

Gunpowder Mills Study Group

NEWSLETTER 12, MARCH 1993

**SPRING MEETING AT BISLEY, SURREY
SATURDAY 8 MAY 1993**

A full day's programme has been planned for the Group by Bill Curtis. From 9.30am there will be a demonstration, with 'hands on' experience, of the use of gunpowder in original firearms. A buffet lunch will be held in the historic Clubhouse of the Surrey Rifle Association. There will then be a display of containers, packaging and means of carrying powder and talks on this subject by Bill Curtis and Dr De Witt Bailey. Participants are invited to bring along any of their own materials and any early firearms. After mid-afternoon tea there will be an opportunity to tour the Bisley Range complex.

The rest of the afternoon will be available for other talks and discussions within the Group. There will then be time for socialising, and a wash and brush-up, before dinner at the Surrey Clubhouse.

Further details of the programme, arrangements for overnight accommodation at Bisley (cabins / tent & caravan site), an indication of approximate costs (probably in the region of £16) and a map of the area are given on a separate sheet enclosed with this Newsletter.

Members wishing to attend are asked to write to Bill Curtis by 28 April at PO Box 493, Rhyl, Clwyd LL18 5XG. Please indicate also if you wish to give a member's contribution during the afternoon programme.

OCTOBER MEETING

It is planned to hold a whole-day meeting in the London area on a Saturday in October. We would like to finalise the date and location at the Bisley Meeting on 8 May. Therefore if you are unable to attend on that day but have suggestions for the arrangements and programme for the October meeting please let us know in advance.

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SUBSCRIPTIONS FOR 1993-4

Subscriptions are due on 1 April and a slip for renewal is enclosed. Please return with remittance (£3 for single membership, £4 double) to Glenys Crocker, 6 Burwood Close, Guildford, Surrey GU1 2SB; cheques payable to Gunpowder Mills Study Group please.

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THE AUTUMN MEETING AT BATH

Glenys Crocker

On the Friday evening of the weekend of 30 October - 1 November, a dozen members met at the Green Park Brasserie in Bath where we enjoyed excellent food, followed by a live jazz performance. The restaurant is in the old Green Park Station (1874) which was jointly operated by the Midland and the Somerset & Dorset Railways and it was refurbished by Sainsbury's when they redeveloped the site. Next morning we met others of the party at the Centre for the History of Technology at the University of Bath for an introduction to the weekend programme. Brenda Buchanan has provided the following summary of her introductory talk:

Gunpowder in the Bristol region: its manufacture and trade

The aim of this talk was to provide both a general account of gunpowder manufacture in the region, and a more specific introduction to the sites to be visited. Despite having been for so long a 'forgotten' industry, a role of some importance can be claimed for the Bristol region because of the special niche it occupies; historically, its development in the seventeenth and eighteenth centuries came after the earlier foundation of mills in the South-East but before those in Cornwall and Cumbria; geographically, it represented a move from the traditional locations to the western fringe; and it was the first region to produce for a range of markets which included mining, shipping, trade and musketry.

The industry flourished in the Bristol region, particularly in the eighteenth century, for at least three reasons. It was part of the shift of economic focus of that time from looking east to Europe to looking west across the Atlantic, and as well as being supplied to merchantmen and privateers, and being sent to the New World as an item of trade, gunpowder was also used as a unit of exchange in the bartering for slaves in that notorious trade. Gunpowder was also supplied to Liverpool for these purposes, as well as being sent to Cumbria and Cornwall for use in mining operations there. Bristol was well-placed to meet this demand for the civil use of gunpowder, especially after its use had been established locally, in leadmining from the 1680s, and coalmining from the early decades of the eighteenth century. The long standing importance of Bristol as a port enabled the industry to take root here. Saltpetre and sulphur could be imported, and the finished product shipped abroad. Merchants engaged in these trades, especially the Africa trade, made fortunes which could then be employed in local manufactures, including gunpowder making. Of the four original partners at the Woolley mills in 1722, for example, only one had no direct involvement in the slave trade, and he was a sugar merchant and therefore had an indirect link with it.

The location of the industry within the region was examined next. Powder makers were active in the city from possibly the end of the second decade of the seventeenth century, but they had an uneasy relationship with the central authorities and they were alternately licensed and suppressed. A century later mills were established in the countryside which offered a greater freedom, a better supply of water, proximity to charcoal supplies and a degree of isolation coupled with relatively easy links to Bristol. After prospering in the eighteenth century the industry was hit by a loss of markets in

the early nineteenth. Local firms were taken over by Curtis's & Harvey and closed down by 1830 as part of a rationalization of the industry. Sites became ruinous, buildings collapsed, and watercourses choked. What remained was saved by conversion to pleasant houses in more recent years. It is to the main sites at Woolley and Littleton that we shall look for surviving evidence in the course of the weekend.

