# Cumbria Industrial History Society



# www. Cumbria-industries.org.uk

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# **EDITORIAL**

The Society appears to be going from strength to strength at present with an ever increasing membership and a very full programme of conferences and field meetings. This Bulletin is a bit shorter than the average in the past due to a lack of material from the membership. However Volume six of the Industrialist is starting to take shape, a couple of more articles would see it complete. So if any of you out there have a piece of research that you feel should reach a wider audience please submit it.

One of the main problems looming for the Society is a shortage of committee members. Two members are retiring this AGM, Margaret Robinson and Chris Irwin after many years of activity and Jan Bennett has indicated that she will be leaving in 2007. Therefore there are places on the committee for up to four new faces.

The Committee does feel that the Society does require a publicity officer. We are looking for somebody who can co-ordinate the programme and send material publicizing the various events to such people as the Cumbrian Federation of Local History Societies, Local Newspapers, Local what's on publications etc.

If you think you can return something to the Society by being on the committee either as publicity officer or as a replacement treasurer when Jan retires or just a general member please let a member of the committee know. You can contact any of the committee members to discuss what is involved or at the April Conference all committee members will be identified feel free to chat to them. Your Society needs you!!!!

# **SOCIETY EVENTS**

# MINES OF CARROCK FELL SATURDAY 12<sup>TH</sup> AUGUST 2006 10.30AM.

Meet at NY 323 330 plenty of off road parking but a bit rough. If you wish park at Friends meeting house (NY 357 322) and share cars. Hopefully ex-miner will describe the site. Lunch at Ian Dunmur's house and Friends meeting house now serving light refreshments.

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Afternoon visit Carrock End Mine (NY 353 343) copper mine with leats, shafts, hushes, waterwheel pits. Potash kiln and retting pond nearby. Finnish at the smelt mill site hopefully with Sam Murphy to describe it.

# SEPTEMBER WEEKEND MEETING 15<sup>th</sup>-17<sup>th</sup> SEPTEMBER.

This is now a visit to the Ironbridge area and a booking form is enclosed.

# AUTUMN CONFERENCE 15<sup>TH</sup> OCTOBER ULVERSTON

This is to be held at the Lantern House in Ulverston and the talks arranged are on the Industries of old Ulverston (above the Railway), The industries below the railway, Ulverston shipping and possibly Newlands furnace. Booking forms enclosed and available on the web site.

# NOVEMBER EVENING MEETING TUESDAY 14<sup>TH</sup> NOVEMBER 2006 7.30PM COCK AND DOLPHIN KENDAL.

George Hadfield will talk on the history of clock making in Cumbria.

# **NON SOCIETY EVENTS**

#### **KESWICK MINING MUSEUM**

Ian Tyler has published his programme of summer walks for 2006 and they include trips to Greenside, Dufton, Raughtongill, etc. Further details from the Museum.

#### **CUMBRIA LOCAL HISTORY FEDERATION STUDY DAY**

They are holding a study day on Printing and Publishing at Newton Rigg 16<sup>th</sup> September 2006 details from Shirley Thornhill 016973 44257

# **KENDAL MUSEUM THE KENDAL STORY**

A special display at the museum until 22<sup>nd</sup> December 2006 tracing the story of Kendal from Prehistory to modern days.

# **BOOK REVIEW**

# WEB SITES

# **PAPERS DEPOSITED**

John Gavin one of our original members died earlier this year. The Society has now been given copies of drafts of papers which he published on his main lines of interest including paper making in Cumbria, Early libraries etc.

Also the Society has been given copies of

# **REQUESTS FOR INFORMATION**

Border TV are looking for examples of early cine film per 1980 showing life in the County for a new series called 'The Way We Were' they are offering to copy all cine film onto VHS more details from Border TV Carlisle.

# ABSTRACTS.

# <u>DESCRIPTIONS OF MANUFACTURING BUSINESSES, PREMISES, PROCESSES, ANDPRODUCTS IN THE CARLISLE JOURNAL</u>, 1824 & 1825

(Continued from the Bulletin of the Cumbria Industrial History Society, No. 64, April 2006)

Compiled by G. W. Oxley

#### 503 Corn milling at Dykesfield, Burgh by Sands

Wind corn mill with drying kiln, house, and offices within a few yards of the canal Advertised to be let, *CJ* 1313 10 January

# 504. Brick making at Edmond Castle

The making of a considerable quantity of bricks Advertised to be let, *CJ* 1313 10 January

#### 505. Corn milling at Wampool in the parish of Kirkbride

Insolvency of John Watson Advertised, *CJ* 1316 31 January

#### 506. Brickmaking at Langrigg in the parish of Broomfield

The making of a 60/70 thousand bricks Advertised to be let, *CJ* 1320 28 February.

