz / ton |

Notes: Column (a) Galena, specific gravity @ 7.5 x 62.43 = 468 lb/cu. ft.
 (b) Galena = 86.6% lead metal - and - galena recovery at 85% is the writer's guess for the mid-1800s.
 (c) "... 70% lead content..." re: Dunham, K.C. "The production of Galena and Associated Minerals in the Northern Pennines", Trans. IMM, Vol. 53, 1943-44, p. 188.
 (d) -----
 Column (e) cu. ft. galena from column (a) - and - weight of gangue 201 lb/cu. ft. derived from: Dunham, K.C. "Fluorspar", Memoirs of the British Geological Survey, H.M.S.O., 1952, p. 54 - specifically, the modified analysis of Boltsburn tailings
 (f) weight of galena from column (a)
 (g) -----
 (h) based on an assumed value of 6.0 oz. silver recovered per long ton of lead metal, re: Dunham, K.C. "Geology of the Northern Pennine Orefield, Vol. 1, Tyne to Stainmore", H.M.S.O., 1948, p. 85.
 cont'd ...

Dr Dunham (1948, p129) shows what appears at first sight to be significantly different percentages from those of the table but if the factors comprising, mined widths, density of waste minerals, lead metal versus galena were to be substituted then the two sets of figures would correspond almost exactly.

6. Returning to London Lead Co's colour coding it is significant that there is no further differentiation beyond 16cwts/fthm (code blue) implying values exceeding 16cwts/fthm by substantial amounts were either not common or not extensive enough to warrant a separate colour code. This confirms that galena values in the 10-16cwts/fthm range (code red) described the average tenor of the company's numerous mines over the greater of the company's existence.

The surprising, in fact astonishing, conclusion of this examination of minutia is that a band of galena only slightly more than an inch in width, albeit carried by an extensive network of frequently strong but narrow veins at no great distance from surface, assured a mining and smelting industry that prospered for well over a century, peopled an otherwise inhospitable upland and was instrumental in creating a fledgling chemical industry on the lower River Tyne. Astonishing indeed and made possible by a number of factors of which the value of pig lead during the greater part of the London Lead Co's existence was by far the most important.

As will be suggested in Part 2 of this article the value of common pig lead in the 1850s was approximately eight times what it is today though the multiple would decline as the century wore on and as production from new discoveries in the Americas and Australia, as well as from a resurgence in continental Europe came onto the market.

Interesting Websites

Roger Bade has brought our attention to the following websites which may be of interest:

It appears PDMHS has scanned some of their past bulletins. Please check the copyright information.

<http://www.pdmhs.com/backissues.asp>

Vol 9 No 5 Summer 1986 The Washing Floor at Killhope Lead Mine, County Durham: An Interim Report - David Cranstone

<http://www.pdmhs.com/PDFs/ScannedBulletinArticles/Bulletin%209-5%20-%20The%20WashingFloor%20at%20Killhope%20Lead%20Mine,%20Co..pdf>

Vol 14 No 6 Winter 2001 Thomas Sopwith and the Forest of Dean 1832-1841: Northing short of Newcastle - Robert Sopwith

<http://www.pdmhs.com/PDFs/ScannedBulletinArticles/Bulletin%2014-6%20-%20Thomas%20Sopwith%20and%20the%20Forest%20of%20Dean,%201832.pdf>

Unfortunately Vol 9 No 1 (Critchley) isn't included.

Latest from the British Geological Survey. This is over 4Mb so takes a little while to download. I have never seen Smallcleugh referred to as Small Cleugh before; I wonder if they used a spell checker! I think Tynebottom may be a similar victim.

<http://nora.nerc.ac.uk/3937/1/RR08006.pdf>

Mine Explorer's latest trip is underground at Whiteheaps. The other Mine-explorer website indicates that there is an issue about access, so these photos are for private enjoyment only.

<http://www.mineexplorer.org.uk/whiteheaps.htm>

The Natural History Museum has put its mineral collection online. Unfortunately they don't include any photos, but at least one gets the NHM number and a brief description.

Enjoy the 82 Boltsburn, 286 Weardale, 107 Nenthead, 15 Settlingstones and 633 Witherite entries. Interestingly the first Settlingstones entry BM1981.246 is for Nickel ore, while BM1981.MI15726 is for argentiferous galena from Allenheads.

<http://www.nhm.ac.uk/research-curation/collections/departmental-collections/mineralogy-collections/mineralogy-specimen-database/search/index.php?search=keyword>

Searching for Gold

Rachel Clarke

Semi Precious: Weardale's Industrial Migration Stories began at the start of the year with a successful grant from the Heritage Lottery Fund. The project is a partnership between the Weardale Community Partnership, Harehope Quarry Project, Killhope Museum, Weardale Museum, Durham Records Office and Twisted Digits UK. The aim of Semi Precious has been to raise awareness of the industrial heritage of Weardale focusing on migration stories by providing access to archives and training for adults and young people in Weardale.

To date five training sessions in local family research, interpretation, oral history recording, creating archives and community heritage for adults have been delivered. Artists and archivists have worked in four local primary schools bringing documents to life and telling industrial migration stories to over 250 people in the community. 'Journeys Around the World', a promenade performance telling the emigration story of families in the North Pennines was performed at Killhope to a raucous audience in June as part of the Northern Rocks festival.



Musician Benny Graham leads 'Journey's Around the World' and the voyage to America at Killhope.

Photo: Louise Taylor 08

There have been shared benefits for young people and adults participating in the project; wider distribution of heritage documents and knowledge, wider experiences of heritage sites, igniting new interest and adding value to existing interest. The subject of migration has also contributed to an understanding of the heritage on our doorstep but also how this fits with the global picture. This dual perspective of heritage and place has been an important theme. It has promoted a wider viewpoint of locality and identity, encouraging pride through the acknowledgement of people from Weardale who made their mark in other places.



St John's Chapel Primary School, re-enact a journey to New Zealand on the Margaret Galbraith in 1879.

Photo: Louise Taylor 08

Whilst we have achieved a lot so far there is still a lot to do. Artists have begun planning for the exhibition *Routes & Riches* which will be installed at Killhope next year. Oral history interviews have still to take place and the website is currently being updated. As we complete interviews more stories will be included and archived online. <http://www.weardale-history.org.uk>.

The great nugget of this project has been the surprise finds and I hope there are still more to come. Whilst searching through the photographic archives at Beamish and discovering a selection of photographs from Weardale emigrants, I came face to face with the man who began this whole journey. In 2005, I was artist in residence at the Klondike Institute for Art & Culture in the Yukon. Here I discovered I wasn't the only person from the North Pennines who had been to the Klondike.

In 1896 John Wilkinson, originally from Weardale, had found himself at the start of the Klondike Gold Rush. Wilkinson was part of the first group of men to extract gold here. His return to civilisation, alongside many others like him, prompted the gold rush where subsequently 40,000 people sought their fortunes in the harsh Canadian north.¹ During the residency I documented my experiences in parallel to the Wilkinson story but the only image I had of him was with a group of his friends building boats to paddle down the Yukon river. During my time in the Klondike I followed his tracks in many ways, finding his name on the claim records, visiting his claim on a skidoo at -15°C and reading about him in historical accounts of the time. These pieces of information all informed my experience of the Klondike but I always wondered what he actually looked like. The unexpected photographic finds at Beamish were akin to discovering gold, maybe not the kind that inspired the gold rush but the kind of precious finds we look for when searching records to meld together clues from the past.

¹ Pierre Burton, *Klondike: The Last Great Gold Rush 1896 – 1899* (Anchor Canada, 2001), 99. The return of men such as Wilkinson, on the first boats back from the Klondike arriving in Seattle and San Francisco in 1897, sparked a media frenzy and the rush for Klondike gold began.



John Wilkinson with his bags of gold nuggets.
Nanaimo, Vancouver Island, Canada 1897. Reproduced
with kind permission from Beamish Museum and
Photographic Archive.

If you would like further information or if you would like to contribute to the Semi Precious project please contact Rachel on 07841584922 or rachel@twisteddigits.co.uk. Alternatively call in to the Weardale Community Partnership HUB, 85B, Front Street, Stanhope.

