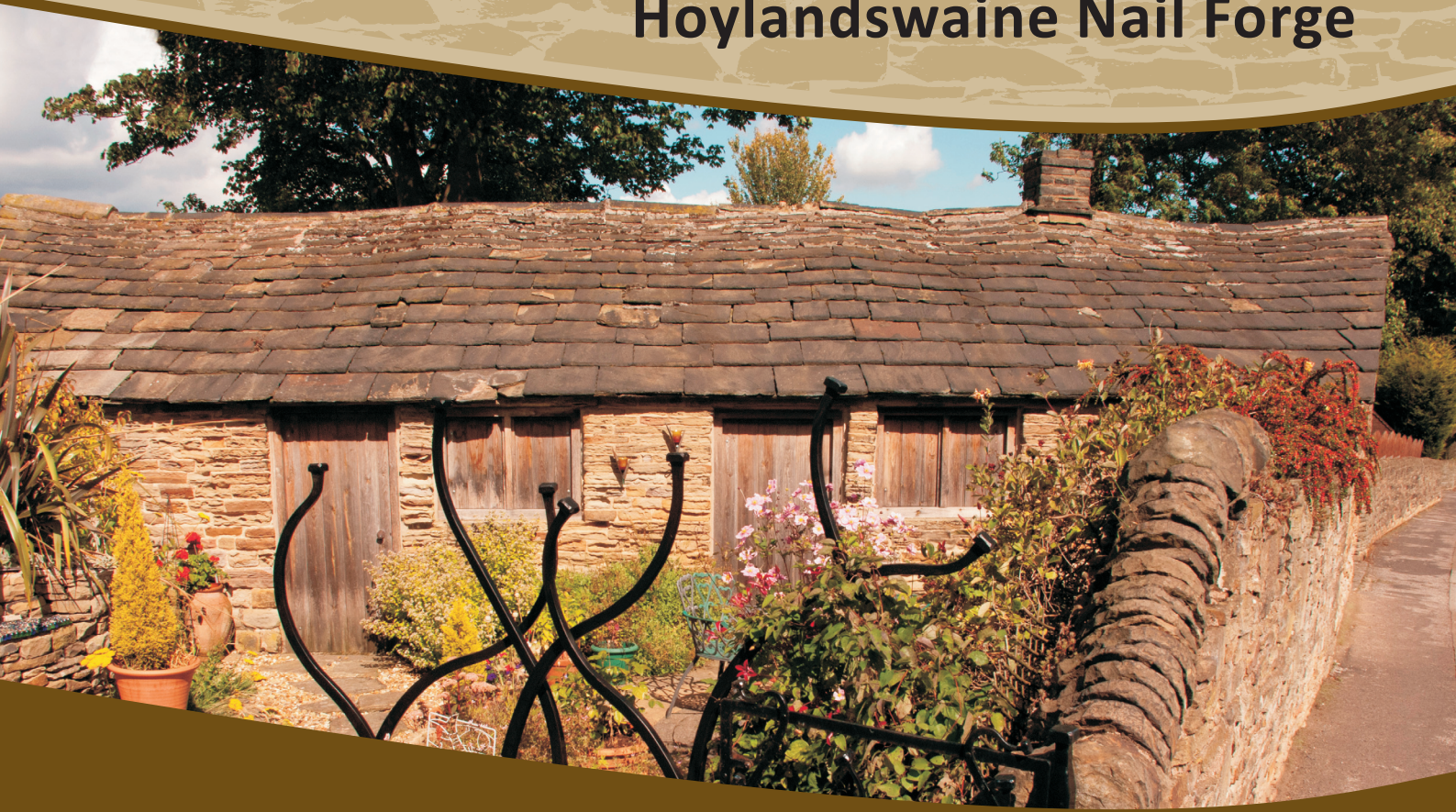
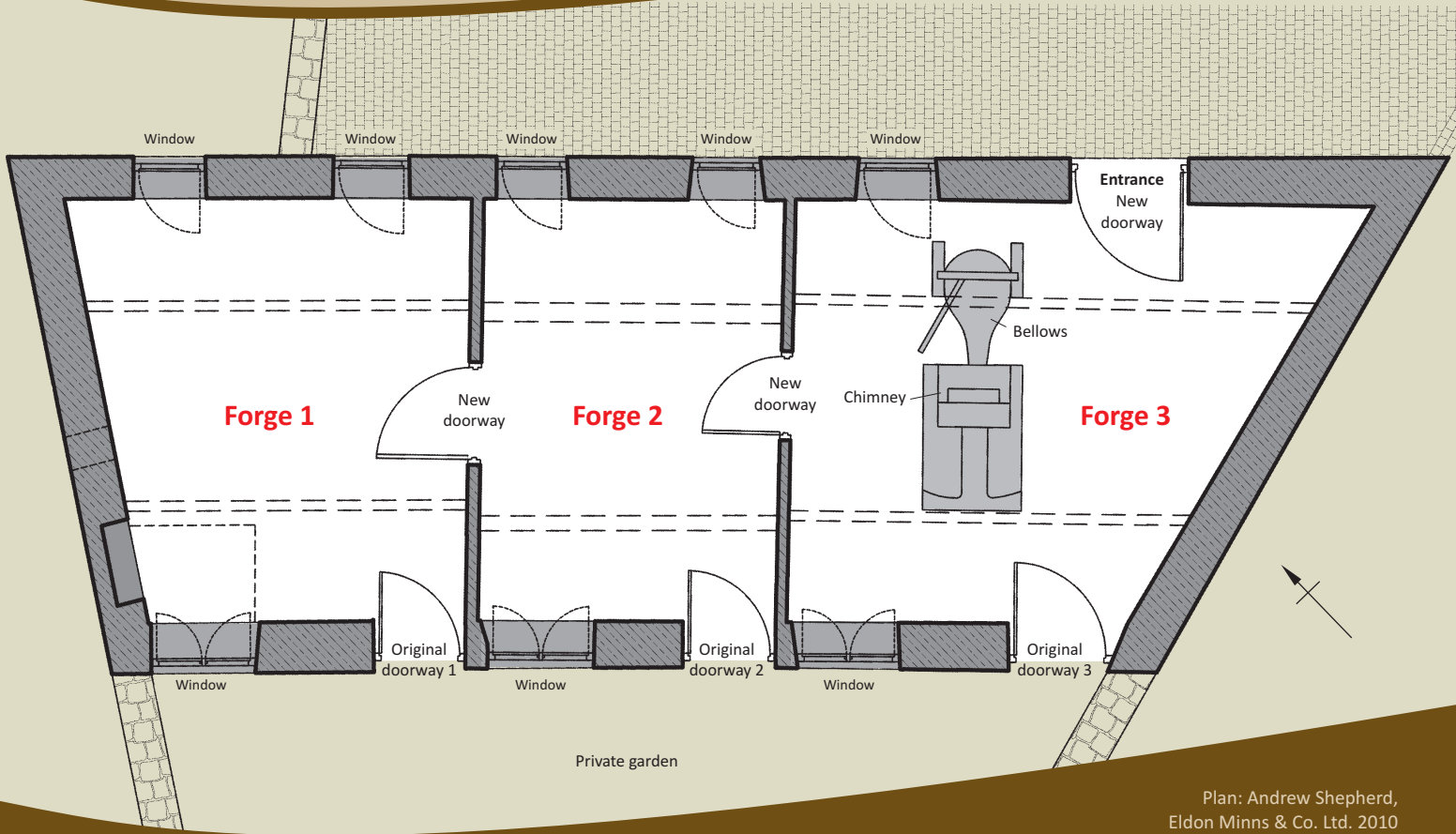
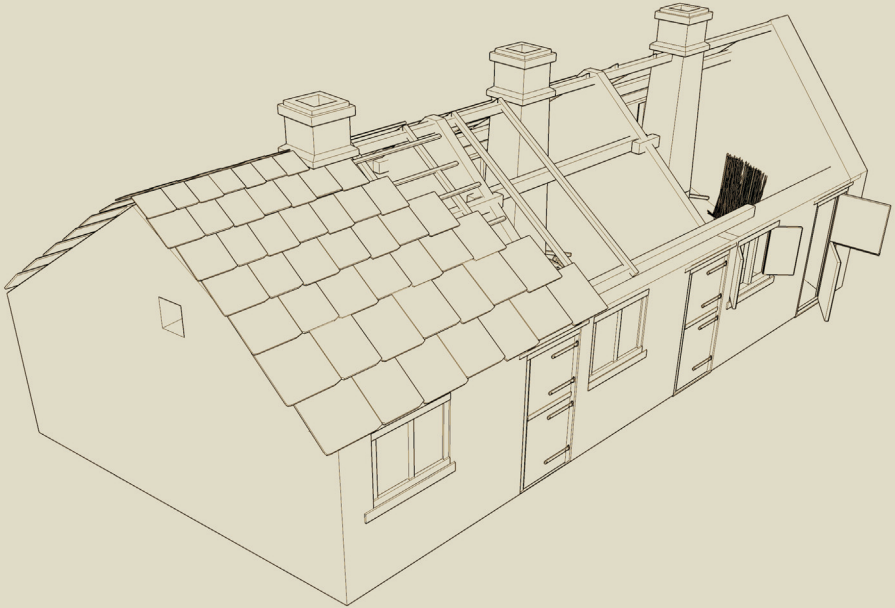
Hoylandswaine Nail Forge





