

THE POWDER MILL - LEIGH

By Chris Rowley

From the middle of the Napoleonic Wars until 1934 the Leigh Powder Mill's site was been used for the production of gunpowder. Now, in 2004, all that remains of the early factory workings some earth mounds, which are the remains of protected storage buildings; the overgrown millstream, which starts from where the railway crosses the Medway, and the tail stream, which enabled barges to come up from the Medway; together with the remains of the four associated sluices. There are also the foundations of a number of mill building and several large mill stones and other pieces of 'machinery', all of which are in an overgrown woodland site. (See rough map of site compiled summer 2004 with notes in Leigh Historical Society (LHS) archive).

However, the site does represent an industrial archaeological feature which is very unusual in southern England.

Just as the Oare gunpowder works at Faversham are now recognised as an important industrial archaeological site, worthy of expensive restoration, so local historians are lobbying for restoration work to be carried out on the Leigh site.

The Process

Gunpowder is a mixture of charcoal (carbon 12%-15%), Saltpetre (potassium nitrate 75%), and brimstone (sulphur 10% - 12%). Willow and alder were the main source of the charcoal, which is ground down into a powder and made into a "wetten dough" with the other ingredients. The mixture then has to be made into uniform sized grains - with sieves - a process called "corning". Finally, it is glazed, dusted and dried.

The Start of the Firm and Reasons for Siting the Mill

The first record of the Leigh powder mill is in 1811 when two fathers and sons, the Burtons and the Childrens, decided to start a company. It was known initially as the Ramhurst Powder Mills, although it later became The Tunbridge (sic) Gunpowder Works. This part of the country had plenty of wood for the charcoal needed in the processes. There was already a millstream, which had powered the corn mill at Ramhurst - at the bottom of Weir Lane - until its destruction in 1812. It was easy to construct access downstream to the Medway and thence to the major naval base at Chatham. (Transporting heavy goods by road in this era was difficult, particularly in winter). Additionally, the Children family also owned this portion of land and were local bankers. The initial investment in the company was the large sum of £30,000.¹

Sir Humphrey Davy

The famous scientist and later President of the Royal Society, Sir Humphrey Davy, was keen to try a new formula for gunpowder and initially was a partner in the scheme, although he did not invest any money. However, by 1812 he had become less enthusiastic. Distinguished local historian, the late Lawrence Biddle, says in his book "Leigh in Kent 1550 to 1900" that Sir Humphrey resigned, reportedly because his wife, a wealthy widow, did not want him to be "tainted" by trade.²

Early Years

By 1813 two out of the three initially planned mills, a house for the manager and some cottages for the workers had been built. The tailwater, or tailstream of about 500 yards had been constructed, complete with a stone faced lock where it joined the Medway. The tailwater had branches around the mill site to enable goods to be moved around between the various processes.

Unfortunately, the Children family bank was beginning to have financial difficulties³ and the Children sold out to the Burtons. William Ford Burton - the son - was left in sole control in 1824 after the retirement of his father.

The Main Years

Production seems to have run successfully throughout the main part of the 19th century with canal barges belonging to the Medway Navigation Company carrying the gunpowder down to the firm's magazine at Erith at fifteen shillings a ton - more than twice the rate for other goods.

However, there was nearly a problem. In 1829 the Penshurst Canal Company was formed with the aim of making Penshurst the top navigable end of the Medway rather than Tonbridge. The Straight Mile - a canal above Tonbridge - was started which would have taken water out of the Medway above the start of the millstream. It was clearly something which was thought to be liable to affect the power for the Powder Mills and William Burton objected. However, the canal project was abandoned in 1832.⁴

Local newspapers reported various incidents. 16 April 1835, the Maidstone Journal told of an explosion in the corning house in which two people were killed; and another accident happened ten years later, although no one was killed.

At the time of the 1851 census, Charles Sealy, aged 45, was the resident manager employing sixteen men, five boys and four women, all of whom were residents of the Powder Mill cottages. In 1840 there had been nine cottages but by 1851 the number had increased to fifteen; and in 1855 new mills - still water powered - were installed.

In 1859, William Burton having died, the works were put up for sale. The property consisted of the charcoal processing area, four mills with eight pairs of stones, the press house, the corning house and the glazing and dusting houses, together with 50 acres of land, the twelve-roomed managers house, and fifteen cottages built for Powder Mills workmen (who paid rent). The annual gunpowder output was said to be between 7,000 and 14,000 barrels.