Les Blackett has been filling his evenings at Dunbar by recording details from Parish Registers, Mine Inspectors' Reports and various other records. He has provided the following selection which will be of interest to our members.

Reasons for Burial

- Hall, John**, of Bridge End, St Johns Chapel. Buried at St Johns Chapel Churchyard 13th September 1821 aged 49. Found Drowned in the River Tees on the Yorkshire near Middleton-in-Teesdale. Buried by Coroners Warrant.
- Robinson, William**, of High Hotts, Ireshopeburn. Buried at St Johns Chapel Churchyard 11th July 1822 aged 28. Killed by the Crushing Machinery at Brecken Sike Mine. Buried by Coroners Warrant.
- Wilson, George**, of Huntshieldsford, St Johns Chapel. Buried at St Johns Chapel Churchyard August 18th 1822 aged 70. Found Dead in the lead mine at West Blackdene. Buried by Coroners Warrant.
- Watson, George**, of Broken Way, St Johns Chapel. Buried at St Johns Chapel Churchyard November 20th 1880 aged 41. Killed in Quarry near Stanhope. Buried by Coroners Warrant.
- Watson, Thomas**, of Burtreeford. Buried at St Johns Chapel Churchyard April 14th 1823 aged 19. Killed by falling from the top of a waggon loaded with wood entered a sump as he was going up the Level at Burtree Pasture Lead Mine. Buried by Coroners Warrant.
- Gibson, William**, of High House, Ireshopeburn, Buried at St Johns Chapel Churchyard 26th June 1823 aged 20. Shot by the Accidental Discharge of a Gun. Buried by Coroners Warrant.
- Walton, Anne**, of Rigg House, St Johns Chapel, Buried at St Johns Chapel Churchyard 15th April 1825 aged 6. Burnt to death having been left alone in the house with another little girl when the house took fire. Buried by Coroners Warrant.

- Douglas**, George, of Swinhope House, Westgate. Buried at St Johns Chapel Churchyard 24th June 1826 aged 14. Killed at the mines at Marlebeck. Buried by Coroners Warrant.
- Smith**, John, of Sidefoot, Westgate, Buried at St Johns Chapel Churchyard 24th March 1824 aged 15. Killed at Shallow Ford Lane End by a cartwheel running over his neck. Buried by Coroners Warrant.
- Smith**, Samual, of Burnhope. Buried at St Johns Chapel Churchyard 28th March 1826 aged 63. Killed in Sedling Mine when part of the roof fell on him. Buried by Coroners Warrant.
- Jobling**, Samual, of West Blackdene. Buried at St Johns Chapel Churchyard 19th June 1827 aged 56. Found dead inebriated at John Lowes Public House. Verdict - "Visit of God"
- Hackward**, Thomas, of Wearshead. Buried at St Johns Chapel Churchyard 27th October 1828 aged 56. Killed in West Alston by the fall of a quantity of rubbish upon him when working in a Stone Quarry. Buried by Coroners Warrant.
- Watson**, Joseph, of Stoneheap. Buried at St Johns Chapel Churchyard 17th September 1864, aged 76. Died of Injuries received from falling 5 Fathoms in Middlehope Shield Level. Buried by Coroners Warrant.

Burtree Pasture

- Rutherford**, Thomas, 24 Jun 1887, aged 45, Miner, died from natural causes whilst walking along the level to work.

Sedling

- Featherstone**, John, 03 May 1904, aged 34, Miner, fatally crushed by a lump he and his partner were taking down.
- Peadon**, Isaac, 01 Apr 1904, (*accident*: 16 Dec 1903), aged 58, Miner, died from injuries received by a fall from roof on 16th December last.

Killhope

- Harrison**, Thomas, 15 Mar 1878, aged 19, Miner, explosion of powder; while in the act of firing a hole, which he had just previously charged, it exploded while he was applying the match - supposed to have been some loose powder.
- Hodgson**, John, 20 Nov 1876, aged 53, Miner, had drilled a hole into a cavity in the stone and while putting in a large charge of powder, he accidentally exploded it with his candle [an article by Margaret Manchester about John Hodgson, his life and family appears in the Winter 2003 issue of the NDFHS Journal], *Buried*: Heatherleycleugh

Carricks Mine

- Fairless**, Hugh, 25 Nov 1895, (*accident*: 15 Nov 1895), aged 27, Miner, while putting a tub of ironstone out-by he got his little finger crushed between a prop and the tub, and died from blood poisoning on the 25th inst
- Hodgson**, Thomas, 15 Nov 1894, aged 48, Miner. Fall of ironstone from the roof causing the death of Thomas Hodgson, a miner. It appears a shot had been fired and this displaced a stone, which had been covering a clay back or parting in the stone above; as soon as this happened, the support having been taken away, a large stone fell upon the deceased man without any warning and killed him. He had examined the stone, both with a light and by sounding it, and thought it was quite safe. The treacherous clay back, surrounding the stone which fell, was the cause of this unfortunate accident; it is precisely of the same character as number one on this list, and my remarks thereon apply with equal fitness to this case.
- Robinson**, George, 20 Jun 1902, aged 39, Miner, a lump of ore fell out of roof and caught and killed him
- Thompson**, William, 08 Jan 1906, aged 50, Miner. Died from natural causes as he was about to enter the mine [fatality reported during the year but not classified as a colliery accident].
- Wilkinson**, Thomas, 07 Jul 1909, aged 67, Mine-foreman. Killed by debris projected by a shot.

Copthill Quarry

- Bell**, Emerson, 11 Jan 1906, aged 36, Quarryman. Of the two fatal accidents in connection with blasting, the first occurred at Copt Hill Quarry belonging to Messrs Monkhouse and Peart. One man was killed and three others injured. A hole drilled horizontally in the face of the quarry, 8½ ft deep, was being charged with gelatine dynamite. About 22 lbs of the explosive had been pushed into the hole with a wooden stemmer, and further cartridges were being put in, when the whole charge exploded. The whole of the cartridges had not been examined prior to being

put into the hole, and the probable cause of the explosion was that one or more frozen cartridges had been used. A warming-pan was provided and kept ready for use, but had not been used. It is useless to have such an appliance and not make use of it, and it should be remembered that in the winter months it is necessary, not only to thaw nitroglycerine explosives in the warming-pan, but also to carry them to the shot-holes in the warming-pans. By so doing there is no risk of the cartridges becoming frozen after being thawed and before being used.

Emmerson, William Walker, 12 Sep 1914, (*accident*: 11 Sep 1914), aged 14, Wagoner. Deceased was filling stone into a wagon, when a piece of stone fell from the overburden, some 50 feet above, and hit him on the head, causing injuries from which he died the following day; the overburden had not been removed sufficiently far back from the rock edge.

Greenlaws

Dalton, Jacob Joseph, 26 Jun 1895, (*accident*: 25 Jun 1895), aged 13, Ore Dresser, crushed between rollers of crushing mill. There was one fatal accident, on the surface, at the Metalliferous Mines; there were none in 1893. It was No 1 on the list and occurred on the washing floor, of Greenlaws Mine, on the 14th of March, about 5 o'clock pm, causing the death of a boy named John William Walton. His father, who lived not far away, went to a well close to the washing floor, and hearing the water wheel going, he looked and saw something white revolving round the shaft connecting the wheel to the buddle, and on getting close to, he discovered his son hanging between the shaft of the wheel and the bearing baulk.

The boy had no business at the place. The machinery had not been at work for a week, prior to the accident, and he must have turned the water on, out of curiosity, to see the water wheel in motion, and been walking along the bearing baulk of the buddle, and been caught between it and the shaft. He must also have had a duplicate key of the valve to turn the water on, for the one kept by the foreman washer was hidden by him and found after the accident in the place where he had put it.

No one can be blamed for this accident except the deceased boy himself; he was trespassing and doing what he had no business to do; and unfortunately paid the penalty of his folly with his life.

Nattrass, John, 29 May 1896, aged 57, Miner. While filling ore into a hopper a fall took place from hanging wall and killed him instantly.