#### 507. Ironworking at Carlisle

Proprietors of wood who are inclined to char their wood will meet with a ready market on application to the Carlisle Ironworks where bar iron is made and sold at reasonable prices and cast iron at reduced prices Advertisement, *CJ* 1322 13 March

#### 508. Brewery and 32 acre farm at Longtown

The brewery has been fitted up in the most complete style and contains every accommodation necessary for conducting the business on a respectable scale. It has been established for two years by the proprietor who remains the occupier and has a steady and respectable connection. It is situated in the midst of an extensive and populous corn district on the great road to Edinburgh Advertised to be let, *CJ* 1325 3 April

#### 509. Iron and Brass foundry in Bochergate, Carlisle

William Dalston expresses gratitude for past support and announces that James Bell of Stanwix has taken a share in the business which is to be known as Dalston and Bell; two moulders are required Advertisement, *CJ* 1326 10 April

#### 510. Weaving in Shaddongate and dyeing in Ritson's Lane, Carlisle

(i) Two dwelling houses occupied by Thomas M'Adam, and John Penrith and a four loom weaving shop with two dwelling rooms over; (ii) the dyeing vats and dyeing utensils of John Penrith who is declining business Advertised to be sold by the owner, John Penrith, *CJ* 1327 17 April

#### 511. Iron foundry at Cummersdale near Carlisle

Insolvency of John Nicholson Advertisement, *CJ* 1333 29 May

#### 512. Brewery at Longtown

Messrs Latimer and Forster of Dalston Brewery have taken over Longtown Brewery and taken into partnership Mr, Tweddle who has established the reputation of Longtown Brewery and will continue to manage the brewery department, for which he is well qualified Advertisement, *CJ* 1334 5 June

#### 513. Millwright in Carlisle

Millwrights (6 or 7) wanted by James Lennox Advertisement, *CJ* 1334 5 June

#### 514. Carving, gilding and glass staining at Carlisle

John Scott has added to his establishment for carving and gilding the magnificent art of glass staining and enamelling after the manner of the ancients and equal in splendour and durability. Work is executed to any design or pattern. Orders for church windows, staircases, fanlights, or other fancy windows comprising armorial bearings, figures, borders, etc.; glass bending for bow windows, clock faces, lanterns, etc.; carving and gilding in all its branches; old looking glasses polished and silvered Advertisement, *CJ* 1340 17 July

#### 515. Cotton mill in Water Lane, Carlisle

A Mill of six floors plus garrets measuring 160 feet by 60 feet and equipped with 25,000 mule spindles with ample preparation on the newest and most approved principles, a 36 Horse power steam engine with three boilers and pipes complete, all in the best working order, a dwelling house, counting houses, warehouses, garden and orchard, all occupying about three acres. The mill is heated by steam and lighted with gas and has a cistern at the top which can hold twenty tons of water with pipes and conductors to each floor in case of fire. The reservoir to supply the engine is fed from an inexhaustible source. All the buildings were erected within the last twenty years in the most substantial manner. The mill is in a healthy situation with a population at hand more than sufficient for carrying on such an extensive works. The Carlisle Canal affords cheap and ready communication with Liverpool, Manchester, and Glasgow and the situation possessing such singular advantages

may be safely be considered the best in the north of England Advertisement, CJ 1340 17 July

#### 516. Flax spinning near Alston

The residue of a 1000 year lease of land on which has recently been erected a valuable and substantial flax spinning mill, dwelling house, and other buildings well calculated for carrying on a n extensive business; also machinery, implements, utensils, and four acres of land Advertisement, *CJ* 1340 17 July

#### 517. Weaving and dyeing in Dalston

Extensive warehouse, dye houses, four weaving shops, twenty-two cottages, a barn, a stable, and a field called Guldy Dale Close (4½ acres), recently occupied by Robert Waldie & Son Advertised to be sold, *CJ* 1342 31 July

#### 518. Weaving in Hutton's Lane, Scotch Street, Carlisle

A twenty-four loom weaving shop and dwelling rooms above Advertised to be let, *CJ* 1342 31 July