Plan: Andrew Shepherd,
Eldon Minns & Co. Ltd. 2010

Contents



Hoylandswaine Nail Forge is a rare example of a nailmaker's forge. The building is exceptional in retaining one of its original hearths, and offers a unique opportunity to explore the history and lives of the nailmakers who were an important part of communities throughout the area.

Hoylandswaine Nail Forge is open to visitors from time to time and usually on one or more days during the national Heritage Open Days in early September.

For details see **www.heritageopendays.org.uk and www.topforge.co.uk**

Group visits, including educational visits, can be arranged by appointment. If you would like to discuss this, please contact Wortley Top Forge on **0114 288 7576**.

Hoylandswaine Nail Forge

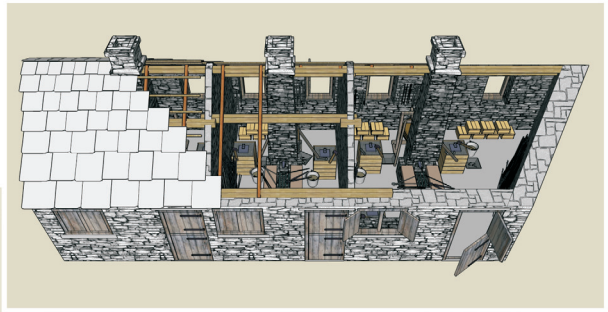
Hoylandswaine Nail Forge is a rare example of a building that was once a common sight throughout the village and in other nailmaking villages. It retains one of its original hearths, and we do not know of any other domestic nail forges in Britain, still on their original sites, where this is the case.

