

GUNPOWDER MILLS STUDY GROUPNewsletter No. 1February 1986

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WEEKEND VISIT TO VALE OF NEATH, Friday 6 - Sunday 8 June 1986

At the meeting in October, it was decided to arrange a summer weekend meeting in South Wales which would include a visit to the Glyn Neath gunpowder site. A programme has now been arranged with the Aberdulais (pron. Aberdill'ice) Tourist Office and the National Trust at Aberdulais Falls as follows:

PROGRAMME

Friday 6th	7.00 pm	Arrive, book into hotel
	7.30 pm	Dinner at 'Welsh Dresser', Aberdulais Rock
	9.00 pm	Lecture: 'The early industrial background to South Wales and the Vale of Neath' Old Works Library
	10.00 pm	Coffee
Saturday 7th	9.30 am	Guided tour using own transport. Aberdulais Basin, junction Neath and Tennant Canals
	11.00 am	Aberdulais Falls. Coffee, guided tour
	12.30 pm	Lunch (packed)
	2.00 pm	Gunpowder Works, Pont Meidd Fechan. Guided tour
	5.00 pm	Return to hotel. Dinner (not included in package)
	7.45 pm	Lecture: 'Mining and Quarrying with Black Powder' Old Works Library, Aberdulais Falls.
Sunday 8th	9.30 pm	Coffee
	9.30 am	Talks by GMSG members. Old Works Library
	12.30 pm	Lunch (not included in package)
	2.00 pm	Disperse

COST

£37.00 per person. Price includes bed & breakfast (Friday & Saturday nights); dinner Friday night and a packed lunch on Saturday; lectures, guided tours and tour notes. It does not include transport which will be by members' own cars. Please note that there is a single room supplement of £3.50 per night.

BOOKING ARRANGEMENTSU. R G E N T

The package is based on having at least 25 in the party. Payment must be made in advance by 1st April, individually, to: Mrs. C. Carr, Tourist Information Officer, Tourist Information Centre, Aberdulais, Neath. However, in order to ascertain whether the trip is going to be viable, would those planning to attend please let me know as soon as possible, enclosing a s.a.e. so that I can let them know whether the visit is going ahead. Priority will be given to GMSG members until 7th March, after which bookings will be accepted from members of other groups.

Since it is necessary to have 25 people to operate the standard package, it will not be possible on that basis to make any reduction in the cost for, e.g. late arrivals and dinner not taken. However, more people can be accommodated and the Tourist Office is prepared to try to cater for special requirements as far as possible. Anyone who can attend for only part of the weekend is therefore asked to let me know so that I can discuss possible arrangements with Mrs. Carr. Also I am asked to advise what facilities are required by persons who are disabled or have other special requirements. The tour is based on the use of private cars, so would anyone who needs a lift or wishes to share a car please let me know.

Glenys Crocker, 6 Burwood Close, Merrow, Guildford, Surrey. GU1 2SB
[tel: Guildford 65821]

GUNPOWDER MILLS STUDY GROUP: Report on the Second Meeting, 12 October 1985

Thirty members attended this meeting hosted by the North Woolwich Old Station Museum, London E16B. Alan Crocker (Convenor) welcomed members old and new and outlined the formation of the Group and some recent developments in the study of the gunpowder industry, notably publications on the Glyn Neath, Lea Valley and Bedfont mills and proposals to develop the Battle Abbey site as a museum/tourist centre. Glenys Crocker (Convenor) introduced the basis for a gazetteer of sites which she encouraged members to contribute to. Phil Philo (Convenor) outlined the day's programme and introduced the first speaker.

Wesley Harry, Historian of the Royal Arsenal, Woolwich, gave the first illustrated talk on the "Early History of the Royal Arsenal, Woolwich". This included an outline of the site's history from the late 16th century and an insight into the Arsenal's many functions, including storehouse, gunyard, munitions factory, research laboratory, to name but a few. Some of the activities carried out on the site, such as saltpetre refining, grinding saltpetre and the manufacture of shot and rockets, were shown through a number of superb water colour illustrations of about 1750 (in the collection of the National Maritime Museum).

Malcolm Maclaren of the Royal Armament Research and Development Establishment showed slides of Waltham Abbey gunpowder mills and talked about the long history of the site. Using some very interesting illustrations of many of the buildings he outlined the various processes involved in the production of gunpowder, from the refining of the basic ingredients to the transportation of the finished product.

After lunch, Bryan Earl, author of "Cornish Explosives", talked about the transition from black powder to modern explosives production. From the late 18th/early 19th centuries attempts were made to improve the basic saltpetre, charcoal and sulphur mixtures by the introduction of materials such as cellulose nitrate and glycerol trinitrate. By the mid-19th century explosives such as dynamite had started to displace gunpowder as the chief explosive. An outline list was circulated which brought the story up-to-date with ammonium nitrate/fuel oil mixtures (ANFO) which now dominate the commercial explosives scene.