The slides showed first of all town plans of Bristol and early maps of north Somerset, to illustrate the urban origins of the industry and the later move to the countryside. As well as mill sites, the location of warehouses and magazines was also suggested. Slides of the Hagley Mills in Delaware and those at Frederiksvaerk in Denmark were shown to convey a sense of a comparable rural setting which can be found at both these sites. Plans and maps of Woolley and Littleton were displayed, together with photographs of surviving buildings and other features. The interpretation of these sites was related to the documentary evidence about them, which has been closely studied. Moreton Mill, another main site, is now submerged under the Chew Valley Reservoir, and sadly the archaeological excavations which were undertaken paid no attention to this phase of the mill's history. Powder houses ranging from the main one at Shirehampton to small ones on the nearby coalfield were also illustrated. Finally, a slide copied from an advertising poster of the Du Pont company of Hagley in the USA was shown because it summed up much that had been pointed out about powder making in the Bristol region: the fact that the industry had prospered by providing for mining and trade, especially the slave trade, but had then declined as these markets were lost, particularly the last named and that in North America. Above all the Bristol proprietors failed to invest and diversify, something at which the Du Pont firm was noticeably successful.

Brenda Buchanan

After this historical introduction, Malcolm Tucker gave an account of the surviving features of the Woolley Powder Works, which we were to visit on the Sunday morning. The history and archaeology of this site are discussed by Brenda and Malcolm in their joint article 'The manufacture of gunpowder: a study in the documentary and physical evidence relating to the Woolley Powder Works near Bath', *Industrial Archaeology Review*, 5 [3], Autumn 1981, pp 185-202.

After lunch at the Centre we set out for the Littleton gunpowder site some 20km west of Bath, where we were joined by Joan and Roy Day of the Bristol Industrial Archaeology Society. The remains of the gunpowder industry are near a 3-storey farmhouse and a row of cottages which has been converted into a single dwelling. A head-lead cum pond is embanked along the valley side and the broad top of the bank now forms a garden walk. In the garden of the cottage there is an interesting lantern gear, about 5ft in diameter with a clasp arm frame. Another interesting object lying on the ground is a slate disc with a groove around the edge - there was speculation as to whether this could have been the clock face of the works clock tower which still stands. Below the bank we explored the remains of a pair of mills with a central water wheel pit - inferred from a breast recess to have been an overshot or pitchback wheel nearly 30ft in diameter. We also went inside