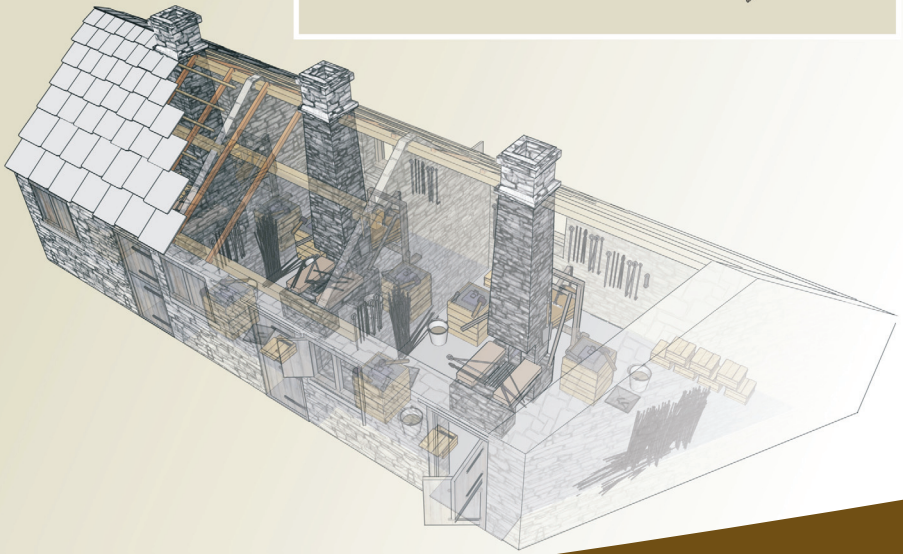
In recognition of its importance the Nail Forge was protected as a Grade II Listed Building in 1988. Ten years later it was donated to the South Yorkshire Industrial History Society through the generosity of Hilary Smith, the previous owner, in order to preserve and restore it. Initial conservation work was done in 2004-5, and the roof was restored in 2011. This restoration work was funded by the East Peak Innovation Partnership and the Association of Industrial Archaeology.

The Building

The building was historically part of a group of buildings known as Mustard Hill. It survives much as it was when originally built. Its design is very simple, with rough unadorned walls of locally quarried sandstone and thick, roughly hewn stone roof slates. Inside it is divided into three rooms, each originally a nailshop with its own forge. Doors now link the rooms internally, but originally they were separate, each with its own entrance.

Whilst the hearths in two of the rooms have been removed, one survives in the southwest nailshop. The stonework of the hearth is worn and cracked, with areas of repointing and patching in brick – testament to almost two hundred years of hard use.





It was at this hearth that the nailmakers heated iron rods until they were red-hot before making nails from them, by hand, for long hours every day.

The fire was brought to the right temperature by pumping the hand operated bellows behind the hearth. The present bellows date to the early to mid-19th century and were made by Abraham Harrap of Sheffield.

The chimney above the hearth, supported on a metal plate, partially hangs over the fire and rises through the roof, taking away the smoke and improving the draught.

When in use, the rooms would have been hot, smoky, noisy and dirty with up to four nailmakers sharing each forge.

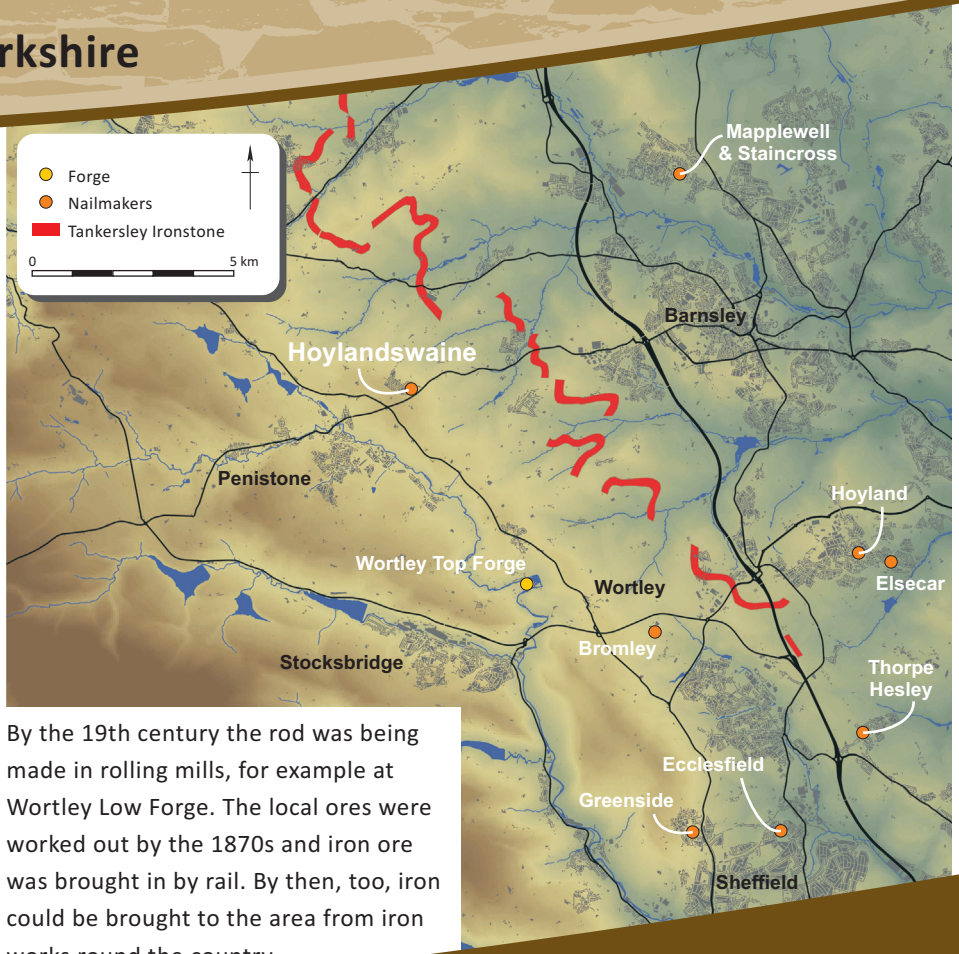
The windows of the nailshops had simple shutters and no glass, in order to ventilate the rooms and abate their exhausting heat. Even so, in the hot summer months the nailmakers might avoid the hottest part of the day, working early in the morning and late into the night.