At a business meeting the Group agreed to keep the informal organising body of three convenors, at least until the next meeting in 1986. Mr. and Mrs. John Upton offered to edit a group newsletter and members were encouraged to contribute short articles and notes. The venue for the next meeting was discussed and it was agreed that the Convenors should look into the possibility of a weekend visit to Glyn Neath, S. Wales in May 1986. The following meeting would again be in London with the possibility of visits to sites in West London. The Convenors would be looking into the showing of films relating to gunpowder production at the Autumn '86 meeting.

A series of short talks followed given by various members. Bob Thomson, of Southampton Museums, gave a fascinating illustrated talk on the early records for Southampton's town artillery, powder production and its artillery fortifications. These records include references dating from the town's purchase of its first gun in 1382 to the 16th century. Alan Crocker showed slides of and talked about sites in Scotland which he had recently visited. Michael Monk outlined the work which had been carried out on the Ballincollig gunpowder mills, Co. Cork.

Alan Crocker brought the meeting to a close by thanking everyone who attended and made a special mention of Terry Turbin and staff at the Museum for working hard to make the day so enjoyable and successful.

AUTUMN 1986 MEETING: PRELIMINARY ANNOUNCEMENT

Saturday, 11th October at Gunnersbury Park, West London.

In 1979, a report by Brady, Shipman and Martin (Planners and Landscape Architects, Dublin), commissioned by the Cork County Council who own the property, concluded that the incorporating mills of the former gunpowder manufacturing complex at Ballincollig could provide an important focus for an amenity area in the expanding satellite town of Ballincollig.

Following on this report, the County Planning Office began liaising with the Department of Archaeology, U.C.C., with the intention of beginning a programme of clearance, possible excavation and research on the mills. A long-term, six-stage work programme was drawn up and a start was made in 1983. Stage I was completed in the summers of 1983/4 by an Irish International Work Camp under archaeological supervision and involved the clearance of the vegetation that had grown over the mill structures since their decommissioning in the early part of the century. Stages II and III are now in train and have involved the detailed recording (scale drawings and photographs) of all the above and below ground mill structures. The below ground recording of the "mill House" foundations has so far involved selected excavation of one of the twelve milling units but it is intended that further excavation will add to the evidence for the structural history of the site. At present two main phases of building are indicated. The first, presumably relating to the initial development of the site in the late 18th and early 19th centuries, is represented by two mill units with wide wheel pits and lower gearing emplacements. The second phase is represented by larger-scale development of the site when the remaining 10 mill units with narrower wheel pits were added post 1834 and the earlier units were altered accordingly.

The compilation of a detailed historical record of the site from extant documents was seen originally as Stage IV in the project but is already underway, coupled with the collection of reference material generally relating to gunpowder milling and liaison with interested groups and individuals. Stages V and VI relate to the restoration of at least one of the mill areas, the setting up of a display centre and museum and the landscaping of the area as a public amenity. At present those parts of the programme are still only at the planning stage and presuppose initial major and continuous funding which has not yet been forthcoming. To date, funding has come from the Cork County Council (general costs), the Office of Public Works (for excavation) and the Department of Labour who are providing funds to pay a work scheme for the first six months of 1986.

In 1986, it is planned to excavate at least one further mill unit, to clear the root systems of the overgrowth removed in 1983/4 in the area of the already excavated mill unit and to sympathetically landscape this area. In addition, it is intended that one of the charge houses be carefully renovated to provide a small display centre for the complex. Hopefully, limited public access will be allowed towards the end of 1986 and will focus further attention on the complex in order to attract funding for further development of the project.

The Ballincollig Gunpowder Mills are located on the southern banks of the River Lee adjacent to Ballincollig, lying five miles west of Cork City.

The area constitutes no less than 150 acres of late 18th and 19th century buildings and other structures associated with the commercial production of gunpowder.