#### 519. Water corm mill at Wampool in the parish of Kirkbride

Twenty-one acres of land, three pairs of stones, a dressing mill, a barley mill, a drying kiln, a good dwelling house, a barn, a stable, a byre, and outbuildings Advertised to be let by the owner Silas Lawson, *CJ* 1345 21 August

#### 520. Manufacture of drainage tiles Langrigg in the parish of Bromfield

Robert Lucock of Laverdale, land drainer, returns thanks for past patronage and announces the start of this business. Tiles are to be prepared on the Staffordshire principle. 20,000 tiles are now ready and the same number will be prepared every nine days. Robert Lucock will continue to contract for the drainage of bogs etc. Advertisement, *CJ* 1345 21 August

### 521. A farm and water corn mill at Great Salkeld

A well accustomed mill with water at all seasons and occupied by John Shadwick Advertised to be let on application to John Nelson of Great Salkeld, *CJ* 1345 21 August

#### 522. A farm and mill at Low House alias Applethwaite in Hesket parish

Occupied by John winder

Advertised to be let on application to the owner William Calvert of Green bank near Keswick, *CJ* 1347 4 September

#### 523. Iron and Brass foundry in the former cockpit in the horse market in Carlisle

Thomas Burgess has started this business and from his practical knowledge of the business he can execute every description in his line on the most reasonable terms and in a superior style. Bells of every description manufactured Advertisement, *CJ* 1349 18 September

# **524.** Tangier Brewery, Tangier Street, Whitehaven

Brewery, malt house, excellent dwelling house, a copper with pumps coolers, ale and beer tuns, stillages, casks, etc. And every other utensil for carrying on a brewery on an extensive scale. Apply to W Birkett, grocer in Tangier Street of to the old brewery office in Cockermouth Advertised to be let, *CJ* 1352 9 October

#### 525. Linen manufacture in Carlisle

J Sowerby of Scotch Street, flax merchants and manufacturers of home made linens, checks, bed hangings with fast blues, bed ticking, and various other descriptions; he has an excellent assortment of blue and white dressed flax, shorts and tows, green hemp, patent sewing threads

Advertisement, *CJ* 1355 30 October

#### 526. Stone mason at Brownrigg in the parish of Westward

Insolvency of James Metcalf Advertisement, *CJ* 1357 13 November

#### 527. Straw hat making in Carlisle

Armstrong and Pattinson have moved to a shop in English Street Advertisement, *CJ* 1357 13 November

#### 528. Corn mill at Hatcliffe Bridge in the parish of Greystoke

A well-accustomed mill having three pairs of stones, a barley mill and cylinder, drying kiln, all other conveniences in excellent repair, eighteen acres of land, out offices, dwelling house, orchard and garden. Advertised to be let by the owner Mr Hudson of Hatcliffe Bridge, *CJ* 1357 13 November

#### 529. Iron and brass founding in Carlisle

Five or six moulders and a foreman in the same line required by Messrs Dalton and Bell, of Bochergate. Liberal wages offered

Advertisement, CJ 1358 20 November

# 530. Foundry at Penrith

Two greensand moulders who perfectly understand the nature of firing and moulding required by Tate and Brown. Liberal wages and constant employment offered. Two three millwrights also needed Advertisement, *CJ* 1358 20 November

#### 531. Brewery at Keswick

The brewery lately occupied by Fisher Rookin and all requisite utensils Advertised to be sold, *CJ* 1358 20 November

#### 532. Coach building at Kendal

A nearly new patent wagon with a moving top and a variety of other vehicles at James M'Naught's coach works. Advertised to be sold, *CJ* 1359 27 November

#### 533. Corn milling at Renwick

Water corn mill, kilns, offices, dwelling house, and 3.1.0. acres of land, occupied by John Dayson Advertised to be let, *CJ* 1361 11 December

#### 534. Gun making in Carlisle

Lancelot Harrison has started business at a shop in Castle Street Advertisement, *CJ* 1362 18 December

#### 535. Brick making at?

Carting and preparing clay for making 500,000 bricks and making the same Advertised to be let on application to P. Clarke of Warwick Hall, *CJ* 1363 25 December

#### 536. Gun making in Carlisle

Lancelot Harrison has on hand at his old established shop at the foot of Scotch Street a large and valuable assortment of single and double barrelled guns with flints and improved percussion locks, Joyce's and other copper caps, gunpowder, patent shot, and every other article attached to gunnery; he also has on sale an assortment of improved bandages for the rupture