Ironmaking in South Yorkshire

The resources for ironmaking were all present in South Yorkshire. There was ironstone in seams running roughly north to south through Silkstone and Tankersley. There were extensive woods for charcoal, and the rivers such as the Don and Dearne provided ample water power.

There is a history of ironmaking in South Yorkshire going back to the Roman period. Written evidence informs us that by the 1100s monks were mining and making iron in Ecclesfield and Thorpe Hesley. The blast furnace, which is still used to make iron today, was introduced to the area around 1585.

The pig iron from the furnaces was turned into bars or sheets of workable wrought iron at forges like Wortley, and cut into rods for nailmaking at slitting mills, including one near Wortley.



By the 19th century the rod was being made in rolling mills, for example at Wortley Low Forge. The local ores were worked out by the 1870s and iron ore was brought in by rail. By then, too, iron could be brought to the area from iron works round the country.

Nailmaking in Hoylandswaine

Beginnings

From the medieval period nails were made in small workshops next to the nailmakers' homes. Whilst there were full-time nailmakers in the area by the 16th century, the majority would have fitted it in between working in the fields.

In the 1600s, records from nearby parishes like Darton show an increasing number of nailmakers living and working there.

It is not known when the first nailmakers were established in Hoylandswaine, but due to the spread of the trade in South Yorkshire it seems likely there would have been nailmakers in the village by the middle of the 18th century.

The Industrial Revolution

During the 18th century Hoylandswaine lay within an increasingly industrial landscape. As the industrial revolution gained pace, the iron trade of the region expanded.

By the 19th century the previously widespread trade of nailmaking became increasingly concentrated in particular villages, including Hoylandswaine, Mapplewell and Staincross in Barnsley; Ecclesfield, Grenoside and Norton in Sheffield; and Thorpe Hesley in Rotherham. We are not sure why the trade developed in some villages and not others.

By 1806, records show that there were around 60 nailmakers in Hoylandswaine, increasing to 90 in 1851.

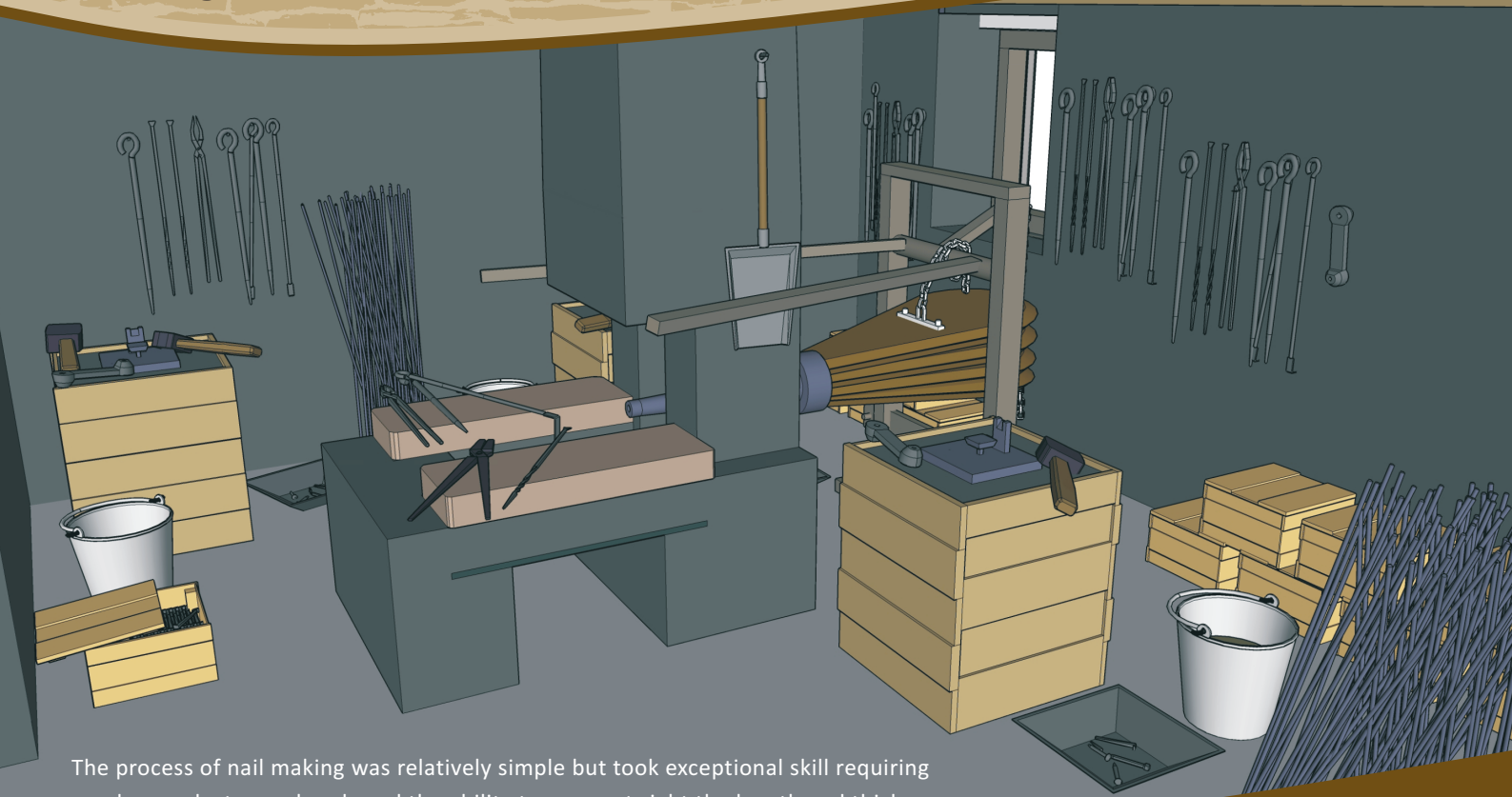
As the trade declined, many nailshops were demolished. Others, like this one in Cooper Lane, Hoylandswaine, were converted to garages, barns or outbuildings, and their hearths removed.