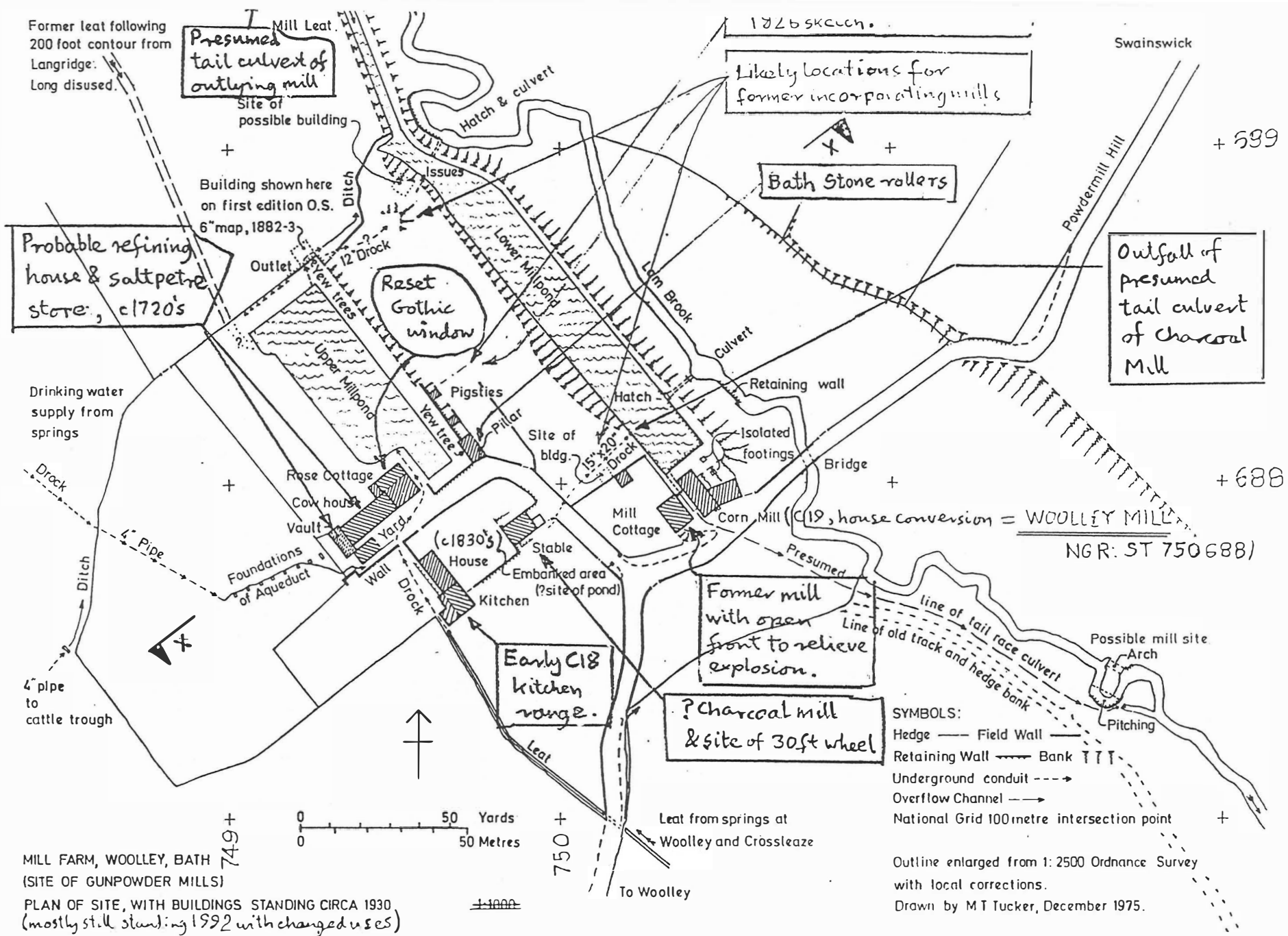


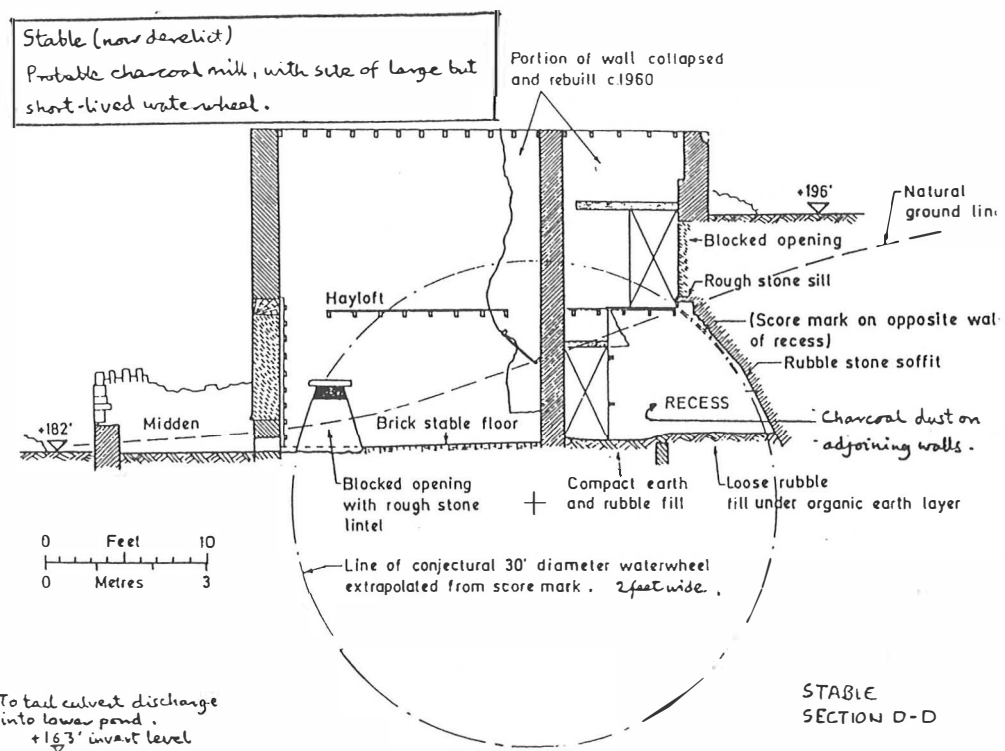
Fig 1

MILL FARM, WOOLLEY, BATH
 (SITE OF GUNPOWDER MILLS)
 PLAN OF SITE, WITH BUILDINGS STANDING CIRCA 1930
 (mostly still standing 1992 with changed uses)

a barn near the farmhouse to see an interesting single storey vaulted chamber which has been built inside one end of the building and is interpreted as a possible gunpowder stove house.

On our way back to Bath we stopped for tea at the picnic area beside Chew Valley Reservoir, which drowned the former Moreton gunpowder site. Then in the evening we assembled at the Bath Industrial Heritage Centre in a building which was originally a Royal Tennis court. The displays are centred on the engineering and brass foundry business (founded 1872) of Jonathan Burdett Bowler who, among his other activities, made and repaired soda water machinery and hence diversified into the manufacture of fizzy drinks. After a tour of the museum and an excellent supper organised by Brenda, we held a session of members' short talks. These were by Joan Day (author of *Bristol Brass*) on sulphur as a by-product of smelting, Tony Yoward on the Schulze powder works at Fritham in Hampshire, Keith Fairclough on the description of gunpowder manufacture in the 1690s contained in John Houghton's periodical *A collection for the improvement of husbandry and trade* (reprinted in 4 volumes by Gregg International, 1969) and Shane Gould explained the project on gunpowder mills which he is engaged in for English Heritage (see pages 7-8). Finally Bill Curtis laid out a fascinating display of samples of black powder.

On the Sunday morning we assembled at Woolley Mill, a house-converted water mill where Malcolm Tucker spent his formative years and where his parents still live (see plan of site, fig 1). We first walked to Rose Cottage and looked inside the probable refining house and saltpetre store, continued past the 1830s house to the stable, to see the site of the 30ft waterwheel of the probable charcoal mill (fig 2) and then returned to the house where mid-morning coffee was kindly provided by Mr and Mrs Tucker.



