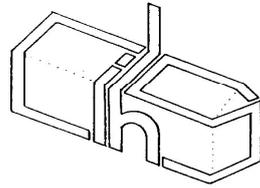


Cumbria Industrial History Society



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EDITORIAL

Well the summer is nearly over and despite the weather the Society does appear to have hit the few fine days for the outings, despite the torrential down pour at the start of the Rowrah railway day the rest of the day was fine. The committee should be thanked for all the effort they put in to organise the programme.

The committee is always interested in ideas for visits and especially ideas and names for speakers at conferences, we have a few ideas for next year but are always open to other ideas.

Front cover Sprint mill the June evening meeting.

SOCIETY EVENTS 2011

TEESDALE LEAD MINES SUNDAY 2ND SEPTEMBER 2012 10.30 AM.

Meet at road side parking on Alston to Middleton road at grid reference NY797 351 for a walk around some of the lead mining remains in the area. Packed lunch and suitable clothing required.

OCTOBER CONFERENCE SATURDAY 20TH OCTOBER 2012 VICTORY HALL BROUGHTON IN FURNESS.

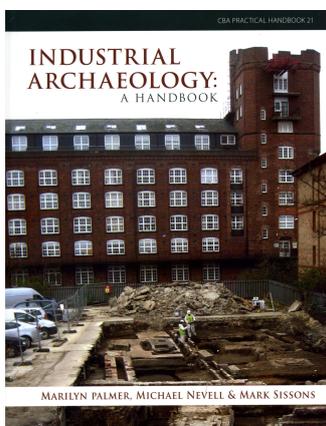
Talks to include Burlington Slate, Millom railways, Millom industries. Booking forms enclosed.

NOVEMBER 14TH EVENING MEETING GREENODD VILLAGE HALL 7.0PM.

‘TO THE INVENTOR OF THE ICE LOLLY’ (REVISING THE CUMBRIA PEVSNER) By Gavin Watson

Our member Gavin was the author of the industrial history section of the latest edition of Pevsner guide to buildings of Cumbria, he will talk about his experiences and thoughts on the subject.

BOOK REVIEW.



INDUSTRIAL ARCHAEOLOGY A HANDBOOK.
CBA practical handbook 21. By Marilyn Palmer, Michael Nevell & Mark Sisson. ISBN 978-1-902771-92-2 Published Council for British Archaeology. 26 pages numerous colour photographs.

Anyone who expecting this book to be a guide to the art and practice of doing 'Industrial Archaeology' as they may do from the title of 'A Handbook' will be disappointed. The book is derived from a series of meetings held throughout the country organised by the CBA and AIA on the subject of industrial buildings in order to train volunteers to consider them in the light of planning applications to demolish or alter them. Having attended a couple of these meetings that was not the outcome I got and neither is it them outcome I got from this book.

The first chapter consists of a concise description of the history of industrial archaeology from when the term was first used in the 1950s until the present day. It also looks at the role of the various authorities within the country in preserving the landscapes and buildings of our industrial past. The final part of the chapter looks at adaptive re-use of industrial buildings and uses a few high profile cases as examples.

The rest of the book consists of eight chapters looking at a wide variety of industries in a very superficial way. For example in the chapter on extractive industries (chapter 4) it covers clay extraction including the pottery industry as well as the brick industry, lime burning, stone quarrying, lead mining, copper and brass industry, tin mining, coal, iron and steel, and weirdly charcoal burning and gunpowder all in 50 pages, some feat. Each topic is split into a number of sections usually looking at the basic process and the history of the industry, changes over time in the buildings and landscape. There is then a short section listing 'key sites' and finishes with a short reading list which usually starts with Shire book on the subject and ends with the list of relevant papers that have been published in the AIA Review.

This book follows on in the tradition of Hudson's *Handbook for industrial archaeologists* and Cosson's *The BP book of Industrial Archaeology*. In my opinion it brings nothing new to the subject other than an update to the history of the subject and a modern but briefer bibliography. For those people who can not find second hand copies of the above books and want a general introduction to the industries of Britain then it may provide interesting reading, but I can not see it getting a lot of use on my bookshelf.

Graham Brooks.

SITE NEWS

KIRKSTONE QUARRIES.