The firm was bought by Charles and Thomas Curtis for £10,000 and, as the annual profit was said to be £2,000 - £3,000, it seems like a good buy for Curtis - a firm which continued to grow over the next fifty years.

In 1860 an Act of Parliament was passed governing the making of gunpowder. In 1864 the Tonbridge Telegraph told of an accident in the Dusting House. The works manager, George Grey, was reported as saying it was "unheard of . . ." It was clearly serious because four workers were buried in Leigh churchyard. By now 40 people were employed including a number of coopers to make the barrels to hold the gunpowder of which 60lbs were mixed at a time.

The Medway Navigation Company was increasingly becoming unreliable, although it did not go out of business until 1911. In 1874, the inhabitants of Maidstone complained that they were worried about the safety of the gunpowder barges and transport on the Medway ceased.

The firm, by this time called Curtis & Harvey, seems to have taken its moral duties to its staff seriously, as the descendant of one of the workmen there, James Swain, has a bible with the inscription - "The Society for Promotion of Christian Knowledge. Curtis & Harvey. Christmas 1876".

In 1876 Continuation Certificate No. 21 was issued for the company and, a little later, steam power was introduced to supplement water power. By this time gunpowder was normally being replaced by cordite for military use - it was much safer - although the Powder Mills' old style gunpowder continued to be used for sporting guns and as a blasting explosive. Cordite was not produced at the Powder Mills until 1885.

Explosions continued to occur. Historian Lawrence Biddle notes that there were five in the years 1878 - 1885 but, in 1885 new equipment was installed to produce the less dangerous type of gunpowder (prismatic powder), mandated by government requirement and by 1897 the manufacture of the old black gunpowder had ceased.

In 1898, Curtis & Harvey became a public company, owning many powder mills all over the country - over a hundred by 1909 - with Leigh a very small part.

In the period leading up to the First World War, the firm was producing smokeless sporting powder, primarily for sporting guns, but the start of the war meant a big expansion to produce explosives for munitions.

Young boys and, more unusually, women, were taken on from Leigh, Tonbridge and other villages and a tarmac cycle path ran to the Powder Mills from both Ramhurst and Tonbridge. The original white workmen's cottages were demolished and the current houses erected by Curtis & Harvey.

In 1917 there was an explosion when a building was struck by lightning. The noise woke up sleepers in Leigh and debris was said to have fallen as far as "The Plough" pub. Another report says that people could read a newspaper in Tonbridge High Street in the glare.

Although one account seems to indicate some people were killed, Leigh resident Eric Batchelor's family memories say the explosion occurred on a Sunday night when the only person there was the night-watchman, Eric's grandfather, Alfred Batchelor. He was blown off his feet but not badly hurt and it was said, surprisingly, there were no other injuries.

At the end of the Great War production was - not unnaturally - dramatically cut back and the firm changed ownership, becoming Nobel and eventually forming part of Imperial Chemical Industries whose best known product from this factory was Black Diamond Gunpowder. Coincidentally, one of the founders of ICI, Robert Mond, lived at Combe Bank in Sundridge from 1906-1924 and used his large gardens to try out explosives, causing some concern to the locals.

Under Curtis & Harvey and its successors, the Powder Mills had an active social scene for both adults and children. In the 1920s and early 1930s there was a club with billiards - not snooker in those days - darts, table tennis and cards. There was the use of a tennis court and cricket pitch at Meopham Bank; shooting at targets was done in the field opposite the Ramhurst Manor entrance, and there was a soccer team with its pitch on the water meadow below what is now the Hunter Seal Close.

*A formal picture still exists of the shooting club, with 20 men in dark suits and tie and two trophy shields and two cups. There is also a 1923 article and photo of the soccer team which had won the Division II Charity Shield. The soccer team included Noel Jempson who not only worked at the Powder Mills but became landlord of the nearby Plough for many years until the 1960s. There were also regular Christmas parties for children.*⁵

There was another large explosion in 1927 and several people were killed including two from well known local families with a long association with the Powder Mills - the Batchelors and the Scotts.

A 1930 photograph shows the well maintained tailgate, the towpath and the buildings. However, in September 1934 ICI moved all its explosive operations to Scotland where it was thought there was less risk of wartime attack and where hydroelectric power was a new cheap source of energy. The land and the houses were sold off and a good number of staff left unemployed, although ICI was acknowledged to have tried to look after its staff - some of whom, including John Evelyn, who had been the Manager for 14 years, being re-employed in Scotland.

There is a 1940 watercolour of the site. After the works had been left derelict for some years, the site was bought in 1942 by a firm called East - run by a father, T.G. East and his son, David.