During the second half of the morning we walked around the system of watercourses, past the Upper Millpond to the line of the disused leat on the 200ft contour, then back via the Lower Millpond. It is fortunate that this long-abandoned manufacturing site has had its own resident industrial archaeologist to record and interpret the remains, and that Malcolm's work has been so fruitfully complemented by Brenda Buchanan's historical study. Our thanks are due to them both for organising the weekend, also to Angus Buchanan for hosting the meeting at the Centre for the History of Technology, the Bath Industrial Heritage Centre, Mr and Mrs Tucker for their hospitality and the local people who kindly allowed us access to their private land.

THE SPAB WATERMILL MEETING, 14 NOVEMBER 1992

Glenys Crocker

The SPAB Mills Section holds two one-day meetings each year in London, one on windmills in the spring and one on watermills in November. It has become the practice in recent years to choose a particular subject for the main part of the programme and the theme for the 1992 autumn meeting was gunpowder mills.

The first part of the programme covered general Section matters and reports from various regional Mill Groups. The thematic part of the meeting consisted of four talks. Three of these were by members of the GMSG: Gerry Moss on 'An Introduction to the Technology of Gunpowder Manufacture', Jenny West on 'Gunpowder Mills in the Mid Eighteenth Century' and Alan Crocker on 'The Gunpowder Mills of Great Britain'. The fourth lecture was given by Paul Everson of the RCHME on the Commission's recent work on gunpowder manufacturing sites, in particular recording the Oare Works at Faversham.

The day's programme ended with members' contributions on a variety of topics including watermills in the French Jura, a rim-gear waterwheel depicted on a stained glass window in a church in Lancashire, shafts for horizontal waterwheels carved out of the rock in SW Iran, and the restoration of the watermill below Warwick Castle.

It was unfortunate that this session on gunpowder came after, rather than before, the Section's visit to Cumbria the previous September (reported in GMSG Newsletter 11) as it would have helped members to make sense of the overgrown and crumbling remains we showed them at Gatebeck and New Sedgwick. Nevertheless the talks were evidently much appreciated and our display panels also created interest.

DONSE GUNPOWDER MILL SITE, DENMARK

In 1989, during the Group's visit to Denmark, Anders Jespersen showed us around the site of the Donse gunpowder mills, which closed in 1910. In the report of the visit (Newsletter 6, pp 6-7) we said that little remains at the site and unfortunately we had no detailed plan. Anders has now sent us a plan, which is taken from *The Book on Gunpowder* which he has reviewed on pages 9-10. It is now clear that the reason why we failed to find many remains was that we were looking on the wrong side of the millstream! Copies of the plan have been sent to the members who visited the site.

UPDATE ON PROPOSED DEVELOPMENTS AT WALTHAM ABBEY

Alan Crocker

In Newsletter 11 (Sept 1992), Jenny West reported on our May 1992 meeting at Waltham Abbey, which included discussions on the future of the site, and I gave a more detailed account of the proposed developments, including a gunpowder museum in one of the ranges of steam-powered incorporating mills. I was unable to attend the exhibition mounted by CIVIX, consultants to the Ministry of Defence, at Waltham Abbey Town Hall on 15-18 September but gather that it created much interest. A well-illustrated coloured brochure on the proposals, entitled *The Royal Gunpowder Mills*, was produced for the exhibition and includes sections on: the opportunity (by the leader of the Town Council); the history; the site today; conflicting considerations; the future; and 'paying for it all'. The proposals themselves occupy one half of the brochure and are accompanied by a large plan of the whole site. This is divided into nine areas: Queen's Mead and Long Walk (open space, recreation); Stratford on Avon, Little Venice (leisure, lecture theatre, local history museum, studios, boat basin); Research & Business; SSSI (85 acres); New Hill (incorporate in River Lee Country Park); Waterways (restore canals); Other Recreational Areas (tennis courts etc); Incorporating Mills, Museum (gunpowder museum in best remaining building, studios, craft and small businesses in others); Hotel, Apartments.

In November I was approached by the Waltham Abbey Town Council to see if I would be willing to represent the GMSG on the Waltham Abbey Town Trust, which it is proposed to form to develop and manage the site. It is anticipated that the Trust will have 16 to 20 members including 6 Town Councillors. It is also proposed that the Trust will have six boards to cover: General Management; Planning & Development; Historical Interpretation; Education; Ecology; Leisure & Recreation. I have indicated that I would be willing to accept a formal invitation to become a trustee.

In the meantime a team from the Royal Commission on the Historical Monuments of England, under the leadership of Paul Everson, have been carrying out a detailed survey of the site and English Heritage have examined the remains with a view to listing and scheduling important buildings and areas. Shane Gould, of the Cranstone Consultancy, which is carrying out a national survey of gunpowder mill sites for English Heritage, has also been involved. One of the important finds arising from these exercises is the discovery of some decaying but complete powder barges in the northern part of the site.