Decline

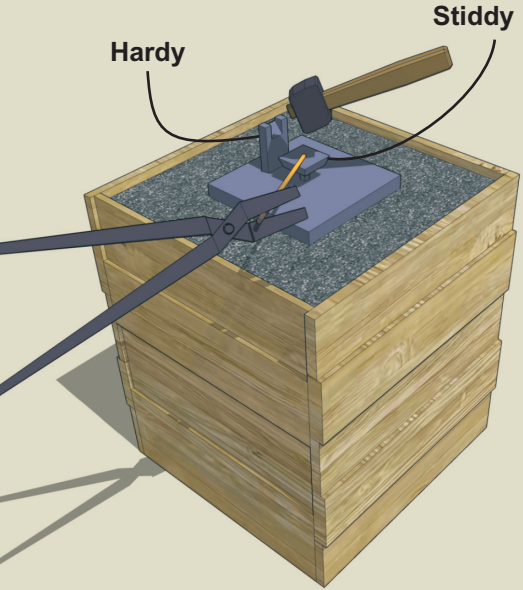
After 1850 nailmaking in the village began to diminish as large mechanised nailmaking factories started to produce machine-made nails at a far greater rate. Furthermore, in 1863 a steelworks was constructed in Penistone and many young men from the village were drawn to it by the prospect of better wages and working hours.

Historical records show that in 1861 there were only 53 nailmakers in Hoylandswaine, and by 1891 this had dropped to 8. But nailmaking by hand continued here long after it ended in most other areas, and Hoylandswaine Nail Forge became the last working forge in the village.

Making a Nail



The process of nail making was relatively simple but took exceptional skill requiring good eyes, dexterous hands and the ability to gauge at sight the length and thickness of the nail being wrought.



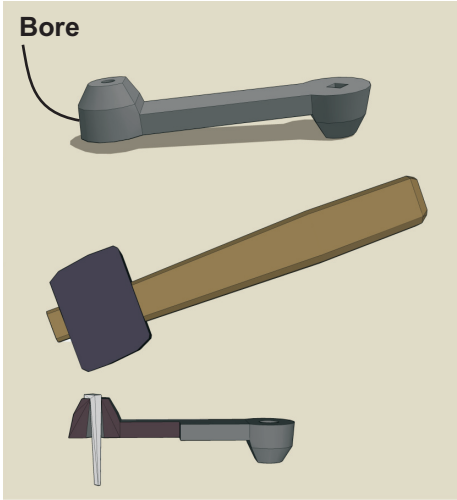
Stages of Production

1. Long wrought iron rods, obtained from a local forge or slitting mill, were heated on the fire and cut into convenient lengths.

2. A length was hammered to a point on a small anvil known as a stiddy.

3. The formed nail was partly cut off from the rod with a sharp stroke of the hammer over an upright sharpened chisel known as the hardy.

4. The nail was then fully severed from the rod with a sharp twist of the wrist into the square hole of a tool called a bore.



5. The hole was tapered to pinch the thicker end of the nail, allowing part to protrude, which was hammered to form the head.

6. The finished nail was then knocked out into a tin.

The hammer used for nail forging had a flat faced one-sided head and had a better balance for this work than an ordinary hammer. It was said a skilled craftsman only needed 12 blows of the hammer and six seconds to complete a common nail. Much of the nailmaker's skill lay in reaching a high speed, with their earnings often tied to the number of nails they could produce.

For the largest nails, some nailmakers elsewhere used an Oliver hammer, which was a large treadle operated hammer attached by chain to a pliant bough that would return it to an upright position. We have no evidence that this was used in Hoylandswaine.

Products

Nails were made to different lengths and with different shaped heads depending on their function, including:

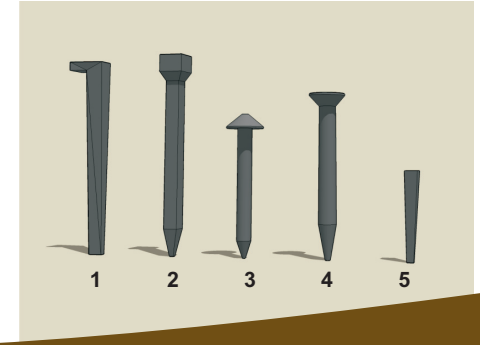
1 *Brad* - A general purpose nail

2 *Horsenail* - A long thin nail for fitting horseshoes

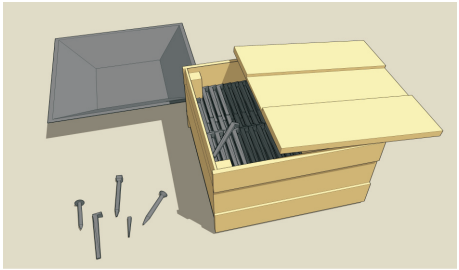
3 *Rose* - An ornamental head for woodwork

4 *Clout* - For nailing metal, leather etc., to wood

5 *Sparrable* - A tiny nail without a head used for nailing shoes



Nails were named based on their weight in pounds per thousand and expressed as pence, e.g. a Threepenny Nail was a 1 inch nail, a thousand of which weighed three pounds. To add further confusion to the matter a nailmakers' thousand often numbered 1200.



Besides nails, hooks for gas and water pipes, links for chains, railway pins, miner's lamp hooks and numerous other small iron objects were also made by the nailmakers.

Families at the Forge

Who Used the Forge?

When and for whom the three nail shops were built is a mystery. They are likely, however, to have been worked by families living in the adjacent Mustard Hill cottages, now altered into larger houses, or a nailmaster could have had all three, and hired people to work them.

By the 1850s the nailshops were worked by the Chappell family who lived in the small cottage next to the forge. The Census of 1851 recorded 5 nailmakers in the family, comprising both parents, two of their sons, and one daughter aged 12. It was not uncommon for even younger children to help in the forge.