The following information has come in from individuals, organisations and institutions in response to publicity relating to the Group's formation:

WORSBOROUGH MILLS, Yorks. (owned by Shortridge & Wright). Billheads from and letter to firm, 1854-58. Letter from C. Wright on firm's letter head, 1853 & notice from John Shortridge & Charles Wright of Worsborough, that they apply under II Geo 3 to keep gunpowder at Toadhole in hamlet of Southey in magazines, 1858. Early 20th C became Kynoch Ltd., and in the 1920's Nobel's Explosive Co.Ltd. Closed c.1930. [Information from J.Goodchild, Principal Local Studies Officer & Archivist, Wakefield Metropolitan District Council, Library HQ, Balne Lane, Wakefield, WE2 0DQ]

METHEGLIN GUNPOWDER MILLS, Scotland? Short description of a visit to the mills along with a more detailed account of the Faversham mills in "London Society", Vol. IV, July 1863, pp 66-76. Anyone with further information please respond. [Information from C.R.Baker, Assistant Curator, Dartford Museum, Central Park Offices, Lowfield Street, Dartford, Kent DA1 1HS]

NOTTINGHAM CASTLE. Gunpowder and match made Autumn 1643 by order of Colonel Hutchinson. "...and having a very ingenuous (sic) person Mr. Hooper who was his engineer, and one that understood all kind of operation in all things almost imaginable, they procur'd some saltpeter and powder in the Castle, which they made both very good. They also cast mortar peices in the Towne..." from Lucy Hutchinson's 'Memoirs of the life of Colonel Hutchinson'. [Information from A.G. Maccormic, Senior Keeper, Human History, Brewhouse Yard Museum, Castle Boulevard, Nottingham, NG7 1FB]

BATTLE GUNPOWDER MILLS References include 'Sussex Archaeological Collections' No.XXIV, 1923; Battle & District Hist.Soc.Trans. No.8 (1958-9). Plus other material in Battle & District Hist.Soc.Museum Trust, Langton House, Battle, E.Sussex, TN33 0AQ [Information from Mrs.M.G.Langley, Hon.Sec. address as above]

WORSBOROUGH DALE GUNPOWDER MILLS Album of photographs of mills, 1893 in County Record Office, S.Yorks County Council. The Cultural Activities Centre, Ellin Street, Sheffield S1 4PL [Information from Mrs.C.M.Short, address as above]

SHALFORD & GODALMING GUNPOWDER MILLS, SURREY Attention drawn to their former existence by Mr.Ali Shah?, Springwood House, Godalming, Surrey.

FERNILEE, DERBYS. Information on the above mills now under the reservoir. Informer has contact who knew site before flooding. Mills were steam powered. Reference in 'Buxton Advertiser' Aug.21 1975 to explosion in 1909. Short article in 'Whaley Bridge in the mid-19th Century', J.H.Smith (ed) mentions mills started c.1801 by Thos.Williamson, millwright. Closed c.1920. [Information from B.Ford, 11 Darwin Ave, Buxton, Derbys. SK17 6NF]

SALTPETRE MAGAZINE, E.INDIA COY. FREE TRADE WHARF, E.INDIA DOCK, LONDON Copy of sales notice of 1835. [Information from R.C.D.Baldwin, Museum in Docklands Project, Museum of London, London Wall, London EC2Y]

NEW PUBLICATION: "THE BEDFONT GUNPOWDER MILLS"- P. Philo & J. Mills, in 'The London Archaeologist' Vol.5 No.4 Autumn 1985. An outline of the history of the site and an interim report on recent trial excavations carried out by the West London Arch.Field Group with the Bedfont Research Group and the Greater London Ind. Hist.Soc. Well illustrated with photographs, maps, plans and diagrams, This report is based on research carried out mainly at Syon House muniment room used in conjunction with the results of the excavations. The site was used as a sword mill (making 'Hounslow'-bladed swords) from 1630-1655 and was then converted to gunpowder manufacture. The works were managed by Curtis's & Harvey in the 19th C. as an annex to the nearby Hounslow Mills and closed in the 1920's. Offprints available at £1 (including post & packing) from Phil Philo, Gunnersbury Park Museum, Gunnersbury Park, London W3 8LQ

THE ROYAL ORDNANCE FACTORIES CALENDAR FOR 1980

Alan Crocker

Members who attended the October 1985 meeting at Woolwich will remember the beautiful slides shown by Wesley Harry taken from coloured illustrations of Woolwich Arsenal in about 1750 which are in the collections of The National Maritime Museum. Six of these fascinating pictures were used by the Royal Ordnance Factories in their 1980 calendar and a friend recently presented me with a copy he had salvaged from a waste paper basket. They show two views of the Laboratory Square with great heaps of cannon balls, one of metal making and one of the fodge, mixing powder with a mortar and pestle and sieves, and finally moulding powder pellets. I wonder whether there might be a stock of these old calendars somewhere?

GUNPOWDER PRODUCTION AT BALHAM

Alan Crocker

Keith Fairclough has done some research on a horse-powered gunpowder mill at Balham House, which was active some time between 1701 and 1723. He suggests that it was operated by William Walton who is better known as a gunpowder manufacturer at Waltham Abbey. Part of the evidence concerns accidents to carts transporting gunpowder across London Bridge to the Tower. Keith has written a short paper on his research and this is due to be published during 1986.