It was announced in March 2012 that the company Kirkstone quarries had gone into receivership. They worked the both Petts quarry at Kirkstone and Brathay quarry near Ambleside. The rights to extract stone from both quarries has been taken over Burlington Stone.

BACKBARROW IRON FURNACE.

This site has been going on for years. The latest planning deal that has been passed is for 29 houses (17 for locals) as well as workshops etc. There is a requirement for the preservation of the furnace and associated buildings. We will see how it goes this time.

MADE IN CUMBRIA

Iron farm gate (NY299241)

This gate (Photograph 1) is situated near Castlerigg stone circle to the east of Keswick. The maker's name appears twice, cast into the post (Photograph 2) and on a plaque attached to a corner piece on the gate itself (Photograph 3). The maker was A Parker & Company. They were established in the early 1900s at Marsh Side in Workington as manufacturers of wrought iron fencing. They were still in business in 1938 but had gone by 1954



SPRINT MILLS – THE TEXTILE MILL

The Society visited sprint mill for its June evening meeting, below is a transcript of the notes on the mill by Mike Davies-Shiels as made available on the evening.

As mentioned with the Sprint Corn mill, it was only possible for the Lord of the Manor to re-designate or re-apply or re-direct the waterpower of the cornmill site to something else. It was usual to find this being done in the early years of the Industrial Revolution, and the Lord, being ‘in loco parentis’ would be only too glad to solve both his work-force problem for a textile mill and reduce the numbers burthening the Poor Rates of the Parish at one stroke by building such a mill. These were very profitable in Lakeland in the late 18th century, because Whitehaven and Lancaster were still the leading importers of the best long-staple cotton from our colonies in the West Indies, and, until about 1820, more cotton carding mills were built in Cumbria than anywhere else in Britain. (Remember that the numerous large cotton mills at Cark, Backbarrow and Ulverston etc. were still in Lancashire, albeit North-of-the-Sands.)

So, here was a corn mill with quite a large flow of water, ample for a cotton mill to be built at the same site and using the same millpond but via a different headrace. The cotton mill was built on the site of an earlier fulling mill for treating woollen cloths:

1468 A watermill at Strickland Ketill*, owned by Walter Strickland. W.S. was a cloth merchant who sold cloth in Bristol and its suburbs each year.

1552 John Machell, Cloth worker of London, purchases the Manor of Burneside. He would certainly continue to use this mill.

Then there is a long gap which I might be able to fill once I’ve seen all the local registers. Then by a long process of elimination of available mill-sites we have:

1787 Rodick, Matthews & Co. Cotton Spinners of Strickland Roger (ref Manchester Mercury of 26 Aug 1788)

Again, a gap, but this would be a four storey cotton mill of standard local pattern, borne out by the FIRE of 1825 (q.v.)

1802, 1805 Emmanuel Burton and Christopher Godmund, Cotton Spinners of Strickland Roger. It was known as Godmund’s Mill, and, since E. Burton died at Whitehaven in 1809, aged 77, (I’ve seen this tombstone by sheer chance, in Trinity Churchyard, ”Also Emmanuel Burton, his father, formerly of Kendal, Clockmaker....”), I presume that Godmund must have continued with the mill for a little while longer. It is also very interesting that E.B. was a ‘Clockmaker’ at the Backbarrow Cotton mill in 1791. That looks as if Sprint had been in Godmund’s possession for some years in the 1790s. Again there is much check work to be done.

1814 Thomas Braithwaite. Cotton Mill and Bobbins (almost certainly all in one building).

1814 Westmorland Advertiser 23 April.

TO BOBIN TURNERS

Wanted at a Cotton Factory, a BOBBIN TURNER, he may depend upon regular and constant work, and at so much a gross, as will enable him to earn very handsome wages.

If married, and a family that would be of use in the factory, it would be preferred. For information apply to Mr Thomas Braithwaite, Ironmonger, Kendal.

I think from this and what happens next, we can construe that the mill is owned by Thomas Braithwaite, but sub-let to Joseph Jagger. Many 18th and 19th century business people took leases of mills as a money venture when there were few other ways of investing one's savings, and then tendered them out to working managers to make their profit for them. Before 1815, T.B. may have been sub-letting to Mr William Wilkinson, Carder. I cannot be 100% certain though, that W.W. was a cotton carder and at this mill, although it is highly probable.