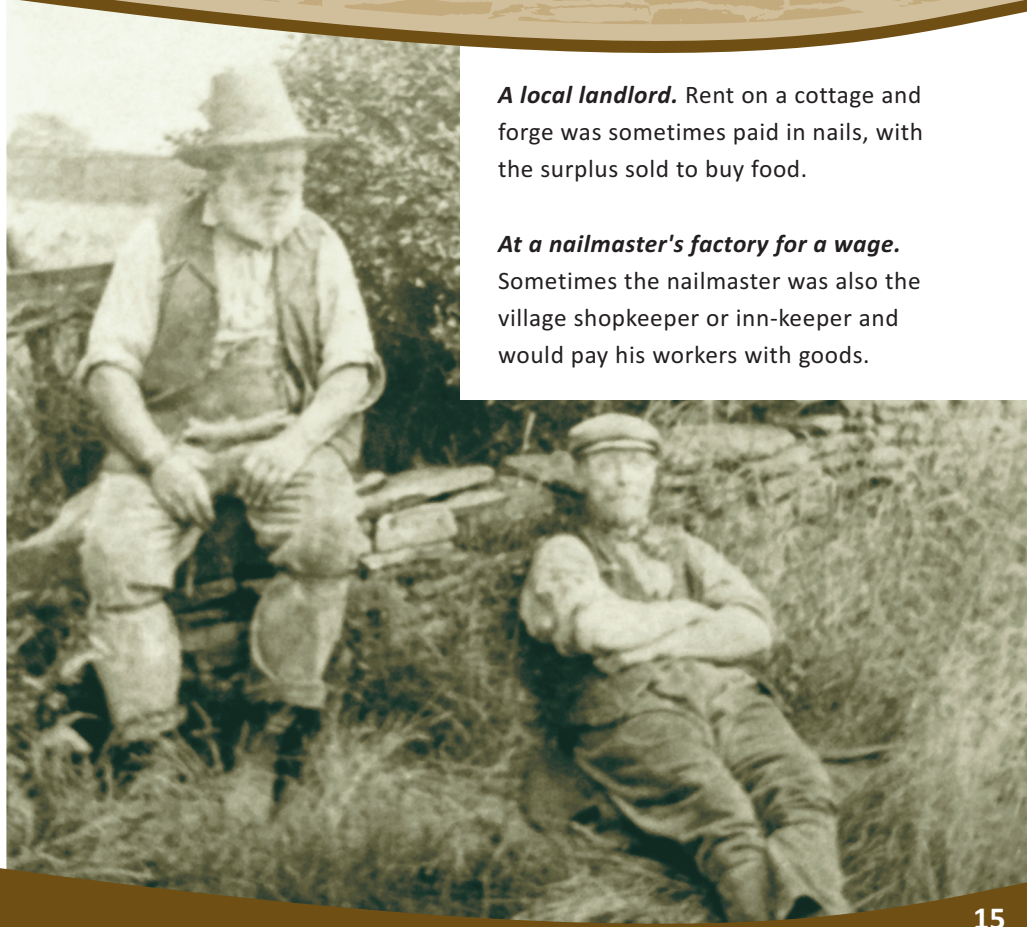
Alfred, or Alf, Chappell and his son Fred were still working as nailmakers at the Forge until at least 1911. Alf, who died in 1913, was the last known full-time nailmaker in Hoylandswaine. Fred may have occasionally made nails and other things at the Forge between the wars. He is known to have produced a consignment of handmade foundry nails for a firm in Penistone during World War 2.

Alf Chappell -
the last full-time nailmaker
at Hoylandswaine Nail Forge

A family business
It was not only the men of the family who spent much of their day at the forge. Women and children also worked long hours making the smaller nails, as this was essential to supplement the men's wages.

Alongside their work, nailmakers would also tend to their vegetable gardens, and during summer and autumn would join the rest of the community in bringing in the harvest.

Who did the Nailmaker work for?
Themselves. If a nailmaker had a forge he could organise his own business or work for a merchant known as a Nail Chapman who brought iron rod to the village and paid the nailmaker when he collected the finished nails.



A local landlord. Rent on a cottage and forge was sometimes paid in nails, with the surplus sold to buy food.

At a nailmaster's factory for a wage. Sometimes the nailmaster was also the village shopkeeper or inn-keeper and would pay his workers with goods.

Pastimes

Nailmakers were not paid by the hour, but by the amount of nails they produced. This is called piece-work. So long as they made enough nails in a day they could start and finish whenever they liked. Other people sometime assumed because of this that nailmakers were lazy, but they had to work long hours to earn a living wage.

At times they could be tempted away from their shops during fine weather. Their pastimes in the Barnsley area included cricket, knur and spell matches, pigeon keeping contests, hunting, shooting and any other event which offered some excitement.