The fatal accident, No 5 on the list, occurred at Green Laws Lead Mine, belonging to the Weardale Iron Company, Limited, on May 29th, and caused the death of a lead miner. The sides of the vein were bad, and as he and another man were filling the ore away they should have put a prop or two in as stays, but they neglected to do this, and a fall of stone occurred and killed this man.

As a rule, I am glad to say, lead miners are careful men, and this accident shows how necessary it is that they should be. Men should never continue to work where the stone is not safe, without either setting timber or removing the stone, and had this man and the one working with him done this, I should not have had this death to report.

Robinson, Joseph, 21 Nov 1881, aged 38, Miner, suffocated by gas while climbing a rise to another level.

No 5 on the list took place at the Green Laws Mine, where Joseph Robinson was suffocated by gases; it appears that deceased and Thomas Eggleston went to work in a rise in the quarry level of Green Laws Lead Mine; the rise was 14 fathoms up, and when they had climbed up about eight fathoms both their candles went out owing to foul air. They tried to re-light them with matches but could not, and Robinson said he would go up to the end of the Air-box and light his candle there. Eggleston advised him not to do so, but he went, and, when about three fathoms from the top, was overcome by the foul air and suffocated. The rise was ventilated by 5-inch air boxes from a water blast, with a column of eight fathoms, but the current had been too feeble to sweep away the foul air which had escaped from the strata during a falling barometer. These two men had driven the rise from the level, and Eggleston said it was usually well ventilated, but that occasionally, when there was a change in the weather, they had seen foul air, and gone home. They did not report this to anyone, and the agent said he was not aware of it

Watson, Joshua, 07 Dec 1888, aged 51, Miner. Fall of earth by the breaking of some timber while he was engaged repairing.

Middlehope (Iron Ore)

Fairless, Thomas, 06 Jun 1889, aged 57, Miner. Whilst he was being taken along the level in a tub his head came in contact with the roof and his neck was dislocated.

Boltsburn

Adamson, Joseph, 18 Dec 1905, aged 60, Labourer, died from heart failure.

Pearson, James, 22 Oct 1907, aged 19, Lead ore dresser. The bolts holding the drawbar to the body of a tub being hauled up to the dirt tip broke, and allowed the tub to run wild down the incline; it struck him and he died three hours afterwards from the injuries received.

The other fatal accident occurred on the surface at the Boltsburn Mine belonging to Messrs The Weardale Lead Company Ltd, on 22nd October. Three bolts, holding the drawbar to the body of a tub being hauled up an incline on to the dirt tip, broke and allowed the tub to run amain down the incline. The youth, who was killed, was standing leaning against the door frame of the jigger house talking to another youth inside the house and not paying any attention to his own work, which was at the incline foot, when the tub came down the incline and ran into him. He died three hours afterwards.

Wall, Thomas, 05 Jul 1898, aged 16, Pumping Water. When travelling out-bye from his work, a piece of stone fell from the roof of the level and killed him.

Ward, Watson, aged 44, Fitter & Banksman. Deceased was riding up a shaft 53 feet deep, in which riding was prohibited; the cage was taken up against the pulley and deceased fell to shaft bottom; the top of his head was knocked in.

The other fatal accident occurred at the Boltsburn Lead Mine on March 15th, and was due to the deceased man illegally riding in a cage which he had been previously warned not to do. There is a shaft underground 53 feet deep, up which the mineral is raised by means of a small engine and a counter balance weight; ladders are fixed in the shaft which the workmen are ordered to use when ascending or descending, and a notice is posted up. at the shaft stating that riding up or down is strictly prohibited. On the day in question the man got into the cage to go up and gave the usual signal to the engineman to pull up. The signal was the same as that given when minerals were being raised, so that the engineman did not know that the man was in the cage at the time. The cage appears to have gone up quicker than usual, and the engineman failed to stop it till it had gone up into the pulley at the top, and the deceased man was knocked out and fell down the shaft and was killed. On the safety gate at the top of the pit two iron arms are fixed which project over the shaft so that when the cage comes up the top of it catches them and lifts the gate and it seems probable that the deceased man's head came in contact with one of these and he so got knocked out of the cage.

This is a life thrown away through disregarding the orders of the Management and the man had himself been cautioned about riding and told only to use the ladders. It came out in the evidence that he had done the same thing before and if the engineman had reported the matter it is probable that this accident would not have occurred. Men naturally do not like to tell of each other, but when a distinct breach of the regulations of the mine is noticed it is their duty to do so, and only by these means can discipline be maintained and accidents avoided. *Source 1905 Mines Inspectors Report (Cd 2910)*

Rookhope

Parker, John, 11 Oct 1887, aged 29, Smelter. While engaged cleaning out a long flue at a smelt mill, a rush of water was sent in from the top which washed him down to the bottom, causing his death.

Wolf Cleugh

Foster, Thomas, 18 Nov 1904, aged 28, Miner. Fall of stone from the side; the stone should have been taken down.

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Responsibility for obtaining permission to use someone else's material also lies with the person submitting the article to the newsletter and not with the editor.

Our thanks to Roger Bade for spotting this interesting article in the Hexham Courant on 21.05.08. Thanks also to the Hexham Courant for kind permission to reproduce it.

Gilmore's house proves a mine of information

Living in The Butts is no joke in Alston — rather it is a matter of pride.



Digging for clues: Beautifully crafted mahogany sample drawers at Gilmore House, in Alston, suggest the property may once have been the home of a geologist employed at the local mines, or a keen amateur mineral collector.

The narrow cobbled streets running north-east of the Market Cross and behind the old Turks Head inn make up the oldest part of the whole venerable town. Most of the houses in The Butts date from the 1600s, and among them is Gilmore House.

This substantial terraced cottage has seen many residents but few changes in its long life. The present owner reckons that, other than essential modernising, only one fireplace is missing from Gilmore House's original 17th century design.

It would be lovely to know who this unknown Alstonian "Gilmore" was, he who gave his name to the house and a cottage nearby. Perhaps he was the house builder or an early resident?

Inside, there is an excellent clue to at least one former tenant of Gilmore House — he seems to have been a technician in the local mine. The giveaway hint is the wall-full of small sample drawers, beautifully crafted in mahogany, which can only be the one-time pride of a Georgian or Victorian geologist.

The myriad small drawers, in what is now a sitting room but may once have been a study, have no labels or markings to confirm their original use, but similar examples in other houses suggest Gilmore's drawers were used for mine samples.

Looking at quaint and quiet Alston today it is hard to imagine what a hive of heavy industry it used to be. The lead mines of Alston Moor were once famed throughout the land.

The 1847 Cumberland gazetteer by Mannix & Whellan recalls that the area was once good for 30,000 "bing" of lead ore a year (a bing weighing eight hundredweight or just under half a tonne) And Alston's valuable lead was laced with plenty of even more exciting silver, which

local assay master Hugh Lee Pattinson developed a revolutionary system for extracting in 1833.

In 1768 there were 119 lead mines in Alston, with evocative names like Rodderup-Fell, Brownley Hill, Hudgill Burn, Dowgang, Galligill Syke, and Blagill. More than 1,100 people had jobs in, or connected with, Alston's lead mines then, and most of the mines were owned by the Greenwich Hospital of London.

Perhaps our mine technician at Gilmore House was a Greenwich Hospital employee. Or perhaps he worked for the Nenthead Smelt Mill which belonged to the London Lead Company, or the Tyne Head Smelt Mill which was owned by John Cresswell Jobling, Esq of Newton Hall, Northumberland.

Another alternative is that the tenant of Gilmore House needed so many sample drawers because he was involved in a revolutionary scheme to develop a whole new field of mining for the North Pennines.

The area had long been known for lead, silver and even copper, but in the mid-1800s, Jacob Walton and the brothers Atwood tried prospecting for iron in Alston.

A writer of the time noted: "This discovery will be of the greatest importance to the district, and will add a new feature to mining in Alston Moor."