1820 Kendal Chronicle 7 March.

“Whereas Joseph Jagger, of Sprint Mill, Strickland Roger in the county of Westmorland, Carder and Spinner, hath by Indenture of Assignment dated 7th March 1820 assigned over all his Personal Estate to Christopher Prickett of Natland Mill-beck, Miller, and Robert Paine of Kendal, Dyer, for the equal benefit.. such of his creditors as shall signify their consent in writing to take this Dividend rising therefrom.....

1820 Kendal Chronicle, 27th March

To Engineers
To be sold by Auction

On Monday 27th March 1820 at Sprint Mill in Strickland Roger (by order of the assignees of Joseph Jagger) at ten o'clock in the Forenoon ALL his household furniture consisting of beds, bedsteads, clock, chairs, tables, etc., etc., One Horse and Cart, and Cart Gear, One Toming Engine with Cylinder, One carding Engine with two Cylinders, one Teazer, one 70 Billy, one 40 Billy, one Reel, one Twisting Frame, etc., etc., all in good repair. Times of payment.....

This tells us that he had an old-fashioned cotton carding mill with too few threads being made at one time to really make it pay. Also, he was using an Arkwright water-frame that by 1820 was well out of date compared with the Crompton's Mules

A later note in the Chronicle says that the mill was sold to Messrs James Gandy and Sons. These were the largest single manufacturer and employer in Kendal from the late 1790s until about 1850 and were known as "the backbone of Kendal". A northern country step-dance was named after them, called 'Gandy's Needles' and I happen to know that the first line went – 'Step to my needles, step to my needles, step, step, step' which makes it a foursome dance, probably with a pair of crossed needles in the centre of the floor.

1820 James Gandy & Sons. Woollen Spinners at the Sprint Carding Mills.
1825 Kendal Chronicle, 2nd April

"The Spinning and Bobbin Mills upon the River Sprint near this town, have been completely destroyed by fire. They are owned by Messrs James Gandy & Sons, and occupied by Messrs Wilson and Birkett."

This tells us that Gandy has converted the four storey mill into a three-storey wool carding mill with bobbin manufacture on the remaining floor. He has then sub-let the mill to Wilson & Birkett.

1830 April 24th, Local Chronology At the Quarter Sessions on Thursday an application was made on the part of Mr. John Gandy for a licence to erect Powder Mills on the River Sprint, but the Court rejected the application

July 24th: a renewed application was made, for permission to erect powder mills on the River Sprint. The Court again refused the application, and said that the risk to Kendal Town could be assumed to be too great as there were no hills or trees between the Sprint Mills site and the town.

The word 'site' tells us that the mill had not been rebuilt and was probably still standing in ruins. It is interesting to note that the Gandys, like the Wakefields, were a Quaker family and presumably had noted the great wealth acquired by the latter through their powder mills at Sedgwick and Bassingill.

The site is not listed in Parson & White's Trade directory of 1829 which means that it had not been rebuilt. P&W were very reliable recorders of mills. This confirms the 1830 data.

1834 But by this date the woollen mills have been rebuilt, probably by the Gandys, and let out to the firm of George Robinson, Woollen Yarn Spinner, as listed in Pigott's Trade Directory. They have in turn sub-leased a separate Bobbin Mill. (I cannot be certain that it was totally separate or merely in part of the woollen mill) to Nathan and Thomas Martindale, as given below.

1836 June 4th, Westmorland Advertiser - Dissolution of Partnership:

"We the undersigned do hereby give notice that the Partnership lately subsisting and carried on by us, under the firm of Nathan and Thomas Martindale, of Strickland Roger in the P'ish of Kendal, in the Co. of Westmorland, BOBBIN MANUFACTURERS, was this day dissolved by mutual consent, and that all debts due to and owing by the said Partnership concern, will be received and paid by the said Thomas Martindale. 25th May 1836, Wilson Mill, near Kendal".

Note that he calls it Wilson mill – this might just mean that it was Wilson who rebuilt it and not John Gandy. The 1899 data suggests that this is correct and that the man in question is of the Wilson family who owned Castle Mills in Kendal for such a long time.