Knur and spell

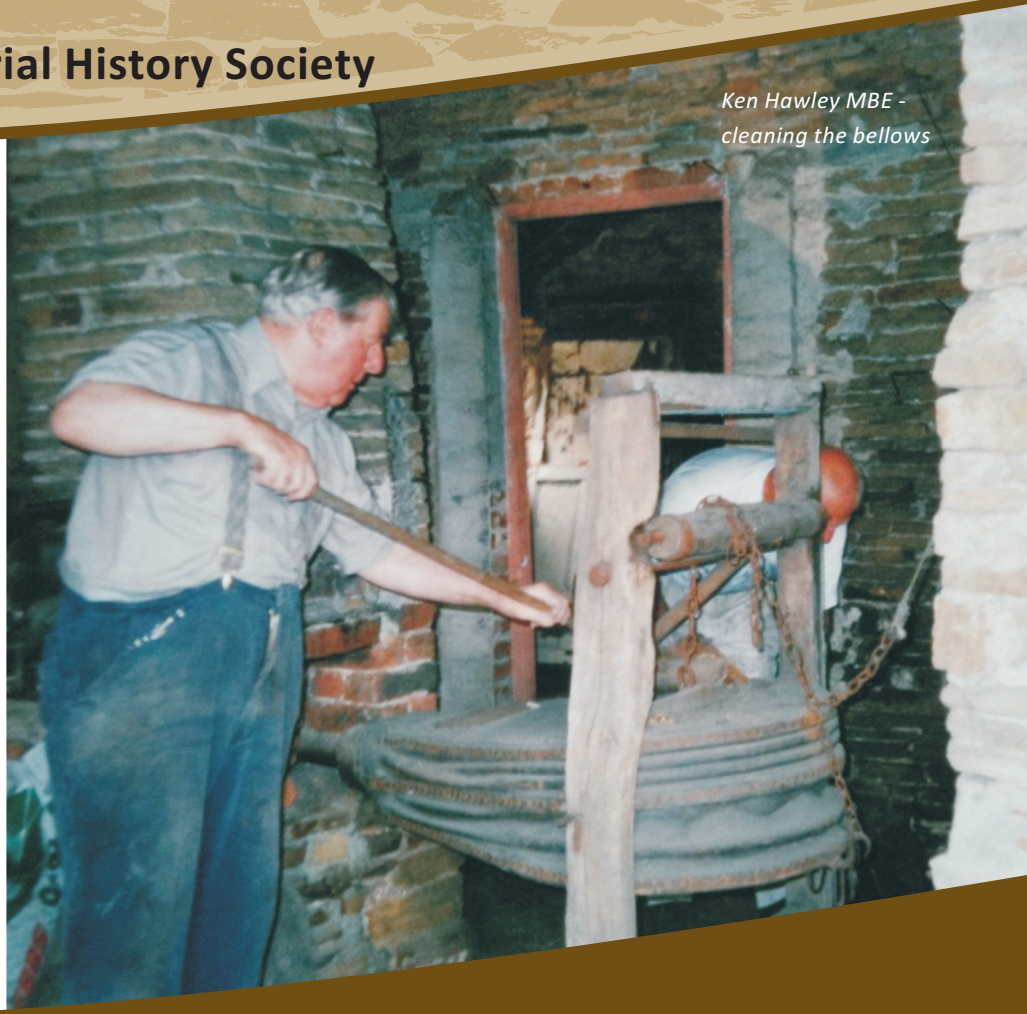
Knur and spell, also known as nipsy or pitmen's golf, is a sport where the players take turns to hit a small pot ball with a club while it is in the air. The player who hits it farthest is the winner. Often there was betting on the result. The ball is thrown into the air (as in the picture) by putting it on one end of a piece of wood balanced across a stone or brick, and hitting the other end with the club. A 'trap' with a spring mechanism was used instead for more formal matches, which are still held from time to time in the Barnsley area.

Hoylandswaine nailmakers were also keen supporters of the Methodist Chapel on Haigh Lane, which was built in 1807. A Sunday School was added in 1811, and many of them learned to read and write there. One who did was George Senior, who went on to set up a successful steel firm at Ponds Forge in Sheffield. In 1901 he was Lord Mayor of Sheffield and in 1910 Master Cutler. He built the almshouses above the Rose and Crown in Hoylandswaine, on the site of a group of nailshops.

South Yorkshire Industrial History Society

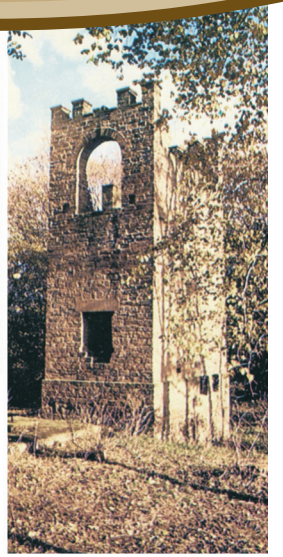
Founded in 1933, SYIHS is a registered charity that actively promotes the conservation of buildings, machinery and tools linked with local trades, industrial history and archaeology throughout Sheffield and South Yorkshire from earliest times to the recent past.

In 1976 the SYIHS formed a sister body named The South Yorkshire Trades Historical Trust to restore, manage and safeguard its properties.



Ken Hawley MBE - cleaning the bellows

The other buildings cared for and maintained by the Trust are:



Wortley Top Forge.
Britain's last surviving water powered heavy iron forge whose history can be traced back to the mid-17th century. S35 7ND

Rockley Blast Furnace and Engine House.
The ruined remains of a blast furnace built *c.*1700 and Engine House constructed in 1813, located in woodland near Rockley Abbey Farm. S75 3DS

Bower Spring Cementation Furnace.
The remains of two cementation furnaces dating to around 1828 that were used in the conversion of iron to steel to make hand tools. S3 8UB

For further information on these properties and details of opening times, visit **www.topforge.co.uk**

Further reading and information

www.topforge.co.uk

www.industrial-heritage.epip.org.uk

Cynthia Dillon, *The Nailmakers of Hoylandswaine,* Hoylandswaine History Group

Hoylandswaine Industrial Heritage Trail, Hoylandswaine History Group and South Yorkshire Industrial History Society

Hugh Bodey, *Nailmaking,* Shire Publications Ltd

Acknowledgements

East Peak Innovation Partnership (EPIP)

This booklet was produced as part of a project funded by the East Peak LEADER programme through the Rural Development Programme for England, which is jointly funded by Defra and the European Union, and the Association for Industrial Archaeology