The father lived in the big house and the son lived in Aynho. The company had a factory in Barking which manufactured Eastlight files but the idea of bringing the work to the Powder Mills fell through. During the Second World War, some of the buildings were used for war work. Mr East had a variety of light engineering schemes and at one stage after the War made furniture/garden furniture. Some of the waterways inside the works were altered - the Easts had a motor boat - there was a sawmill and a forge with several workshops - one in the old Cart Houses.

When the Easts' backer withdrew, the site was bought in 1949 by a small pharmaceutical company, Menley & James, who were the UK agents for the US firm, Smith, Kleine & French Laboratories and whose main UK works had been in Coldharbour Lane in London. It initially only employed five people. In 1952 it became wholly owned by Smith Kleine & French. By 1956 it was employing around thirty people. *[There is a 1950 photo, which shows some of the old powder works buildings. There is also a photo of the demolition of the five storey distillation tower in 1965. The firm's newsletter gives details of its construction in the First World War expansion].* Smith Kline & French became Smith Kline Beecham and finally at the turn of the century GSK (Glaxo SmithKline) which has expanded in size with the integration of the research side of Wellcome from Dartford. The site, now employing around 300 people, concentrates on pharmaceutical research rather than the production of chemicals.

In addition to the firms mentioned above on the old original site, various other firms dealing in chemicals and light engineering were established after the Second World War on the site opposite the main Powder Mill entrance and on the site now occupied by the Hunter Seal houses. On the former, there was Ward Adams who dealt in timber and light manufacturing; and the latter included Bridge Chemicals (part of SmithKline Corp), Vivien Chemicals and Hunter Seal, a light engineering company. The latter site was left derelict for a number of years.

In 1996, the developers, D H Ward, applied for permission for a change of use on the Hunter Seal site from industrial to an all housing scheme. The proposal was strongly supported by local residents and, although the Sevenoaks District Council would have preferred a mixed light industrial/residential scheme, the all-housing proposal was eventually agreed and seventeen houses built.

Other Gunpowder Sites with Links to Leigh

- i The Tonbridge Powder Mills at Old Forge Farm near Southborough (TQ 5943). Operated from 1771 to about 1820.
- ii Faversham - various major gunpowder works including Oare & Chart which were for a period in the second half of the 19th century and early 20th century owned by Curtis & Harvey. At least one person who worked at Leigh went to work at Faversham - see notes on William Charles Sealy 1848-1931 and his powder-making family in Leigh.

Current Status in Archaeological Listings

The Leigh site is listed in the English Heritage document "Monument Protection Programme: Gunpowder Mills" 1998, where it is assessed as "not of schedulable quality but undoubtedly of regional value". The KCC County Archaeologist's department have the site on their register.

Ownership of the Site

Two thirds of the site is in the Sevenoaks District Council area and one third in the Tonbridge & Malling Borough Council area. Neither Councils have been approached - at the time of writing, about the possibility of some kind of preservation or restoration. The ownership of the north part of the site belongs to Glaxo Smithkline, but it would be useful to check on the ownership of other parts of the site. Currently, no parts of the site are available for viewing by the public without advance permission.

Summary

For around 125 years the Parish of Leigh had a gunpowder-producing company. Whilst it employed a number of people from Leigh, it was always a separate community, with usually around a hundred people living in the houses largely built for the powder mill workers. The site continues to be the parish's largest employer although the vast majority of the workers on the site come from outside the parish.

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¹ For details of the actual 1811 Gunpowder Licence, a map and description of the site of the Mills and the 1813 Rateable Value of the Mills - see "Kentish Sources III" by Elizabeth Melling.

² For further information about Davy's involvement, see pamphlet "Sir Humphrey Davy: Tonbridge Associations" by G.P.Hoole July 1978 and an article by J. Z. Fullmer, held in the Tonbridge Reference Library in a folder headed Powder Mills, Leigh. Also see Leigh in Kent 1550 to 1900 by Lawrence Biddle, pages 53/54.

³ See Leigh in Kent by Lawrence Biddle, pages 54/55.

⁴ An 1837 map with a key to the various parts of the estate; and a 36 page booklet "A History of the Medway Navigation Company" compiled by John Hilton - gives more details of these events and a general background to trade on the Medway including gunpowder.

⁵ See "We Had Everything . . . Recollections of a Kent Village Leigh 1900-2000" by Chris Rowley, page 371.

Note: Further documents relating to Leigh powder mills are held in the archives of the Leigh and District Historical Society.

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