1839 July 13th Fatal Accident at Sprint Mill near Kendal on Tuesday.

"James Robinson, one of the partners of the firm of Messrs Robinson and Scott, worsted spinners, was at work in the mill, and had occasion to use an instrument to pick the wool from the axle of a cylinder, which he was in the constant habit of doing, when the tool became fastened between the cylinder and the framework. He pulled hard to get it out, it came suddenly and struck his right eye, going several inches into his skull. Deceased was 35 years old."

1842 Geo. Robinson, Woollen Yarn Spinner (Trade Directory)

1844 FIRE totally destroyed the Worsted Mill of George Robinson, at Sprint Mills.....
(Local Chronology?)

1849, 1851 George and William Robinson, Yarn spinners and Blanket Manufacturers
(Mannex Trade Directory)

This means that the mill was once again rebuilt. This is the age of the mill now standing.

1858 A reference to Geo Robinson being a manufacturer of Saddle Woollens.

1869, 1873 William Robinson & Co. Woollen and Woollen Yarn Manufacturers

1879 to 1906 at least: James Robinson, Woollen Manufacturers, Sprint Mill.

But note that in 1880, 1885 and 1899 J.J. & H. Wilson of Castle Mills, Kendal were at Sprint Mill. These references come from Gilbert Gilkes & Gordon Turbine Works' ledgers and show that the Wilsons are the true owners and Robinson merely leased it from them. The 1899 reference is the most interesting for it gives details of the old spherical turbine that is there now:

Turbine No. 1377 of 1899 installed by G.G.G. at Sprint. 15 h.p. on 32 ft fall, for J.L. & N. Wilson Ltd. Type: Trent 12 inch.

1932, 1938 Bobbin Mill, owned by the Oakbank Wood Turning Company.

1964 I saw it in a derelict and dangerous state, with the remains of a bandsaw and sawbenches, got into the turbine pit via the tailrace arch and made the sketches. You will note that the cottages referred to on the 1838 Corn Mill Letting Notice are still there.

M. Davies-Shiel, Jan 1979, to Edward Acland, Sprint Mill

* Strickland Ketel parish lies to the west of Burneside and the River Kent, which throws some doubt on this record – the other references are to Strickland Roger which is to the east of Burneside and includes Sprint Mill. H.C.



SPRINT MILL DURING RENOVATION.

ANOTHER GRADWELL BRICK?

By Daniel W Elsworth

A list of bricks known or assumed to bear marks of the Barrow builder William Gradwell was published in 2010ⁱ. These comprised two basic types, those marked just ‘W G’ and



those spelling out the name ‘Gradwell’ and occasionally including ‘Barrow’ or ‘Barrow-in-Furness’. The former types seem to be earlier, belonging to the 1870s, the latter later. Recently another brick has been discovered, that, assuming it was also manufactured by Gradwell, perhaps spans the gap between the two types. In the woods at Conishead Priory the paths have in various places been made up with dumped building material. The source of this material is not known, it perhaps resulted from one phase or other of alteration at the prioryⁱⁱ, or has come

from the nearby brickworks, which were probably built for use in the construction of the priory and latterly acquired by William Gradwell in 1882, although he was using it by 1876ⁱⁱⁱ. Amongst the rubble in the paths was a brick marked ‘W G B’, presumably standing for ‘William Gradwell Barrow’ (**Error! Reference source not found.**). The form of the brick and text is consistent with examples known to have been used in 1874^{iv} so it presumably of similar date, although the addition of ‘B’ would suggest it is later. William Gradwell died in 1882, but his various businesses seem to have continued in operation until as late as 1900^v. The dating of this brick cannot therefore be certain but later 1870s seems likely. It adds another example to the remarkably large range of bricks made by William Gradwell, and if anyone is aware of other examples I would be grateful for further information.