Finally a meeting is to be held at Waltham Abbey Town Hall on 22 March to inform interested parties of the present situation. The GMSG was asked to nominate four representatives and John Boyes, Keith Fairclough, Malcolm Tucker and I will be attending. Other members of the Group will be present representing other bodies.

ENGLISH HERITAGE'S MONUMENT PROTECTION PROGRAMME: THE GUNPOWDER INDUSTRY

English Heritage have appointed the Cranstone Consultancy, which provides archaeological services, especially in industrial archaeology, mining and metallurgy, to prepare a report on the Gunpowder Industry. This will include all aspects of the industry from the preparation of raw materials

to the packaging of the finished product, together with assessments of all the sites of potential national importance, with recommendations for and against protection. The Cranstone Consultancy is based in Gateshead and Shane Gould, who was previously involved with a similar project on the coal-mining industry, is in charge of the work. He attended the Group's meeting in Bath last autumn (see page 2) and the Wind & Watermill Section's one-day meeting on Gunpowder Mills last November (see page 5). We have provided him with a complete set of GMSG Newsletters and the *Gazetteer* and several members have given him information on sites which they felt were important. He has recently sent us a draft copy of a 28 page 'Step 1' report and would very much like to add examples of early surviving sites, even if they only exist as earthwork features. I am sure that he would welcome comments from members and can be contacted at 267 Kells Lane, Low Fell, Gateshead, Tyne & Wear, NE9 5HU (tel. 091 482 2004).

BALLINCOLLIG VISITOR CENTRE: GEORGE KELLEHER'S BOOK

The new visitor centre at the Ballincollig gunpowder mills is due to open to the public on 2 April. However the official opening has been delayed until the end of June because the distinguished person who will perform the opening ceremony will not be available until then. Details can be obtained from Paula Cogan, telephone (from England) 010 353 21 276891. It is a happy coincidence that the late George Kelleher's book, which he developed from his research on the Ballincollig site, is being published at the same time as the visitor centre is opening in April.

FEDERATION OF GUNPOWDER MILLS OF EUROPE

Alan Crocker

At the end of October, Paula Cogan of the Planning Department of Cork County Council, contacted us about the possibility of applying to the Commission of European Communities for funding for a project on gunpowder mills. The CEC have introduced a new 'Kaleidoscope' scheme 'to promote knowledge of the various cultures of the member states and greater awareness of the common cultural heritage'. In 1993 Kaleidoscope will support three types of activities including 'the promotion of cultural heritage through networks'. Paula's proposal was to set up a network of organisations in four countries representing the gunpowder heritage.

We felt that the GMSG would be the most appropriate body to represent England and suggested that the Gunpowder Mill Museum at Frederiksvaerk in Denmark and the ETBA Cultural Foundation in Greece (mills at Dimitsana) might also join Cork County Council to form the network. The CEC will normally only provide 25% of the cost of projects and their maximum contribution is 30,000 ECU (about £24,000). The deadline for submitting the proposal was 31 December last. We heard no more until a few weeks ago when we received an acknowledgement of the application addressed to the 'Royal Gunpowder Mills Study Group'! Therefore I phoned Paula to find out what had happened. It seems that the contacts in Denmark and Greece had agreed to be involved and she had managed to persuade Cork County Council to contribute £3000. So, if the proposal is successful, the CEC would contribute only £1000, although Paula thinks they might be generous and give £3000. We shall keep you informed of developments.

Faversham and District Bibliography, by Patricia Hyde. The Faversham Society, 1993-.

The first sections of this impressive new publication by the Faversham Society have come out in 1993. The author, Patricia Hyde (whose discovery of a record of powder makers in Faversham in the 16th century was reported in Newsletter 7, pp 11-12) is studying the development of the town between 1475 and 1625 but has undertaken the formidable task of producing this more comprehensive work, covering both primary and secondary sources. The work is being published in-house by volunteers, according to the Faversham Society policy of making its publications easily affordable and accessible to as many people as possible. Part 1 (primary sources) is in six volumes, of which 1 and 2 cover the town and 3-6 the nearby villages, in alphabetical order. The contents of the whole work are repeated in each volume. The historic parish boundaries are described as rather wayward and a map has thoughtfully been provided. Part 2 (secondary sources) is to be in one volume. An index will be published later. The volumes which have already been published are volumes 1-3 of part 1. These are available at £1.95 each (£2.75 including post & packing) from the Fleur de Lis Heritage Centre, Preston Street, Faversham ME13 8NS.

'Mills and ferries along the lower Lea' by K R Fairclough. *Essex Archaeology and History* 23 (1992), 57-66

Keith Fairclough's latest article on the Lea takes as its starting point a survey of the river in the vicinity of Tottenham, Walthamstow and Hackney by John Holwell, 1678. This is one of the examples Holwell used in his textbook entitled *A sure guide to the Practical Surveyor* and is drawn purely to illustrate surveying methods. Keith's article provides information on the mills or millstreams and ferries shown: Tottenham Mills (gunpowder by 1656 and not after 1669), Walthamstow Mills (gunpowder manufacture by John Samyne in the 17th century), Abrahams Ferry and Jeremiah's Booth (Jeremy's Ferry), plus a section on other ferries.