Alston's new iron mines and furnaces added hugely to the available job market in the North Pennines and at their peak employed more than 2,000 men. But Alston's iron proved a flash in the pan and by 1880 the mines were worked out and the iron men had moved away.

Yet another possible explanation for our Gilmore House resident with all the drawers was that he was an amateur mineral collector and his 40-odd drawers were built to hold a vast assortment of local rocks. He certainly had plenty to choose from.

Alongside Alston's plentiful veins of metal, huge crystals in rainbow colours can often be found today, and a century-and-a-half ago many miners had a profitable sideline in collecting these glittering rocks and arranging them in mini-grottos called "spar boxes".

Fluorspar was the most prized stone, turning up in translucent shades of green, white, yellow, violet, red and brown — and hard enough to cut glass like a diamond. Sometimes, a lucky miner came upon a whole cave inlaid with sparkling crystals. A contemporary report describes: "Large caverns are often met with in the lead mines, exhibiting all the variety and splendour of the most curious grotto work, being formed of the variegated spar, shot into a diversity of figured crystals.

"When yellow copper ore, or pyrites, or black Jack, appears in them, these cavities are most splendid, for the minerals display the most beautiful colours imaginable."

Whatever his purpose in collecting beautiful rocks from the carboniferous age, Gilmore House's mine technician — and all of the property's tenants before and since — could not avoid having his roots deep in the past.

Just saying the address "Gilmore House, The Butts", hails back to a day long before the house was built, when The Butts were mounds where the young men of Alston were obliged by Royal decree to meet and practise their archery.

Cumberland byelaws of 1597 enforced that: "The butts of Aldston and Garrigill be yearly made before St Helen Day upon "pain" (fine) of three shillings four pence for every offence."

The lord of the manor kept a strict eye on the Butts timetable, especially in these Border areas where fighting skills might be needed at any time to defend the village from a band of Scottish reivers.

But medieval Alston was no different to most other towns and villages in England at the time. They all had an area called The Butts, where healthy games like running, wrestling, throwing the gaveloc or dart, and of course archery, kept local youths safely off the streets. Sounds like an idea worth reviving!

1 Gilmore House, The Butts, Alston, is for sale via Northumbria and Cumbria Estates of Fore Street, Hexham.

The Diaries of William Rigby (cont'd...)

Ian Forbes

William Rigby visited the North Pennines in August 1832 to discover what he could of ore dressing and smelting technology and practice in our area. He kept a journal of his visit, and we are able to print extracts from this diary with the kind permission of Mrs Timms. William Rigby arrived in Alston from Wales on 9th August. By the following Monday (13th August) he was in Teesdale and visiting the London Lead Company mines of the Hudeshope valley north of Middleton. In the last newsletter we found him discussing ore separation at Lodgesyke mine.

The next mine we visited was Coldberry. This is not of such long standing nor is it as productive as the last mentioned, though to describe one is to describe both, being only 1 mile distant from each other and worked by the same agents, consequently the stratification and system cannot differ very widely. *(Coldberry Mine was in its turn to become extremely productive later in the nineteenth century, and the remains at this mine today are some of the most extensive in the North Pennines. Both Lodgesyke and Coldberry mines exploited the same rich belt of mineralisation north of Middleton.)*

The third mine of this Co in this neighbourhood is called Manor Gill and lies about one and a half miles east of the Lodge Dyke *(in the Great Egglehope valley)*. We did not visit this as I said before we intended finishing our evening at Eggleston Smelt Mills, in which however we were most grievously disappointed.

On our way back to Middleton we learned from a miner that a small mine in a glen about half mile beneath us belonged to the same Co as the others, and so (though already having had a stiff walk for we were saving our mare for the evening journey to the mills which lie 4 miles from Middleton in another direction) we ran down to it, in hopes of seeing something new, and then learned it was called Low Skier. *(This is Low Skears mine, in the Hudeshope valley south of Coldberry mine. In time Low Skears and Coldberry would be connected underground.)*

We were here struck with the general neatness of the washing machinery which consisted entirely of German Buddles, apparently all newly erected. *(I have not been able to establish the meaning of the term "German Buddle" although it occurs elsewhere in mine records of this time. I feel it may be an early name for what later became known as round buddles or circular buddles, but I would be extremely grateful if any Friend could give a secure definition of the term.)*

On our return to Middleton we called Mr Richardson who, as Mr Stag was from home, was commander of the forces at Eggleston Smelt Mills. We explained our business and our wants to him but he was different from all the rest of the people we saw in this country, drily refused us permission to look through the mills on account of us being connected with the trade. *(This is interesting as it shows how protective the London Lead Company was of its smelting expertise, in contrast to the company attitude to sharing knowledge about ore dressing. Eggleston Smelt Mills were state of the art, and clearly the technology used was commercially sensitive.)* The only piece of information gleaned from this ill bred fellow was that the principal or one great reason for the mining Co in these districts smelting their own produce was that each Smelt Mills which smelt no ore but that raised in the same parish in which it stands, is exempt from Poor Rates. *(Can anyone confirm the truth of this statement? If it is correct, it is an interesting additional factor to take into account when historians consider the sometimes apparently illogical siting of smelt mills).*

Being disappointed in going through the Mills we thought it most prudent to make our way to St John's Chapel which lay about 11 miles, which we accordingly did. We found the road bad but were nevertheless consoled to find that we were in tolerably comfortable quarters at the Black Bull *(one of the inns in the Market Place at that time)*, as our landlady, to use her own expression was a 'comfortable motherly kind of woman'. We this night found out the residence of Mr G Crawhall but as we heard that he was shooting we did not call upon him before 8 o'clock on the morning of Tuesday 14th.

We will learn more of the habits of Crawhall, the Weardale agent for WB Lead, in the next instalment.

Beamish Trophy Trial Checks in at Killhope

Returning after the absence of a year the 36th Beamish Trophy Trial enjoyed the best weather conditions for several years and again used Killhope, manned by the Friends, as a designated check point. Originally the annual event was organised by the Friends of Beamish Museum but in 1999 it was taken over by the members of the Durham Classic Motorcycle Club. This year's event was organised by the South Durham Section of the Vintage Motor Cycle Club.



Russ Parkin tests the knowledge of this Triumph rider.

Photo: Louise Moore

The trial is based on the route of the Travers Trophy Trial first held in the 1920's and is open to motor cycles over 25 years of age, the oldest in this year's trial being being a 1925 Triumph. Whilst Killhope was not included as a checkpoint in the original 1920's route it has been a popular stage since the trial was resurrected in 1998.



It looks like a car but this BSA three wheel vehicle is classed as a motor cycle as it has no reverse gear.

Photo: Dick Graham

This year there were ninety nine entrants who had to complete a 110 mile circular route and answer questions on motorcycling history and their knowledge of the highway code at various points en-route.



The sidecar team and Dick seem to be enjoying themselves.

Photo: Louise Moore

The bikes began to arrive at Killhope just before 10.00am and all but one were through the checkpoint by 11.20am. One entrant arrived at 12.30pm having had to visit Barnard Castle to replenish his fuel tank. Some motor cycles have a limited range and the closure of the filling station at Westgate has caused problems for the organisers. The stop at Killhope allowed many of the riders, and one driver of a BSA three wheeler, to take a break and they and their machines were a popular attraction for both the staff and visitors at the museum.



Riders and bikes enjoy a welcome rest

Photo: Dick Graham

Next year's Beamish Trophy Trial will be held on the 20th September so make a note in your diaries.

Project Officer's Report

Once again, I fear this is an abbreviated report, as your Project Officer has been spending far more time than is healthy on the Heritage Lottery Fund bid for Killhope.

However this preoccupation has not prevented some excellent work by members of the Friends in support of the museum. Trevor Bridges, assisted by Dick and Margaret Graham, laid out a magnificent display of some of Killhope's "Hidden Treasures" over the weekend of 9th/10th August. The treasures included the wonderful set of Sopwith's wooden geological models (backed up, this year, by Sopwith's copy of Westgarth Forster as reported elsewhere in this newsletter), the very precious Graham family quilt from the mid nineteenth century, the charming sparbox which belongs to the Dawson family and which is not currently on regular display and a number of other artefacts from the collections in store. The display gave visitors a chance to see things not normally available, but, more importantly, the benefit of an enthusiastic and knowledgeable commentary from Trevor, Dick and Margaret. It is really good to have people and activity in the mineral and spar box room, for people bring displays to life through explaining them to visitors.