ⁱ DW Elsworth and S Whitehead, 2010, ‘The Barrow Steam Corn Mill, 1870-1972’, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd ser, **10**, 71-73.

ii It should be noted that although at least medieval in origin, Conishead Priory became a private home following the Dissolution, but retained the name. It was subject to various extensive programmes of rebuilding, the most significant perhaps that of the early 19th century.

iii R McKeever and J Layfield, 2004 *The Industrial Archaeology of South Ulverston*, Ulverston, 120-122.

iv DW Elsworth and S Whitehead, 2010, 73.

v *Op cit*, 71

CLEATOR IRON WORKS – THE SHEFFIELD CONNECTION

Roger Baker writes:-

Last year, Robin Walker from Swanage in Dorset got in touch with me. Robin had been researching his family history and discovered that his forefathers had been involved with the iron works at Cleator. A search of the internet had led Robin to an article I had written for the CIHS' website in which it says:-

“Carbon steel had been made from the early 1700s in the cementation furnace, by increasing the carbon content of wrought iron ... The only reference to steel produced by this method in Cumbria is to an iron works at Cleator ... The suggestion is that the original furnace site was adapted to steel converting by a Yorkshire (Sheffield?) firm, but abandoned and demolished in 1799”.

Robin sent me a copy of his research with the warning that “I have never been to Cumberland and know nothing about the production of iron and steel”. He asked for any other information about the ironworks – I have sent him some of my notes, but would happily pass on any information other members might have. This is what Robin found out:-

In the Sheffield Archives is a document “Articles of co-partnership” dated 2 February 1793 – Samuel Lucas of Royd’s Mill, Brightside Bierlow, Sheffield; John Read of Green Lane in the same parish, refiner; Edward Lucas of Sheffield, gentleman; Thomas Lucas of the same, gentleman; and James Bedford of Birmingham, cutler. To become co-partners to buy iron ore and calx of iron for working in an ironworks already begun to be built at Cleator, Cumberland according to a process discovered and patented by Samuel Lucas to “bring ore and calx of iron into a metallick state without first rendering either of them fluid.”

The background to this is that about 1760 Samuel Lucas (my 5x great grandfather), silver refiner, moved from Birmingham to Sheffield with his nephew John Read to form Read & Lucas partnership which later became The Sheffield Smelting Company. When Samuel Lucas died in 1772, John Read then went into partnership with Samuel Lucas’ son Samuel (his cousin), and Samuel’s brother Edward Lucas (my 4x great grandfather) also worked for the firm.

Samuel Lucas had taken out a patent in May 1792 for bringing ore into a metallick (sic) state – patent no. 1869, A.D. 1792. Edward Lucas took out a patent in Whitehaven dated 13 November 1793 for “a method of fusing ores, metals and calx of metals whereby saving is made in fuel and labour”. Samuel took out a second patent on May 20 1804, no. 2767, for the production of malleable iron.

John Read purchased some plots of land, and leased some more, on the banks of the River Ehen or End at The Flosh, Cleator. In an account by H.A.Fletcher in the Transactions of the CWAAS is written:-

“At the Flosh, Cleator, where Mr Ainsworth’s Flax Mill now stands, there were some works for making bar iron and steel, which were abandoned and dismantled in 1799. Could this be the intended works referred to in William Gilpin’s letter to Sir James Lowther, November 2nd 1794 in which he alludes to the free and plentiful ore at Langaran near Whitehaven, and that at Frizington, and the intended forge at Cleator for smithing them with pit coal. Mr Lindow believes they belonged to Mr Williamson of Cleator Hall, but an intelligent and very aged resident, who says his father worked there, thinks they were held in the latter part of their time by a firm from Yorkshire. Possibly they came from one of the steel processing valleys near Sheffield, and adapted what were before bar making works to steel converting, for a clever sepia drawing of Cleator Iron Works in the year 1794 shows a row of six conical furnaces rising out of square bases, which are evidently of the kind used, and still in use, for the conversion of bar iron into steel by the process of cementation.”