***Bogen om Krudt* (The Book on Gunpowder), by Lars Hoffman Barfod & Jens Chr. Bailing Jensen. Published 1992 by Politikens Forlag, Vestergade 26, 1456 Kobenhavn K. Price 249 DK kroner (£28). Weight 1078g, 176pp, 129 illus, 7 in colour.**

This is indeed the Book on Gunpowder and the works where it was manufactured throughout Scandinavia. A magnificent production for the layman as well as for the specialist - alas not for the 'international reader' as the text is 'only' in Danish.

The illustrations are well chosen, and well placed, thus avoiding boredom for the reader.

The first section deals with gunpowder history. It moves from the rather haphazardly mixed (and often capricious) powder-powder to the prismatic powder which burned more evenly, but still too quickly. (We learn from Egon Eriksen in his book on Frederiksværk: prismaticizing the powder certainly gave a more steady burn, but the gas pressure still rose too quickly, even

if the sulphur content was reduced to almost zero). The ideal solution was of course smokeless powder (nitrocellulose) already developed in the 1840s, but it proved impossible to wash out entirely the nitrogen acid from the cellulose fibres, and this greatly increased the risk of self-ignition. Not until the late 1880s did someone come up with the bright idea of pulping the cotton in a Hollander beater, thus cutting the cotton fibres in small bits, thereby destroying the capillary forces, and the HNO_3 could no longer be arrested by the fibres. In this way the road was open to smokeless powder and black powder was reduced to use in fireworks. But, all this is outside the scope of this work and therefore it is doubly useful to have the industry monitored while we still have the specialists available to do so.

The bulk of the book is concerned with describing the powder works placed all over Scandinavia in the broadest sense: the Dutchies (Sleswig-Holstein), Danmark (the Kingdom), some 18 plants, Island (Iceland) none, but sulphur production, Norge (Norway) 10 works, Sverige (Sweden) about 55 plants, Finland, perhaps 4 and Eesti (Estonia). The number of plants is quite uncertain for several reasons: partly production was often placed on several works, and often each plant was divided into several smaller units - and in spite of this, they often blew up - no matter whether the employees cursed or not (see the 3.post of the Instructions for all Powder Handling, warning against taking the name of the Highest in vain!).

For the more earnest working reader it is a bother that the plant provenance is rather inconsistent. And what *Miil* (mile) is now in use: 8,500m, 10,000m, 9,000m, 8,000m, 7770m or perhaps 7538m?? Pick your choice. A list of all plants with their UTM co-ordinates would be a great help, e.g.: DK-924-Frederiksvaerk, 33/313/6207 - that is all it takes.

The book is concluded by a very valuable chapter on the chemistry and exothermi (energy content) and a long row of units will be very useful to the reader (however, no *miil*). May we hope to see this book one day in English?!

P.S. By correlating the technical information in the book with information from elsewhere, some very interesting facts emerge:

The original way of breaking through rock, as a tunnel for road or water or for mining, was *ildskorning* (fire-softening), where a bonfire at the rock face heated the stone, and subsequent spraying with water caused the stone to break. This was an expensive method in firewood:

1 tonne of ore cost in firewood	18.7 m ³ wood
1 tonne of ore cost in gunpowder	1.1 kg powder
1.1 kg of powder cost in charcoal	0.0153 m ³ wood

i.e. 1222 times as much firewood to do *ildskorning* as to blow out with powder, not counting the use of saltpetre and sulphur. Surely a very good example of the great value of gunpowder for civil undertakings.

But to all Gunpowder Plots: get hold of this book while it is still in the market. Before the turn of the century you will be able to read the text into a computer and get it out in the language you wish.

Anders Jespersen

'A Survey of Earthworks at Hammer Meadow, Abinger Hammer' by Judie English and David Field, *Surrey Archaeological Collections*, 81 (1991-2), 91-5.

This article is about research on the site of the proposed gunpowder mill site at Abinger Hammer (NGR TQ 1047), 7 km upstream from the Chilworth mills in the Tillingbourne valley in Surrey. The work was described briefly in Newsletter 8, p 7, where it was explained that some construction work had clearly been carried out prior to the application to establish the mill being heard and finally refused in 1791. The article provides a detailed survey of the site, showing embankments which appear to represent watercourses and ponds, and compares this with a surviving 1789 plan of the proposed mill. It also describes documentary research on the relevant Quarter Sessions reports.

GUNPOWDER MILLS IN NORWAY

Gunnar Christie Wasberg

The first gunpowder mills in Norway were founded in the 17th century, owing to the many wars with Sweden.

Between 1319 and 1814 Norway was united with Denmark and completely ruled from Copenhagen. Formally, however, Norway was a separate state, and had its own army from 1628. The greater part of the Danish-Norwegian weapons industry, and especially the production of guns, mainly took place in Norway. This branch of industry counter-balanced the Swedish arms industry which at times was the strongest in Europe.

Within this historical framework we must place the few and scattered Norwegian gunpowder mills. In the 17th century the most important was situated at Alvøen, near Bergen, later better known because of the paper mill there, which was operating until a few years ago.