THE GROUP, SPAB and AIA

Alan Crocker

Members will remember that the Wind and Watermills Section of the Society for the Protection of Ancient Buildings supported the formation of the Gunpowder Mills Study Group. It is therefore appropriate that the Group should report its activities to the Section and I was able to do this at the Watermills Meeting held in London on 16 November 1985. In particular I showed a dozen slides of gunpowder manufacturing sites in different parts of the country, outlined our two 1985 meetings and mentioned our plans to publish a Gazetteer. On the following day Glenys and I represented the Group at the Committee of Group Societies (COGS). The main point we raised was the possibility of SPAB publishing the Gazetteer as explained by Glenys elsewhere in this Newsletter

Glenys and I also reported Group activities and mounted a small display at the annual conference of the Association for Industrial Archaeology held at Glasgow on 13 - 15 September 1985. Accounts of the Group's first two meetings have been published in the AIA Bulletins for Summer 1985 and Winter 1985.

GAZETTEER OF GUNPOWDER SITES

Glenys Crocke

I have now received gazetteer entries for 24 of the 75+ sites in the British Isles, covering the Lea Valley, Hounslow and Bedfont, East Molesey, Tonbridge Wales and Ireland. I am now starting to draft entries for the remaining sites from material I have available and will be contacting relevant members to check the details.

I have approached to Society for the Protection of Ancient Buildings Wind and Watermill Section regarding publication of the Gazetteer. This has had the support of the Committee of Group Societies and is being considered by the Committee of the Wind and Watermill Section shortly.

A 17th CENTURY GERMAN GUNPOWDER TREATISE

Alan Crocker

The catalogue for a Sotheby's Science and Medicine sale on 8 November 1985 included a 17th century German manuscript treatise on the manufacture of gunpowder. It was said to have about 80 pages of text in a Gothic hand and five full colour and liquid gold illustrations measuring approximately 265 x 200 mm. The estimated price was £5000-£6000.

I contacted Sotheby's on behalf of the Group to see if we might get access to the treatise and they suggested that I should contact the Science Museum Library. David Bryden at the Library knew about the sale but explained that they would not be bidding, partly because the manuscript is German and partly because the Museum does not have a specific display on gunpowder. He suggested that I should write to Sotheby's confirming the Group's interest and asking them to pass on an enclosed letter to the purchaser. This I did and in due course had a response from Bernard Quaritch, Ltd, antiquarian booksellers of London, who had bought the treatise. They gave permission for us to examine the book and indicated that they would welcome technical advice on the plates and text.

Gerry Moss has made a preliminary study of the five plates. They show; [1] Two monks with a cannon and part of a retort. [2] Saltpetre recrystallisation with four furnaces under basins of solution. [3] A saltpetre furnace, filter table, mixing vat, and pestle and mortar for incorporating. [4] A stamp mill with four hammers, and two drums possibly being used for corning. [5] A drying room with large lumps of black powder on trays on racks.

The text is demanding to read and translate and Michael Wilkes is hoping to find someone willing to decipher the relevant parts. Offers of help from members of the Group would be welcome.

GUNPOWDER MILLS IN THE NETHERLANDS

Alan Crocker

At the Mills conference organised by the International Molonological Society (TIMS) in Belgium in January 1985, J. Schoonhoven presented a paper based on historic illustrations of the manufacture of gunpowder and on the locations of powder mills in the Netherlands. The illustrations are of a pestle and mortar, hand stamps, treadwheel stamps and edge runner mills and are taken from O. Guttman 'Monumenta Pulveris Pyrii', London 1906; J.M.Beyer 'Theatrum Machinarum Molarium', Leipzig 1735; D.Diderot 'L'Encyclopedie', Paris 1763 and elsewhere. Location maps are provided for some two dozen mills which existed from the early 17th to the mid-19th century. There was a cluster of sites around Amsterdam, and also mills at Delft, Rotterdam, Utrecht, Valkenburg, Wetteren (now in Belgium) and five on the island of Walcheren in Zeeland. It appears that they were all horsemills. Gunpowder works still survive at Muiden and Ouderkerk near Amsterdam and at Wetteren. I am indebted to Kenneth Major for providing me with a copy of this paper which will be published in the conference proceedings. I can supply a photocopy for £1 (including post and packing).

GUNPOWDER MILLS STUDY GROUP

The aims of the Group are the study of the complete span of gunpowder and explosive industries, including the processing of raw materials and the manufacture and handling of the finished products and the exchange of ideas and information. Meetings are held twice a year.

Convenors: Professor Alan Crocker
Mrs. Glenys Crocker
Mr. Phil Philo

This Newsletter was compiled and produced by Mr. & Mrs. John Upton.