There is a copy of the sepia drawing referred to above in the book ‘Cleator and Cleator Moor’ by Rev. Caesar Caine entitled “Cleator Iron Works 1794 (*and subtitled*) – These works occupied the site of the present Linen Thread Mills, and disappeared half a century before Cleator Moor Works (Whitehaven Iron and Steel Company) began.” The text says the drawing shows the present Hilden Road, now occupied by Mill Cottages, which was apparently the cart-way to the furnaces. The landowners claimed proprietorship over the road as late as 1872. The River Ehen is seen from the dam opening into the mill race connected with Robertson’s wheat mill to the present Mill Street. The centre of the picture is occupied by the river above and below the weir. Above, it forms a still pool; and below it a swirling torrent, in which the river debris has formed two islands, large enough to support trees of a considerable size. It strikes one that the river was less constrained by its banks than it is now. One object is worthy of note here. The houses on the right of what is now Mill Street, leading to the Thread Mill, are in the picture. It would appear that these houses were built before those on the left, and further that they were originally built, not for the workers in the mill, but for the furnace men. The drawing bears the inscription “Cleator Iron Works 1794, copied by Miss J Hartley from a drawing belonging to the late Mr Randleson.” Caesar Caine goes on to say that the Cleator Flax Mill was erected on the site of the old iron furnaces in 1800 by Mr Henry Birley and other members of his family.

There is a letter in the Gentleman’s Magazine Vol LXV of 1795 which includes:- “From this place the road is good to Cleator; at which place the traveller may stop and, if he is a lover of the Arts, may view the very extensive works of Read and Co. (of Sheffield), who make great quantities of iron and steel by a process entirely new I believe. The works are upon a large scale. The black peats beforementioned are used in this place. Hence go to Egremont.”

It appears that the running of the ironworks in Cleator Moor was left to Edward and Thomas Lucas, as the other partners had their own commitments elsewhere. Both of them married local girls. Mr Edward Lucas of Cleator married Miss Isabella Bouch of Egremont, 2 November 1797 in Whitehaven, and they had four children baptised in Whitehaven – Isabella 16 January 1799 (residence Summergrove), Samuel 20 June 1800 (residence Summergrove), Catherine 14 July 1802 (residence Summergrove), and the fourth – my 3x great grandfather – Edward 6 March 1804 (residence Summergrove). It has been suggested that Isabella Bouch had some interest in the land on which the ironworks was built. Thomas Lucas, gentleman of Cleator, married Esther Harris 29 March 1796 in Whitehaven. This is recorded in the Monthly Magazine Vol 1 1796 – “At Egremont, Mr T Lucas of Cleator Iron Works, to Miss Harris”. They had three children baptised in Whitehaven – Catherine 13 January 1797 (residence Cleator), Anne 25 May 1798 (residence unknown), and Jane 20 April 1800 (residence Egremont).

The partnership was dissolved in 1808. This is recorded in the London Gazette, April 16 1808 – “Partnerships dissolved. Samuel Lucas, Edward Lucas, Stephen Bedford, Joseph Read and John Read of Sheffield, casters of cutlery.”

COMMITTEE MEMBERS DETAILS

Roger Baker, Membership Sec
3 Sun St
Ulverston
Cumbria
LA12 7BX
mbarb@freenetname.co.uk

Bill Myers
20 Lord St.
Millom
Cumbria
LA18 4BL
bill.myers@nwemail.co.uk

Mr Ron Lyon
Chondrenn
Church St.
Skirwith
Penrith CA10 1RO
Chrons12@btinternet.com

Mr David Powell
45 High St
Workington
CA14 4ET
daipowell@btinternet.com

Geoff Brambles, Chairman
21 Derwent Drive
Kendal
LA9 7PB

Graham Brooks, Bulletin Editor
Coomara
Carleton
Carlisle CA4 0BU
gbrooksvet@fiscali.co.uk

Mrs Helen Caldwell, Secretary
Low Ludderburn
Cartmel Fell
Windermere LA23 3PD
lowludderburn@btinternet.com

Alan Postlethwaite, Treasurer
17 Railway Terrace
Lindal-in-Furness
Ulverston LA12 0LQ
mandatelsop@btinternet.com

Mr Dan Elsworth, Publicity Officer
6 Town Street
Ulverston
LA12 7EY
dwelsworth@cooptel.net

Dr Ian Hill
5 Parkside Drive
Arnsdale
Cumbria LA5 0BU
fi.hill@btopenworld.com

Mr Robin Yates Membership Secretary
Glenrae
Brigsteer Rd
Kendal
LA9 5DX
robin@phonecoop.coop

Mr Ron Lyon
Chondrenn
Church St.
Skirwith
Penrith
CA10 1RQ
chron12@btinternet.com