Whilst at Killhope, Trevor was able to assess and sort the collection of mineral specimens or "bonny bits" very generously donated by Ossie Jones. Ossie has had these pieces since he collected them himself whilst working in Blackdene Mine. There are some very nice pieces which will go into Killhope's core collection, as well as some specimens which Killhope staff will use as "handling pieces" to show visitors. Thanks, Ossie.

Also on the topic of minerals, Cal and Kerith Graeber and colleagues from Rogerley Mine have once again been wonderfully generous in their donations of galena to Killhope from their mine workings. So too have the management of Coldstones Quarry who continue to put aside galena for Killhope, which is collected and brought to Weardale by members of the Russell Society. These supplies of lead ore are so important to Killhope for use and demonstration on the washing floor, and many children get a thrill they will never forget from finding and taking home in triumph pieces of galena and fluorspar they have "washed" themselves. Supplies of ore for the washings this year have also been helped by a generous donation from Peter Blezzard.

With the help of a grant from the North Pennines AONB Partnership, Terry McCormick has designed a dry stone wall for the riverside at Killhope which will demonstrate the underlying geology of the hillsides rising from the valley floor. Although it was easy enough to get the stone required for the wall quite close to where it was needed, the last hundred yards was a challenge. We are very grateful to Lloyd Peart, assisted by Liz Whitfield, for solving the problem. Lloyd came up to Killhope with his JCB, filled in some holes in the piece of land between the wall and the stream at the bottom end of the site, and used this rough road to carry the stone to exactly where it was needed. An invaluable piece of work, and a big "thank-you" to Lloyd and Liz.

Ian Jowett continues to come up trumps and works tirelessly behind the scenes to help keep Killhope in good order. This year he has made another cloth for the Brunton Buddles, a task of Herculean proportions. Is Ian the only maker of Brunton cloths in the country? I rather suspect he may be.

Ian and Russ Parkin have also tackled the problem of the collapsed water leat on the north bank of the burn, and have done great work bringing that back into service.

Peter Natrass once again organised and ran the Friends of Killhope Quoits Championship in his usual calm and efficient way – and for once it was neither a cold nor a wet day. The midges had a go at us though. As ever it was a friendly competition, but with no lack of skill, and some great matches keenly contested.

This year the Friends of Killhope brought the geology weekend back to Killhope where we feel it rightly belongs. A huge amount of work was contributed by Paula Martin and colleagues from Durham University, by members of the Russell Society who put on a fabulous and informative display of minerals, and by Brian Young, whose enthusiasm for his subject is always infectious. But the weekend was a disappointment in terms of the number of visitors, despite being well promoted in the "Northern Rocks" geology festival brochure. Your committee is determined to continue to bring geology and minerals alive for the non-

committed visitor, because, as the weekend demonstrated, the subject has some great stories to tell. But how do we make this weekend a success and attract large numbers of new customers? We need to think again, but I am truly grateful for the contributions of everyone to the weekend. There was lots to see and do – it was just sad that there was not a big audience seeing and doing it.

The day school or seminar organised by Alistair Bowden giving participants “A New Look at an Old Friend” of stratigraphy went very well, with a good audience and some high quality presentations. In the afternoon the field trip to the Middlehope valley above Westgate was also very well received. Thanks to Alistair for undertaking the sometimes nerve-shredding task of organising and delivering this event. There clearly is an appetite for this kind of seminar, and we will do more in the future. Any suggestions of topics would be welcomed by your committee.

We have received another excellent donation to the archive, when Bob Foster-Smith very kindly let Pam and I go through his late father’s library and take what we wanted for the Friends of Killhope. A most generous gesture, and we garnered some very good additions to the library.

Finally, an early warning that next year we celebrate 25 years of Killhope. I’m not sure yet what we will be doing to mark this milestone, but I hope as many of you as possible will be able to take part in a celebration event. We’ve come a long way in a quarter of a century!

Ian Forbes

Committee Changes

I am very pleased to inform you that we have a new secretary, he is Simon Donnelly, who lives at Westgate. Simon agreed to take the job during a visit with his family to look at some of the “Hidden Treasures” – items not normally on display.

As no-one has offered to take over the chairman’s job I shall continue in the role for the foreseeable future.

Dick Graham

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Readers' Letters

Many apologies to Michael for the delay in including his letter which was received shortly after Newsletter 68 was sent out.

Dewatering of Mines

I've read the note by John Burgess in Newsletter No 68 (Sept 2006).

The use of horizontal pumping rods was quite common in the Cornish tin mines and there were several local examples in the Derwent lead mines, with the best probably those at Sikehead and Taylors shaft. Was this John Taylor's influence perhaps?

What puzzles me, as a non-engineer, is the efficiency of these rods over long distances (at Sikehead they were nearly a mile in length). As I understand it the pump rods comprised sections of one-inch square wrought iron rods bolted together and supported on pulleys. I don't know the length of each section, but there must have been several hundred in the Sikehead operation. Any "free play" would have been magnified over the length of the rod thereby diminishing the transmission of the horizontal movement. What is the explanation that I'm missing?

Has anyone any ideas?

Michael Jones

The Discovery of Teesdale

I have just read *The Discovery of Teesdale* by Michael Rudd, ISBN 978-1-86077-453-9, Phillimore 2007, which I picked up as a remaindered book with Postscript.

Focussing on the literary and artistic connections, with transcripts of the descriptions of visits to Teesdale from the early 19th Century, this is a worthy addition to the library.

I was unaware of the Weel which existed before Cow Green Reservoir was built, so I have searched and found some more information from *History, Topography, and Directory of the County Palatine of Durham* by William Whellan and Co

The Weel is a sullen lake, in breadth about half-a-mile, and three or four times that length, formed by the interception of the Tees by basaltic rocks, over which the water flows into a deep and rapidly descending gorge, and forms the waterfall of Cauldron Snout."

I wonder why it was called "The Weel."

Christopher Saxton's map of County Durham circa 1607 is instructive. "Durtpit Chap" is shown in Teesdale, while "St John's Chap" and an enclosed "Stanhope Park" (between "Westgate" and "Eastgate") are shown in "Weardale". "Kellop flu", "Welhop flu" and "Burdon flu" are marked at the head of "Weardale". Presumably flu is an abbreviation of flush or some Latin version of burn.

In Thomas Kitchen's *New Map of Durham*-Drawn from the best authorities drawn in 1764, one can note a "Smelt Mill" at Rookhope and a "Smelt Mill" at Stanhopeburn. "Stanhope Park" is still enclosed, while "Kellhope Burn," "Wellhope Burn" and a general locality of "Burnhope" are shown at the head of "Weardale". "St John's Chapel" is again marked, as is "Dorpit Chap", and "lead mines" at "Langdon" and "Grasshill", all in "Teesdale". While to the north of Walsingham at "Thorley", "Coal pits" and a "Smelt Mill" are shown.

It is interesting the prominence given to Dirt Pit in Teesdale and the two early spellings of Killhope, perhaps prompting further investigative work.

Roger Bade

Book Reviews

The past few months have seen the publication of several new books which might appeal to anyone with an interest in the rocks and minerals of the Northern Pennines. Although this apparent sudden surge of publications is purely coincidental, it does highlight yet again the importance of our local rocks and minerals. Brief comments follow on three of these books.

The first two books, both published locally by the Weardale Society under the banner of 'History in the Landscape', are products of the Mineral Valleys Project, a major Lottery-funded initiative run by English Nature, and which over the past few years has supported a variety of environmental projects within Weardale.

The archaeology and architecture of Weardale.

Caroline Hardie and Niall Hammond. 2008. The Weardale Society. 267pp.
ISBN 978 0 9557373 0 5 £9.95.