The fact that the Norwegian army was stationed near the Swedish border, was the reason why the other mills were placed in the eastern part of Norway. Christiania, which was the name of Oslo between 1624 and 1924, had its gunpowder mills in the surrounding country. The gunpowder produced in some of these was stored in the 'Gunpowder Tower' at the fortress of Akershus, the largest in the country, and continually besieged by Swedish troops.

In the mining town Kongsberg, south-west of Christiania, there were iron works as well as arms industries and gunpowder mills. Trondheim had a considerable garrison with a gunpowder mill.

Norway had no independent national navy, but a great part of the Danish-Norwegian fleet, one of the most important in Europe, had Norwegian crew. In the Norwegian naval base Fredriksvern, at present Stavern, on the south coast, there was a special 'Gunpowder Tower', isolated from the other buildings. The tower is still there.

Little or nothing is left of the Norwegian gunpowder mills. In addition to their military functions, they also produced gunpowder for use in the country's considerable mining industry, especially for gaining iron, copper and silver.

Even though the gunpowder mills have gone down to history a long time ago, some of them have continued to exist in today's ammunition and explosive factories.

We have got to know Gunnar Wasberg, who is a Norwegian professor of history, at meetings of the International Association of Paper Historians and we would like to thank him for writing this article for us. Eds.

GUNPOWDER LABELS

Alan Crocker

Our member Miles Oglethorpe, of the Royal Commission on the Ancient and Historical Monuments of Scotland, has provided us with coloured photographs of a collection of 17 gunpowder labels from Ardeer. These include: (1) Hay Merricks & Co, Roslin, Tower Proof, sporting; (2) John Hall & Son, Faversham, FFF; (3) Curtis's & Harvey, Hounslow, Extra Course Grain, duck and coast shooting; Tower Proof; Diamond Grain No 6, Size 14; Diamond Grain No 3; Field B No 5; (4) Nobel - Glasgow Union Brand, white countered gutta percha fuse; (5) T C Tebel Idaresi, Birinci, Nevi, Kara av Barutu [sic].

In 1989 our member Alice Palmer, who has researched the early years of the Lowwood gunpowder mills in Cumbria, allowed us to make slides from her collection of 13 labels. These include: (a) Daye Barker of Lowwood, FF; (b) Pigou, Wilks & Laurence, Dartford and Battle, FF; (c) Hall, Faversham, Southern Cross coarse grain sporting for breech loading cartridges; (d) Kynoch, Kynochstown, Superior F; (e) Curtis's & Harvey, Hounslow, F, FF, FFF, Improved F, Improved FF, Sporting, F(ICI).

I showed Alice Palmer's slides at the GMSG meeting in October 1989 and plan to show them again at the forthcoming meeting at Bisley on 8 May. I will also display Miles Oglethorpe's photographs.

BEAM ENGINE AT ROSLIN GUNPOWDER WORKS

Alan Crocker

In Newsletter 11, I reported on millwrighting work at the Curtis's & Harvey mills at Faversham, which Alan Stoyel has discovered in the papers of the late Rex Wailes. Alan has now sent me a copy of a letter from ICI to Rex Wailes dated 12 February 1963. It concerns a large beam engine which was bought second-hand and installed at the Roslin gunpowder mills, Midlothian, in 1863. It did excellent work from that time until the works closed in 1954, powering four incorporating mills. The maker was unknown but a novel feature was that the sprockets for the under-gears were made of wood, so eliminating the risk of sparking. It seems that the engine had been dismantled and removed to Ardeer for storage but, when Rex Wailes showed interest, ICI reassembled it in order to provide photographs.

TRANSCRIPTS OF GUNPOWDER MILL DOCUMENTS.

Members who attended recent meetings at Birkbeck College and Waltham Abbey will remember that inventories of gunpowder mills had been found relating to the mills of William Buckler in 1678 (at Molesey, Wandsworth and Faversham) and those of Pearse, Pryce & Co at Chilworth and Faversham in 1753, and that it was hoped, with the owners' agreement, to publish edited transcripts of these documents. The Surrey Record Society has shown interest in the project but wishes to include other relevant documents in order to make a more substantial volume. It is proposed to publish the 1678 and 1753 inventories together with the 1661 inventory of the Carshalton powder mills and the letter book of William Tinkler of Chilworth dated 1790-91. We are working on this with Keith Fairclough and Michael Wilks.

Eds

POWDER MAGAZINES AT TEESMOUTH SOUTH GARE BREAKWATER

Tom Hay has sent the following items which David Tomlin, of the Cleveland Industrial Archaeology Society, has found in the Cleveland County Archives:

'Domesday Books' NG/IR
Record of valuations made by the Commissioners of Inland Revenue.
Part 1. Finance Act 1910 taken in 1911

In microfilm roll 640 under COATHAM

ENTRY 1176

OCCUPIER	OWNER		
Curtiss & Co	Curtiss & Co	Magazine	South Gare Breakwater

entry 1177

Nobel Explosives	Nobel Explosives	Magazine	South Gare Breakwater
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No other information is given apart from some valuations.