Advertisement, *CJ* 1363 25 December

#### 537. Minerals in the Barony of Gilsland

Rev. T. Ramshay of Brampton will provide details of the situation and extent of the minerals and the quantities of coals and lime to be had from the Earl of Carlisle's works

Advertised to be let by Earl of Carlisle, *CJ* 1363 25 December

# 538. Corn mills at Wormanby and Holme Cultram

Wormanby water corn mill at Burgh by Sands which has a kiln, offices, outbuildings, and a large reservoir, and a windmill with a kiln and offices at Monkhill. The mills adjoin each other, are four miles from Carlisle, are within a quarter of a mile of the Carlisle Canal, and are well situated for country or export trade. Occupied by William Langcake, the owner

Advertised to be sold, CJ 1367, 22 January

#### 539. Linen weaving at Wigton

J.

Beattie is to start business taking in linen yarn for weaving into the following fabrica: damask, diaper, huckaback, ticking, and sheeting; also orders taken for Scotch table linen and napkins Advertisement, *CJ* 1367, 22 January

#### 540. Weaving at Sedburgh

- 1. Factory building measuring forty-seven yards by seven yards with a yard and fronting the main street. Occupied by John Upton & Sons
- 2. Factory building measuring forty-eight yards by seven yards and two inches and occupied by John Punch Both were erected as weaving factories and are well adapted to cotton or linen manufacture. The rate of labour in the neighbourhood is low and hands can readily be procured. Particulars from H Weight, Spring Gardens, Manchester Advertised to be sold by the assignees in bankruptcy of George Dickenson of Kirby Stephen, manufacturer, *CJ* 1372, 26 February

# 541. Lead mining at Patterdale

The erection of a crushing machine to have one pair of fluted and two pairs of plain rollers on one side at Greenside lead ore mine. The wheel is twenty-four feet in diameter. Particulars from Jonathan Woodman, agent to the mine who will show the plans and specification

Advertised to be let by proposal to Mr Cant of Penrith, merchant, CJ 1373, 5 March

# 542. Railway construction at Hallbankgate

Contractors sought for the excavation, embanking and forming of four miles of railroad from the present railway at Hallbankgate near Farlam to Midgholme Colliery; the building of several small bridges upon the railroad; the winning of blocks for supports for the rails; and laying, ballasting and completing the way. Conditions, plans, and specifications will be shown by Mr James Thompson of Kirk ham near Brampton who will receive proposals

Advertisement, *CJ* 1374, 12 March

#### 543. Weaving at Upperby

Alexander Robinson & Sons return thanks for past support. They are manufacturers of home made damasks, diapers, etc. They have the honour of weaving the armorial bearings of many noblemen and gentlemen of this and adjoining counties and have invariably given satisfaction. They work double and single damask from ¾ of a yard to 2¾ yards wide: table cloths, tray cloths, napkins, etc. In the most fashionable patterns; also ticking, plain linen and sheeting. They have lately received a number of fashionable designs which they hope will merit the attention of the public. NB linen cloth, bleaching and yarn boiling taken in at their warehouse in the Green Market in Carlisle on Wednesdays and Saturdays

Advertisement, CJ 1374, 12 March

#### 544. Brewery at Carlisle

Two fifteenth shares in the brewery carried on under the firm of Sir Richard Hodgson. Advertised to be sold, *CJ* 1375, 19 March

#### 545. Skin yard at Workington

Formerly owned by David Grave deceased, stock may be had at a valuation Advertised to be let. *CJ* 1383, 14 May5

#### 46. Brewery at Wigton

A modern built common brewery now in full business and extensively carried on by Mr Lowes; also a dwelling house, gardens and about one acre of land Advertised to be let. *CJ* 1383, 14 May

#### 547. Cotton spinning in Carlisle

'Considerations addressed to the Cotton Spinners in the vicinity of Carlisle' concerning the question of combination Editorial matter, *CJ* 1384, 21 May

#### 548. Currier and Leather cutter in Carlisle

Isaac Milburn has taken over the premises formerly occupied by Milburn and Mearns in Scotch Street and will continue the business on his own account Advertisement. *CJ* 1385, 28 May

#### 549. Gun maker in Penrith

R. Cartmel has taken over the stock of Mr Harrison and will continue the business in all its branches. He has a large assortment of double and single barrelled flint and percussion guns, crossbows, walking stick guns, Joyce's anticorrosive percussion caps, gun powder and patent shot, shot belts and powder flasks, and every article necessary to complete the equipment of a sportsman