Although perhaps not an obvious title for those interested in geology, one of this book's six chapters quite rightly focuses on the place minerals and rocks have played in the dale's history and, in addition, comments on the wider significance of Weardale's geology. The remarks that follow are directed mainly to this chapter: others may have views on the content of the remaining five chapters.

Entitled 'A treasury of minerals and rocks', after a brief introduction, under the subtitle 'A treasury of lead, silver and fluorspar', some of the historical and archaeological aspects of the lead industry are explored. The continuity of the narrative is, however, interrupted by several blocks of mainly unconnected text, reproduced in green typeface. The first of these, a short piece on the Rookhope Borehole, although interesting, makes little or no connection with the text it interrupts. The content of the other pieces, one of which carries a separate authorship, and which deal with various aspects of lead processing and conditions endured by the miners, would have been better if incorporated into the main body of text. The discussion of iron smelting within one of these odd interruptions is quite out of place. Returning to the main text, it is disappointing to note the quite unsustainable assertion that lead smelting in the 12th century was primarily for the refining of silver, with lead production arising almost as a by-product of silver extraction. In the light of recent research it is surely time to stop pedalling these baseless myths on Northern Pennine silver.

In view of Weardale's historical place in the origins of the world's fluorspar industry, it is a pity to see this important mineral treated so casually, and inaccurately, under the same banner as lead and silver. Strange too to note that of all this vital industrial mineral's many uses, the authors single out its employment in the making of non-stick pans and denim jeans (!). The basis for the latter claim is far from clear. More spectacular errors include the claims that Boltsburn Mine, a modest producer of industrial fluorspar in the early 20th century, but unique in its output of a few kilograms of optical grade fluorite, continued in production until the early 1980s and that Wolfcleugh survived until the mid 1990s. Boltsburn actually closed, in 1932; attempts at re-opening Wolfcleugh as a fluorspar producer in the 1950s proved unsuccessful. Even the most casual reference to the late Sir Kingsley Dunham's classic 1990 book '*Geology of the Northern Pennine Orefield Vol 1 Tyne to Stainmore*' Economic Memoir of the British Geological Survey, will reveal the true history of fluorspar working, save for its final demise in the handful of years that postdate this work. The claim that two Weardale mines are still being worked for barytes is bewildering; where might they be? However, most astonishing of all is the total absence of any mention of Dunham's work, despite numerous references to other authors, in a chapter on mining in Weardale. Such an omission is akin to missing Durham Cathedral out of a review of the buildings of Durham City!

The chapter continues, under the subheadings of 'A treasury of limestone', 'A treasury of iron', 'A treasury of millstones', for some inexplicable reason presented in green type, and, yes you've guessed it, 'A treasury of Whin Sill and ganister'.

The section on iron is interesting, though misconceptions are apparent in the suggested sources of the dale's iron ores. To claim that the dale's limestone lies '*...between the Millstone Grit and the Great Whin Sill...*' is both strange and incorrect.

In the light of these, and numerous other criticisms, this chapter cannot be recommended as an account of Weardale's mineral industry. The text betrays serious errors and lack of research. Curious editing has been applied both here and elsewhere in the book. A problem confronts

those wishing to cite the book – on the title page its publication date is given as 2007, on the following page of credits its publication date is claimed as 2008!

The rocks, landscape and minerals of Weardale.

Alistair Bowden. 2008. The Weardale Society. 56pp. ISBN 978 0 9557373 1 2 £7.95.

Whereas to many people Earth science (a more all-embracing and meaningful term than ‘geology’) may seem arcane and inaccessible, with careful and thoughtful interpretation, a little knowledge of rocks and the processes that shape them, can add real interest and fascination to a country walk. What could be more exciting on a walk through a Pennine valley or across a wild moor, than to see the remains of 300 million year old plants and animals, or the beds of the ancient rivers or seas in which these lived?

This small, and generally attractive, booklet, aims to introduce the remarkable stories that Weardale’s rocks, fossils and minerals can tell, outlines some of the uses to which these have been put over the centuries, and attempts to explain the nature of the distinctive dales landscapes. It attempts to do so by examining different rocks, fossils and minerals, based around visits to particular places as the dale is followed westwards. Thus we are invited to look at coal and coal-bearing rocks around Tow Law, sandstones around Wolsingham and limestones in the Frosterley area. Assuming that the ‘novice’, to whom the book is targeted, is not too daunted by being suddenly exposed, without any adequate explanation in the introduction to the concept of cyclothem and the use of terms such as Westphalian, Namurian and Viséan (technically known as chronostratigraphical subdivisions) of the rock sequence), the following few pages work well enough. Some good photographs of fossils, most of which it must be admitted are very unlikely to be seen by the visitor, and some attractive reconstructions of past environments, enhance the narrative.

A handful of specially prepared diagrams and maps supplement the text, though without any explanation of the colours used, the ‘novice’ unfamiliar with geology might struggle to understand the Whin Sill diagram. Also, it is not clear why the geological map on page 25 has been re-drawn in the form shown. Having obtained permission to use extracts from maps of the British Geological Survey, it would surely have been simpler and easier for the reader for these to have been reproduced in their original, and very much clearer, form.

The overall sense of direction, both geographically and geologically, seems to falter as the book progresses. We have an interesting and succinct account of the Rookhope Borehole, surely one of the most important contributions Weardale has made to Earth science. However, having highlighted its importance in understanding the nature and origin of the mineral deposits, we are left in inexplicable suspense as we are offered several pages of otherwise interesting and worthwhile landscape interpretation based upon Quaternary geology that seems to have been lifted straight from a research report. When we eventually return to Weardale’s minerals, the story of their origins, introduced so appropriately when considering the Rookhope Borehole, is only resumed, several pages later, in the description of West Rigg Quarry. Some high quality archival photographs add particular interest to modern views of the same mining scenes, though it is unfortunate that the photographs of minerals mostly do not match the earlier shots of fossils in either their quality or clarity: the pictures of galena, siderite and ‘limonite’ could be anything.

Despite these criticisms, the book is a useful addition to the understanding of local rocks and landscapes and at £7.95 is sensibly priced.

Minerals of Britain and Ireland.

A G Tindle. 2008. Terra Publishing, Harpenden, Herts. 616pp. ISBN 978-1-903544-22-8. £90

At the opposite end of both the technical and price spectrum to both of the above books, is this impressive work.

Few books can be regarded as ‘classic’ works from their moment of publication, much less from their conception. However, Andy Tindle’s long awaited *magnum opus* fits firmly into the classic category. Not a book to read from cover to cover, unless you are a real mineral ‘anorak’ or are in need of counselling, but a stupendous work of reference covering every valid, and some invalid, mineral species known from Britain and Ireland at the time of writing. This is not a mineralogical textbook in the sense of describing the characteristics of species to enable their identification. It is a work of topographical mineralogy, listing all of the significant locations at which individual species have been found and outlining significant

features in the material present at those locations with full bibliographic references. The otherwise formidable text is relieved by numerous superb photographs of typical, or interesting, forms of many of the species. Most are colour images of hand specimens, but where appropriate, photomicrographs of thin or polished sections are given, as well as a number of electron micrographs of species too small to illustrate in any other way.

Unsurprisingly, the Northern Pennines figures prominently, with many column inches, and numerous fine colour photographs, devoted to details of occurrences of such common species as fluorite, galena, sphalerite, baryte, witherite, barytocalcite etc., but rare species known from the area, including uraninite (pitchblende), xenotime-(Y) and bastnäsite are all there.

Inevitably with any compilation work of this sort, attention is soon focussed on one's own areas of particular interest or expertise. In consequence it is to be expected that a few of one's favourite sites have been missed, and this is so for a few Lake District ore minerals and some clay minerals in Southern England. Coverage of some silicates, notably feldspars and amphiboles, is rather patchy and locally some editorial glitches in formatting of the text. The reference list is obviously of monumental proportions and, as a guide to the published literature on British mineralogy, is worth acquiring in its own right. A scan of this reveals the omission of a number of titles that might have been expected to appear, notably a number of mainstream publications of the British Geological Survey. However, in the context of this work these omissions are trivial.