Association for Industrial Archaeology

Cynthia Dillon - Hoylandswaine History Group

South Yorkshire Industrial History Society

Harold Taylor

Stuart Gibbins

Published by

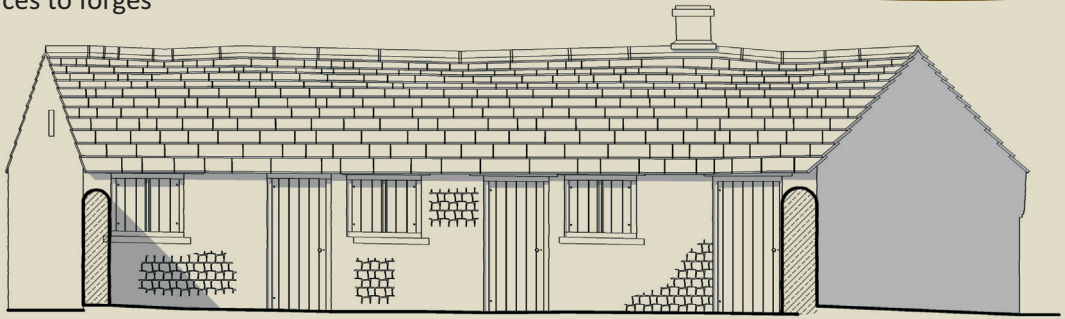
South Yorkshire Trades Historical Trust

Prepared and designed by

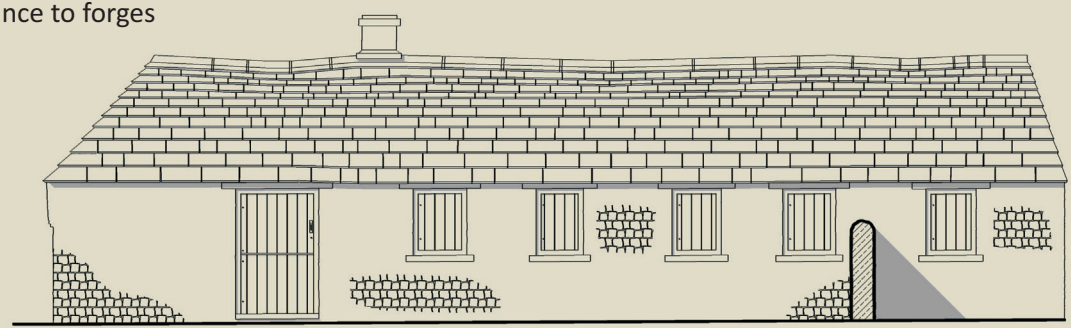
James Thomson and Karen Nichols

Wessex Archaeology

South West elevation
Original 3 entrances to forges



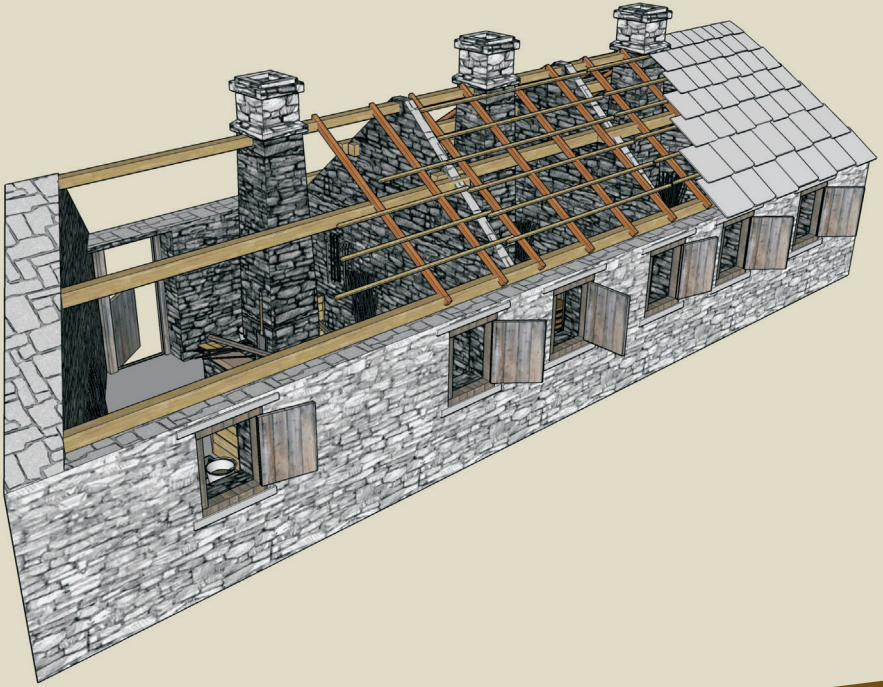
North East elevation
Current entrance to forges

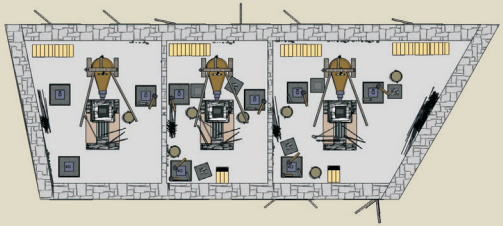


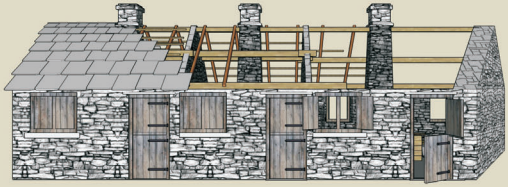
Entrance
New doorway

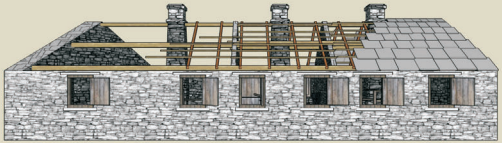
Elevations: Andrew Shepherd,
Eldon Minns & Co. Ltd. 2010

ISBN 978-0-9556644-2-7









Supported in partnership by:

defra

Department for Environment Food and Rural Affairs

LEADER

The European Agricultural Fund for Rural Development: Europe Investing in Rural Areas

DISCOVER EASTPEAK

AIA

Prepared & designed by

Wessex Archaeology