Advertisement. CJ 1389, 26 June

#### 560. Dye house near Caldew Brow without Irish Gates, Carlisle

The dye house contains 2 pumps, storeroom, and indigo mill; also a dwelling room with yards, stables, pig house and byre; occupied by Daniel Sim. The tenant may be accommodated with fourteen dye vats, two metal boilers, two copper boilers, and other dyeing apparatus and utensils in the dye house at a valuation Advertised to be let. *CJ* 1391, 9 July

#### 561. Manufacturing at Dalston

Dalston Low Factory recently occupied by Richard Dugdale as a cotton manufactory, fourteen cottages, a twenty loom weaving shop and large ware room above, all in Dalston Lonnin near the factory Advertised to be let. *CJ* 1394, 30 July

#### 562. Mill and lime kilns at Torpenhow

An estate including a water corn mill with a regular supply of water, three lime kilns and a good limestone quarry Advertised to be sold by the assignees of Richard Wright of Low Ireby, grocer, *CJ* 1396, 13 August

# 563. Coach building at Kendal

James McNaught has for sale a prime landaulette, two jaunting cars, a nearly new patent wagon, and sundry gigs Advertisement. CJ 1397, 20 August

#### 564. Foundry in Carlisle

Thomas Burgess returns thanks for past support for the New Foundry in Lowther Street since he commenced business as a brass and iron founder. The firm will in future be known as Burgess and Install. Bells of every description; brass cocks made at the shortest notice Advertisement. *CJ* 1398, 27 August

#### 565. Collieries and lime works at Kirkoswold

Property including (i) 1/3 of a colliery and lime works known as Burnt Edge and Clints held under sir Philip Musgrave, Bart., (ii)  $\frac{1}{4}$  of a lime kiln at Clints appropriated to the use of the tenants of Staffield Advertised to be sold, CJ 1403, 10 September

# 566. Lead mining and brewing

Insolvency of John Lowry late of Bunkers Hill in Cumberland, lead ore miner, common brewer, dealer and chapman Advertisement. *CJ* 1407, 8 October

#### 567. The Old Brewery, Carlisle

Two fifteenth shares of Robert Warwick, a bankrupt Advertised to be sold, *CJ* 1409, 22 October

### 568. Dyeing at Buckabank

Dyeing premises, out offices, and dwelling house Advertised to be let by Mrs Blamire of Buckabank, the owner, *CJ* 1409, 22 October

#### 569. Shipbuilding in Cumberland

Report of a meeting of shipbuilders held at Whitehaven on 27/10/1825

Present: Thomas Hartley, William Wilson, Musgrave Walker, John Brocklebank, Richard Whiteside, John Scott Thomas Hammond for William Bowes, and Robert Hardy of Whitehaven; William Peile and Thoman Peile of Harrington and Workington; Michael Falcon Sr. and Michael Falcon, Jr. of Workington; Kelsick Wood, Joseph Huddleston and Isaac Middleton of Maryport

It was agreed that because of the tyrannical and disorderly conduct of members of the Cumberland Shipwrights Union no member of the Union will be employed after the 29 October and that the standard rate of wages for men employed who are not connected with the union is to be 4/-per day

Advertisement. CJ 1411, 5 November

#### 570. Milling at Longtown

Fauld water corn mill within ¼ mile of Longtown on the side of the great London Road having corn Barley and flour mills, a capital dwelling house, offices and about eighteen acres of land; all newly erected on the best principles and in excellent repair

Advertised to be let, CJ 1411, 5 November

#### 571. Lead smelting at Nenthead in the parish of Alston

The Governor and Company for Smelting Down Lead require a surgeon and man midwife to attend upon their workmen and their families. He must reside at Nenthead; he will receive a liberal salary and may engage in general practice. Particulars from Mr John Millican Advertisement, *CJ* 1412, 12 November

# 572. Paper making at Caldbeck

A two vat paper mill with two dwelling houses, gardens, out offices and two acres of land, on the River Caldew. It is conveniently supplied with water of the best quality and the premises have lately undergone considerable repair. The mill is about equal distances from the market towns of Wigton, Penrith, and Carlisle and is well adapted for making paper to a considerable extent.

Advertised to be let, *CJ* 1415, 3 December

## SPRING CONFERENCE REPORT.

Over 70 members and friends attended the spring conference at Charlotte Mason College Ambleside, one of the best attendances to date.