The only previous attempt at a complete compilation of this sort was Greg and Lettsom's *Mineralogy of Great Britain and Ireland*, published in 1858. Although still regarded as a classic work, this is a midget in comparison to this new book. An updating of Greg and Lettsom was the unfulfilled ambition of such eminent mineralogists as Sir Arthur Russell: many have since thought the task impossible. Dr Tindle is therefore to be congratulated for his devotion of what must have been innumerable hours of dedicated research in compiling what will clearly stand for many years as an authoritative and classic work of mineralogical literature.

At its list price of £90 this is not a cheap book, though it has been listed at an appreciably lower price by at least one Internet bookseller. For anyone with a serious interest in minerals of the Northern Pennines, or anywhere else in Britain, this is an indispensable work of reference. If you possibly can afford it, do buy it, you will not be disappointed.

Brian Young

West Durham The Archaeology of Industry.

Andy Guy and Frank Atkinson. Phillimore & Co Ltd 2008. ISBN 978-1-86077-447-8

This new book consists of 284 pages of 127 x 25cm approx and contains no less than 183 photographs both old and recent as well as maps covering each of the 9 sections. West Durham for the purpose of this work is broadly the area west of the old A1 (A167) road less Gateshead and the Tyne valley in the north but including a strip south of the Tees.

The book aims to be no more than an introduction to the industrial remains of the area and does not claim to be a comprehensive gazetteer of all the known sites but rather a selection of the most accessible. It is in fact intended as an update of Frank Atkinson's *Industrial Archaeology of North East England* published in 1974.

Each section of the book includes an outline of the background to the industry, its history, methods of working and a glossary of terms so that Friends of Killhope are unlikely to find much that isn't already familiar in the leadmining chapter.

In the section on coal the usual belief of shallow bell pits being independently worked is challenged following finds in Leicestershire where open casting revealed wood lined shafts 90 feet deep leading to interconnected roadways and a worked area of about 2.6 square miles. Remarkably, so little is known of the structure and extent of the early west Durham shafts that is not possible to say whether they resemble the Leicestershire example.

Arthur Raistrick no less, remarked upon how much we have learned about early coal pits from opencast sites and called for everything to be recorded. Amazingly there were no arrangements for professional recording and equally surprising, no bell pit sites have been definitively identified in West Durham.

Every chapter in this impressively researched work carries a wealth of detailed information and many photographs as well as the underlying message (of) the need to record at least, our remaining archaeology of industry.

The conclusion to the book contains stark warnings about the future of the area's industrial remains and lists a number of at risk sites and material which has been lost including the Grove Rake head stock and the millstones from the Waskerley site. On a more global scale it is noted "For an area that now sees potential in exploiting its historic industrial past, it has discarded the sites of two of its greatest industries, coal and iron with remarkable alacrity" (and without professional recording). Thus it is easier to see Roman forts in west Durham than it is to see a readily recognisable original colliery – perhaps as the writers observe "a case of preserving the pretty rather than the gritty."

Perhaps ever more worryingly it seems that official protection of sites doesn't necessarily guarantee their safety. As late as 2006 English Heritage noted that the North East remains the region with the highest percentage of Grade I and II listed buildings at risk in the country with industrial sites of particular concern. Included in the depressing list are the lead mining sites at Daddry Shield, Brandon Walls and Low Slitt in Weardale. Readers could no doubt add their own favourite sites which may not be listed and which it should be remembered could, under current planning laws be demolished without the need for notice or permission.

More cheerfully it is conceded that sites are generally better protected, interpreted and appreciated than ever before. It is also noted that local interest and knowledge can have a powerful influence on the survival and interpretation of historic sites, which implies a role for the likes of the Friends of Killhope.

The book succeeds admirably in its aim to be an introduction to the rich archaeology of the industry of this most under-appreciated area of the country. Let us hope its message about the preservation of what remains is equally effective. In the meantime as the writers implore, explore, discover, enjoy.

West Durham The Archaeology of Industry by Andy Guy and Frank Atkinson, published by Phillimore & Co. £25 from all local bookshops.

Bryan Chambers

Isaac's Strange Gift. Roger Morris.

Coolgeordie Publishing 2008. 60 pp. ISBN 978-0-95660122-0-3

"The largest monument in Allendale is not to a lord, lady or dignitary. It commemorates an itinerant tea seller and a former lead miner." This is the opening sentence of a new paperback book by Roger Morris about Isaac Holden, a remarkable man. Many Friends will be aware that Roger developed a popular 36 mile walking trail based on the route covered by Isaac, a 19th century tea seller. The literature produced to promote the trail gives a brief summary of Isaac's life and mentions his fund raising activities to improve the lot of working folk in the Alston/Allendale area. The discovery of a tract, written by Isaac Holden describing how he provided the folk of the West Allen area with a hearse has prompted Rodger to expand the details of Isaac's life and times.

The first half of the 60 page book describes the the Holden family, the career of Isaac Holden and the lifestyle of the people living in the East and West Allen river valleys in the 19th century. Isaac was described as "Not very bright" and even by his friends as "Peculiar" but the fact that over 600 people subscribed to his memorial shows he was well respected for his achievements. This is not surprising as they included raising funds to pay off a chapel debt, providing a fresh water supply for Allendale Town, promoting a savings bank and founding a clothing fund for poor women and children. The second part of the book is a reproduction of Isaac Holden's tract, printed in 1855, describing how he raised funding (being obsessively secretive about the purpose of the fund), by selling portraits of himself, for a horse drawn hearse which he unveiled at a ceremony to open a new school at Ninebanks. The tract gives an insight into Isaac's character and beliefs and, whilst it is somewhat rambling, it is remarkably well written when one considers that he left school at the age of eight.

This well researched little book brings home the reality of life in a small part of rural Victorian England in a way that many history books fail to do. Priced at £4.99 with proceeds going to support the work of the Allendale Trust Rodger's book is a worthy addition to your bookshelf and in its own way helps continue the spirit of Isaac's charitable work.

Isaac's Strange Gift is available from the Allenheads Trust Ltd, Allenheads, Hexham, NE47 8HN. Further details from: rogerdmorris@googlemail.com.

Dick Graham

**MINUTES OF THE TWENTY THIRD ANNUAL GENERAL MEETING OF
THE FRIENDS OF KILLHOPE HELD AT KILLHOPE LEAD MINING MUSEUM
ON SATURDAY 7TH OF JUNE 2008
Chaired by Mr Dick Graham**

1. **Apologies for absence** twenty seven members attended the meeting; apologies for absence were received from: Peter Lanham, Jake Almond, Rt Hon Hilary Armstrong, David and Elizabeth Hacker, John Almond, Carol Sutton.
2. **Minutes of the Twenty First Annual General Meeting.**
The minutes were accepted as a true record.

3. **Matters Arising.**

Dick thanked everyone for their good wishes last year and informed the meeting that he is now fit and well.
Russell confirmed there are still problems with a few standing orders and some member's fees are not getting paid.

4. **Annual Report.**

Dick reiterated the problem of the lack of officers.
Dick thanked Ian Jowett and Russell Parkin for their work on site. He explained that the need for a beam to be replaced in the jigger house is holding up the work.
The archive team were thanked for all of their hard work over the winter. More use is now being made of the archives.
Alistair Bowden was thanked for a successful Day School
The FOK have not been successful with a bid to help the Peatscape Project purchase low energy light bulbs to give to those visitors to Killhope who support the project.
Dick confirmed that we are now deregistered as an environmental body. We are very grateful for the £79,000 we have had in total from the cement works, Blue Circle and latterly Lafarge.

5. **Accounts.**

The ENTRUST Account is now closed due to the deregistering of environmental body.
Net Costs of assets shown on annual financial report at accountants advice. This is because assets can appreciate and depreciate in value.

£15,000 has been transferred to a three month bond to gain better interest.

The FOK have a total of £39,000.