LAST SMALL ARMS POWDER PLANT CLOSING

The ICI managed factory at Powfoot, Dumfries & Galloway, the last British factory making powder for small calibre weapons, is closing due to decreased demand for ammunition for the Ministry of Defence. After March 1993, nitro-cellulose based propellant will come from a Royal Ordnance plant in the Netherlands. (*Daily Telegraph*, 5.11.92)

FIREWORKS

The above-quoted report had a footnote explaining that certain types of firework currently banned in Britain on safety grounds could go on sale again if a European committee includes them in a new standard, and this will be opposed by British firms and industry associations.

THE ALLIANCE EXPLOSIVES COMPANY AT CHILWORTH

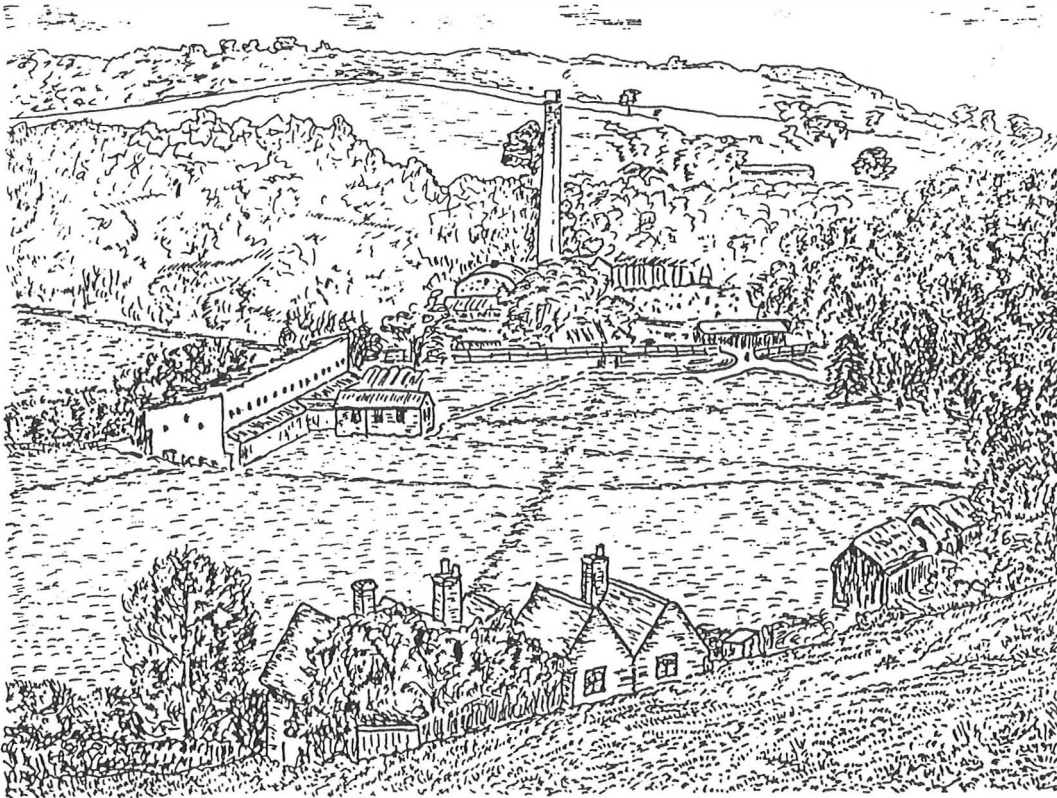
Alan Crocker

The Chilworth Gunpowder Co Ltd records are filed at the Public Record Office under BT31/14793, 20935. These records commence with the Memorandum and Articles of Association of 1885 and continue to the Appointment of a Liquidator and the Winding Up in 1920, although there is also some information on meetings as late as 1927. Much weeding has been carried out so that most of the information is provided at 5-yearly intervals. In 1910 'The Alliance Explosives Co' occurs for the first time and is stated to own 2950 of the 5000 shares which were issued in 1885 at £20. In 1916 the capital of the company was increased by £100k and in 1919 'Alliance' owned 4900 shares.

Who were 'Alliance'? This company is not listed in *The Rise and Progress of the British Explosives Industry*, published in 1909, but there are several

references to it in Reader's *ICI, a History*, volume 1. It appears that it was formed in 1884 and was run by a Frenchman, Paul Emile Barbe, who was in active partnership with Nobel. In 1886 it became part of the Nobel Dynamite Trust Co Ltd. There are no references to it in Reader between 1889 and 1915, when it is stated that 'the Alliance Company does no actual trading except a very small merchant's business in the Chilean market'. The Dynamite Trust was wound up in 1915 because of its German interests. There are no further references to Alliance in Reader and he does not link it directly with Chilworth.

It would appear that an interesting research project would be to explore the background of Alliance and its links with Chilworth. This would also involve discovering the significance of the other shareholders at Chilworth including Vickers, Armstrong Whitworth and of course Nobels.



Drawing of part of the Chilworth gunpowder works based on a photograph of about 1900. From 'Gunpowder Mills of Surrey' by Glenys and Alan Crocker, *Surrey History*, 4(3), (1991), 134-58. This issue of *Surrey History* is available from the editors for £2.95 or £3.50 including post & packing.

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