The subject for the day was power and we started with Allan Crocker talking about water power. He had calculated that there was up to 300,000 hp of water available in Cumbria sufficient to produce 220 MW electricity, Mike Davies-Shiel had calculated that 30,000hp was being used by mills in Cumbria in 1850. He then went on to describe a collection of books and catalogues from Gilkes in Kendal which consists of 107 catalogues of water turbines from 50 companies in 9 countries.

He next described the different types of water wheels that have been used over the years with different advantages of the different types and changes in construction techniques. Early waterwheels had an efficiency of just 10%, but john Smeaton improved the efficiency of overshot wheels to 63%. Sir William Fiarburn improved efficiency further by putting the spokes in tension and there was an example at Cleator Flax Mill. Other improvements included holes in buckets to let air out as water entered. The Poncelet wheel was designed by the mathamatican Jeqan-victo Poncelet. Water entered as a flat jet at bottom of the wheel at high speed. The vanes were designed to be pushed both on filling and emptying.

He then moved on to water turbines which are more efficient, operate at higher speeds than water wheels can use a higher fall and are generally smaller and easier to install and maintain. There are different types of turbine including Impulse were the water strikes the cups on the out5side of the wheel i.e. Pelton wheel. Or reaction turbines were the pressure of the water is used to drive it. This includes axial, outward radial, inward radial and mixed.

The Fourneyron turbine which consists of a pair of horizontal wheels submerged in the tail raceand water flows radially outward through them. There are 2 in Cumbria one at Force forge Seathwaite daiting from 1850 and the second at Blennerhasset Co-op model farm.

Thompsons Vortex turbine was first introduced into England at Croppers mill at Cowanhead in 1853.

He finished his talk with a demonstration of a model turbine working, but alas was a failure.

The second speaker was Richard Scott from the Bay Wind Energy Co-operative, who spoke about the modern wind turbine in Cumbria. There is no working old fashioned windmills left in Cumbria although there was considerable numbers on the Solway plains.

Wind has the advantage of being sustainable, low greenhouse emissions, low accident potential, scope for local ownership and micro generation potential. The main objections are damage to the heritage landscape and proximity to housing. To date there are 11 sites in Cumbria.

We then broke for lunch when delegates were free to look over the bookstall provided by the Irwins and the displays that various members had brought along.

The afternoon session opened with a talk on gas works by Rodger Baker. These use to be a common sight and smell in a lot of towns and villages in Cumbria. He concentrated on the large public works and not the privately owned works. The first town works in Cumbria was Carlisle opened in 1819. he then worked through the process of setting up a gasworks and opening it to produce gas for public consumption. He has submitted a paper for the next copy of the Cumbrian Industrialist so I will not spoil it for you. He finished his talk with a trip round Cumbria looking at the remains on the gas work sites and alas there is not many.

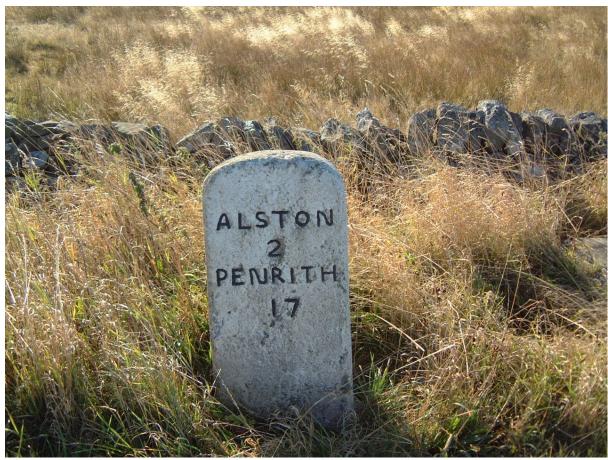
The final speaker was Trevor Purnell who talked about Calder Hall nuclear generator site. The site was chosen for many reasons including its remoteness, pure water supply from Wastwater, site available due to no need for Ordnanace factory with end of 2<sup>nd</sup> World War and a work force which was losoing its traditional jobs in the coal and iron industries. He then went on to describe the building of the eventual 4 reactors including the 58,000 graphite blocks in the core. As a safety feature the control rods are held in place by electro-magnets so if power is lost they fall into the reactor and shut it down automatically.

If the fuel rods were required for Plutonium production they were only left in the reactor for a period of months but if only for electricity production they were left in for years.

Calder Hall was the worlds first commercial nuclear power station with an output of 240MW. 10Mw were used in house and the rest used on the site. The site was closed due it being a small site with high overheads and low electricity prices.

He finished on the fact the Calder Hall 1 may be preserved as a monument to the industry.

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