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|--------------------------------|---------------|-----------|
| A brief description of income: | Subscriptions | £2,230.00 |
| | Interest | £825.00 |
| | Gift Aid | £638.00 |
| | Donations | £194.00 |
| | Books | £142.00 |
| | Quoits day | £75.00 |

| | | |
|-------------------------------------|----------------------|-------------------------------|
| A brief description of expenditure: | Postage | £562.00 |
| | Printing | £531.00 |
| | Laptop | £530.00 – including insurance |
| | Accountants fees | £510.00 |
| | Insurance | £206.00 |
| | Room Hire | £100.00 |
| | Stationary | £86.00 |
| | Subs to other groups | £83.00 |
| | Equipment | £50.00 |

The subscriptions pay day to day running costs. As the entrance fee to Killhope has remained as last year there is no need to increase our subscriptions.

Margaret suggested that in the light of the crisis with officers and the possibility of the organisation winding down, that we should spend the money we currently have.

6. **Election of Officers**

Secretary – Jackie Hamer resigning, this post is now vacant. Dick will cover for six months, if nobody volunteers in that time then we will run down the organisation

The secretary's post was outlined. It consists of taking minutes, preparing agendas, dealing with correspondence and completing the annual returns for The Charity Commission.

Dick thanked David Redfern for his offer of help.

Chair: this post continues to be vacant. Committee will share role.
 Newsletter Editor: this post continues to be vacant. Margaret Graham will continue to produce a newsletter provided articles keep coming in.
 Membership Secretary: Russell agreed to continue in post.
 Treasurer: Margaret agreed to continue in post.
 Project Officer: Ian Forbes agreed to continue in post.

Dorothy Chambers proposed and Helen Cannam seconded that the officers are accepted as outlined. The three year rule for committee members is being waived due to the current lack of volunteers. Alistair Bowden has been accepted onto the committee. Liz Whitfield, Denise Fisher, Frank Bouweraets, Jackie Hamer and Pam Forbes remain as committee members. Proposed by Trevor Bridges and seconded by Margaret Graham
 Tim Reid to stay as auditor. Proposed by Ian Forbes and seconded by Shelagh Bridges.

7. AOB

The talk by Bob Symes has been cancelled.
 Book launch at Killhope, Friday 20th June 2008, 1.30pm to 3.00pm. Minerals of Northern England by Brian Young and Bob Symes.

Friends of Killhope books have been reduced in price.
 Northern Lead Dales now £6.00 from £12.00
 Fluorspar now £3.00 from £7.50.

These books have already paid for themselves so any now sold are all going to make a profit. Mavis Luff asked if there were a high proportion of subs not being paid because of the standing order problem. Russell explained that it is a small number of new members that have this problem, and it is impossible to correct as the banks involved are too far away.

Ian Forbes gave a brief run down on the development proposals at Killhope. He thanked the Friends for their work and spoke of the importance of the relationship between Killhope and The Friends and that he hoped that the short term difficulties can be solved.

He explained that the March deadline for the Heritage Lottery Fund had been missed. He said that a new HLF program was less work at both stages and that they hoped to submit a new bid on 1st September 2008. The Architects, Page and Parker, have to reduce the cost of the new building. If all goes according to plan then Killhope will be closed in 2010 and re-open in 2012, this closure of the museum has the backing of Durham County Council.

Shelagh Bridges asked how the special atmosphere that is now apparent at Killhope could be maintained in a new modern building, more distant from the old mine site. Ian replied that his personal belief was that the new building would enhance the situation.

Eileen Redfern asked about the welfare of the resident red squirrels during and after construction. Brian Young said he believed that due to the isolation of the population that the numbers would diminish naturally, so we cannot become too sentimental. Ian Forbes agreed, although he said that disturbance to the squirrels would be kept to a minimum.

Several members commented on their concern about being able to maintain the current atmosphere which they believed was due especially to the interaction with staff. Some questioned the need for a new building, pointing out past achievements obtained without the need for a new modern building. Some wondered if an extension onto the existing building would be a better option.

Ian replied he believed we need a new building in order to move on and change.

Bob Pendlebury pointed out that the folding of The Friends would not look good on the HLF bid.

Bob was thanked for his contributions and support over the years as he is not standing for the county council after being a member for over 30 years.

Dick thanked everyone for attending.

Meeting closed at 11.50 am.

Forthcoming Events 2008

Friends of Killhope Events 2008

6th December **Christmas Social Evening** at Ireshopeburn Institute starting at 7.30 pm.
All welcome. Tea and coffee provided, contributions of party food welcome.

Killhope's Events Programme 2008

25th & 26th October **"Spooky woodland walks with Adam the storyteller"**
Walks from 12 noon. Children 50p, adults £1

31st October **Halloween night Dead scary mine trips and Hallowe'en "bites"**
£25 essential - Do you dare venture underground? Starts at 5.30 pm
Share the experience with a paranormal investigator. Strictly 16 years plus.

For more information on these and other workshops, talks and activities taking place throughout the season please go to www.killhope.org.uk.

Weardale Field Study Society - Programme 2008

All meetings held in Durham Dales Centre, Stanhope at 7.30 pm on Tuesday evenings.

4th November Dick Graham "Greta Lodge - Gone but not forgotten"
2nd December To be arranged

North Pennine Heritage Trust - Members Events Programme 2008

2nd November **Gullyback and the Letterbox - an underground ramble**
Must be booked in advance - phone Pete Jackson on 01642 564100

8th November **Annual General Meeting**
23rd November **Underground Archaeology at Thompson's Level**
This is a provisional date - please check with Pete Jackson for more information.

For further details contact: Nenthead Mines Heritage Centre 01434 382037/382726 or email: info@npht.com

NAMHO (National Association of Mining History Organisations) 2009

19th-22nd June **NAMHO Conference at Matlock - call for papers**

The 2009 National Association of Mining History Organisations Conference will be held at Matlock on the weekend of the 19-22 June. Celebrate the 50th anniversary of one of our founder organisations - the Peak District Mines Historical Society - and our own 30th anniversary. There will be the usual wide range of surface and underground field visits (at all grades of difficulty) extending from Friday to Monday, and a lecture programme on the Friday evening, Saturday and Sunday. Contributions to the lecture programme are now invited: the main theme will be mining landscapes, especially underground, and contributions concerning overseas mining, in particular those relating to British ventures or technical linkages will also be welcome. Papers will be published in *Mining History* and written drafts should be available at the conference.

Lecture programme: contact Lynn Willies as soon as possible at lynnwillies@Hotmail.com

Preliminary Conference Programme booking details will be available from November 2008 contact Robin Hall at: www.peakmines.co.uk.

Computer Processing

Sketches, maps, and other graphics are usually computer-processed to ensure that an author's work is shown to the best advantage when printed.



FRIENDS OF KILLHOPE

Membership Renewal 2009 (due 1st January)

Name:

Post Code:

Enclosed cheque or standing order for £ Family @ £15 Senior (over 60) @ £7.50

Individual @ £10 Student @ £7.50

Please delete inapplicable rates.

Cheques to be made payable to Friends of Killhope and sent with this form to the Membership Secretary,
Russell Parkin, 50 Lydgate Lane, Wolsingham, BISHOP AUCKLAND, Co. Durham DL13 3LF

GIFT AID

The Gift Aid scheme is very flexible and covers any donation or subscription at any time. It will not cost you any extra and it does not commit you to making any future payments. All it takes for the Inland Revenue to return to us 28p for every pound you give us is your signature on a form such as that below. The 28p comes from tax which you have already paid and can continue to be claimed only as long as you continue to pay income tax. Accordingly you will see that the form also asks that you let us know if you stop paying tax.

GIFT AID DECLARATION

Please reclaim my tax. I want the Friends of Killhope to treat all donations I have made since 6 April 2000 and all donations I make from the date of this Declaration as Gift Aid Donations.
I will inform you if I cease to pay tax.

Signature: Date:

Full Name:

Address:

..... Post Code:

STANDING ORDER MANDATE

To: Bank plc

Address:

..... Post Code

Please pay HSBC Bank plc, Bishop Auckland DL14 7HQ Code 40-43-06

For credit of Friends of Killhope Account No 11031015

The sum of £ (amount in words)

Now and on 1st January thereafter and debit my account accordingly.

Signature: Account No:

Date:

