

INDUSTRIAL ARCHAEOLOGY NEWS

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COVER PICTURE

Vanishing species: dockside cranes at Liverpool Docks in 1975, one of the subjects of this year's Ironbridge Weekend (see page 4)

Photo: Peter Stanier

Llythyrdy Smithy, Pentrebach, Powys

In October 2001 a contracted archaeological desk-top study, photographic recording and building survey was undertaken on the site of a former village smithy which to be converted for domestic use. Cartographic evidence showed a building occupying the site of the smithy in 1819, which is shown clearly as a three-compartment building in 1905. The dry stone walled structure suggests a possible eighteenth century origin. The smithy is a rare example of small rural industry and includes a forge hearth that has been left untouched since it went out of use in the latter half of the twentieth century.

Pat Frost

The smithy is located in the centre of the small settlement of Pentrebach (SN 90883303) about 4.3km north of Sennybridge. The settlement developed on the confluence of Nant yr Eithrin and the Afon Cilieni, which flow south to meet the River Usk, surrounded by agricultural and pastoral lands and small woods. The smithy occupies a roadside position south of a converted corn mill and north of an inn which has undergone several name changes since it was constructed as The Railway Tavern in the 1860s as a hostelry for railway navvies. The inn was primarily the home of a shoemaker, and renamed The Shoemaker's Arms (Tafarn y Crydd).

Corn mills, smithies and inns were an essential part of every rural community. The traditional method of heating iron on a hearth blown by bellows has changed little since medieval times and many post-medieval smithy structures overlie their medieval predecessors. While the size of smithies may have increased, the basic tools such as hammer, tongs, bellows and anvil remain the same. There was a general increase in ironworking during the eighteenth century and the production centres of Merthyr Tydfil and Blaenavon presumably supplied blacksmiths north of the county with bars of iron.

The 1819 Ordnance Survey drawing by Robert Dawson records the village and despite the map's small scale, the corn mill is clearly seen and further south a rectangular building fronts the west side of the road with a second building west of it. The roadside building is on the site of the present smithy and the building to the west appears to be the part stone-walled structure that has been converted into a garage on the property now named Llythydy. The buildings are recorded consistently on subsequent OS maps. On the 2nd edition 25-inch OS map of 1905 the current smithy is shown as the northernmost compartment of a terrace of three, with an addition on the south east side and a small square structure on its west boundary, presumably a privvie.

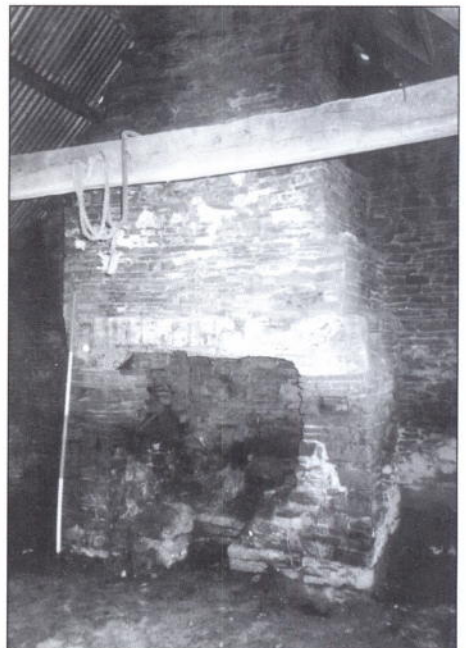
The village of Pentre-bach is excluded from tithes as recorded on the 1839 Tithe Map and apportionment for the Parish of Llandilo-Fan. Examination of maps and papers deposited as part of Aberllech Estate and lands that were part

of the D.T.M. Jones estate in the area of Pentrebach have so far failed to link the smithy with either estate. Aberllech manor house was built in 1780 and the date appears to tie in with the corn mill and smithy buildings.

A thriving community appears to have developed at Pentrebach during the mid-nineteenth century. During the 1860s the Neath & Brecon Railway Co. began to construct a line north and south of Pentrebach, but it was never completed and the abandoned earthworks can still be seen. The Railway Inn was built and became a traditional meeting place for the local hunt. The Squire at Aberllech had his own pack of hounds and there was a hunt at Sennybridge in the early twentieth century which also met at the inn. The single door in the Pentrebach smithy infers that shoeing of horses took place on the roadside forecourt area set aside for this use.

The smithy forms a single storey building measuring 6.9m by 6m wide externally, fronting the west side of the road. The north and south gables rise to c5m at the apex and the walls are 0.6m thick on all sides. The building is constructed of irregularly coursed and unmortared local linear-bedded sandstone. The fabric shows signs of past lime wash and more recent patches of concrete rendered repair work. The east and west long walls stand c2m above the external ground level, but the floor level inside is 0.4m lower because the road has been raised.

The current roof is covered with corrugated iron sheets, but a former stone tiled roof is suggested by finds on the site of two sandstone roof tiles with nail holes. The roof is supported by a central through purlin tie beam truss with collar beam constructed in oak. Joiner's marks in the form of three parallel lines were located on the



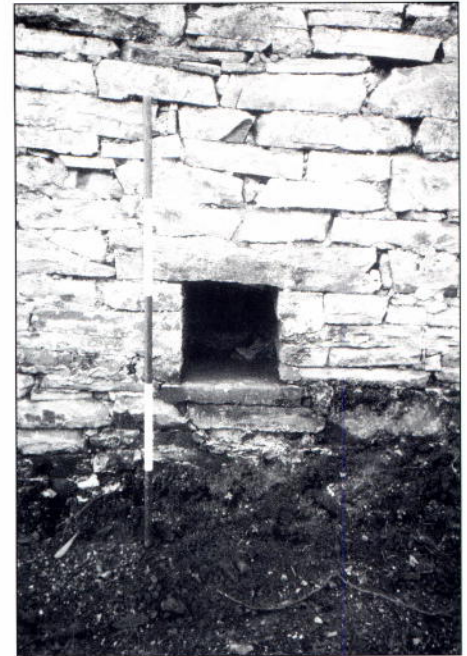
Blacksmith's forge adjoining the north gable. The tie beam can be seen occupying a central position. The dark patch on the floor to the right of the forge may indicate the location of a hoist

Photo: Pat Frost



The roadside smithy, viewed from the north-east, beneath a corrugated roof

Photo: Pat Frost



The opening in the north gable to allow long lengths of ironwork to be placed in the hearth. Scale: 1m

Photo: Pat Frost



The cobbled floor. Scale: 1m

Photo: Pat Frost

west side of the collar beam and adjoining rafter. Pairs of wooden pegs affix the collar beam to the rafter and secure the head of the 'A'-frame. The roof lies on three purlins supporting rafters, which remain on the east side only.

The building is of simple construction, similar to local smithies that existed at Defynnog and Llandeilo-Fan, and appears to have fallen into disrepair since it went out of use in the 1950s. The removal of the south side of the structure sometime after 1948 has weakened the south corners and the stonework has fractured on both sides. The lower courses on the east side of the south gable show evidence of keyed-in stonework, the remains of the rectangular terrace of three recorded since 1819. The irregular stonework on the corresponding west side also suggested some repair work.

The forge hearth is built against the internal north gable wall and an opening 0.3m square at the base of the wall presumably gave access to the hearth for long lengths of ironwork. The hearth and stepped chimney rise to c5m above the floor level. The open hearth c1.4m wide is located below an oak lintel measuring up to 2.47m long and 0.42 high.

The hearth appears to have used two bellows to create the air draught essential to bring the fire up to sufficient temperature for ironworking. The openings for blast pipes from the bellows can be seen in the east and west sides of the hearth. The internal east wall includes a recess 1.1m high and 1m wide located opposite the opening in the chimney east wall, presumably to accommodate bellows. At a similar location on the internal west wall an amorphous-shaped area of cement

rendered patchwork may be the filled-in recess for a second bellows. The location of the hearth and the small windows comply with the fact that traditionally blacksmiths could test the heat of the fire by the colour of the glow, made easier by lack of direct sunlight.

Clearance of soil and ash revealed an irregular cobblestone surface which appears to extend over the entire floor area. The floor is composed of waterworn smooth cobbles with intermittent square and rectangular stones. In front of the hearth on the east side an irregular shaped filled in hole may indicate the location of a hoist. There was no evidence to suggest the site of the anvil or the water trough for cooling metals and tools.

The south internal gable wall includes three recesses c18cm x 12cm that may have secured joists for a possible loft or storage area. The recesses are level with each other but not with the tie beam. There is no evidence to suggest how a floor was secured or how far it extended into the smithy. The location of the recesses and the aperture 0.5 x 0.12m below a timber lintel may indicate a former staircase to the loft above.

Since the building fell out of use as a smithy, it has been used for coal and general storage. The building was subsequently cleared out and no artefacts relating to the smithy remained. The photographic record and building survey have ensured that a record has been made of the smithy prior to its change of use. The owners of the property intend to retain the stone chimney and hearth following necessary consolidation work and to retain the character of the smithy as far as is possible within the constraints of modern planning regulations.