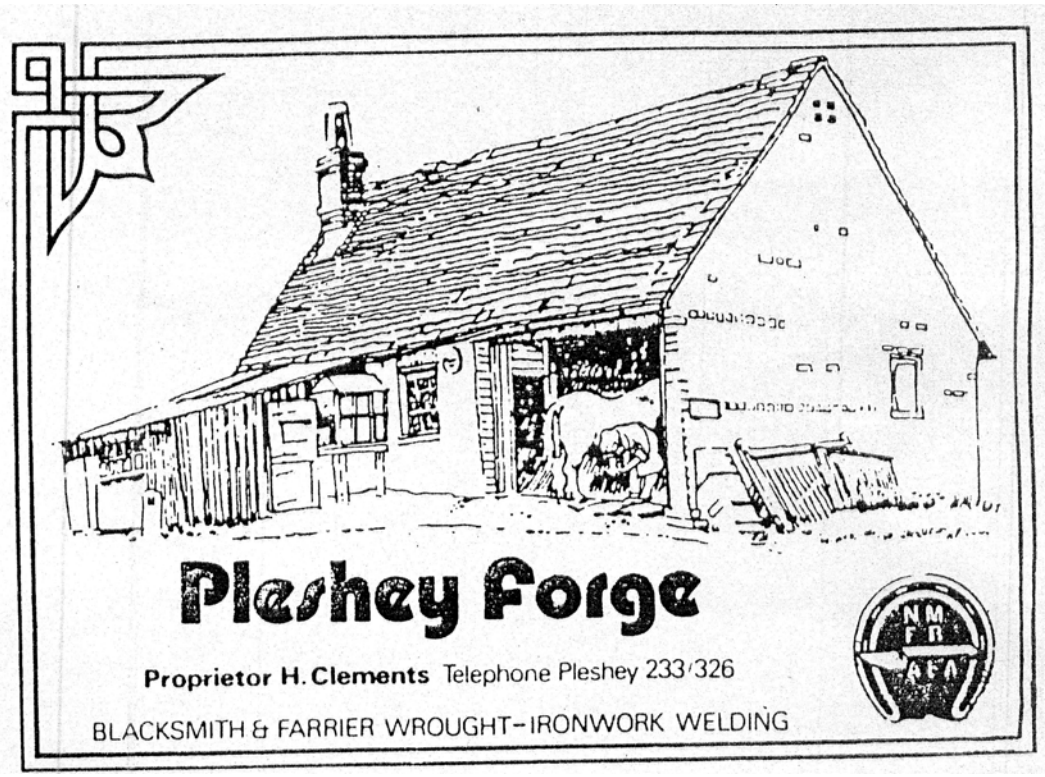
THE OLD FORGE, BACK LANE
PLESHEY
ESSEX

HISTORIC BUILDING RECORDING AND ARCHAEOLOGICAL MONITORING



Essex County Council

Field Archaeology Unit

November 2012

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HISTORIC BUILDING RECORDING AND ARCHAEOLOGICAL MONITORING

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	EC Historic Environment team
	Essex Historic Environment Record

As part of our desire to provide a quality service, we would welcome any comments you may have on the content or the presentation of this report.

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THE OLD FORGE, BACK LANE
PLESHEY
ESSEX

HISTORIC BUILDING RECORDING AND ARCHAEOLOGICAL MONITORING

Clients: Mr Arthur Warren and Ms Vivien Morris
FAU Project No.: 2441
NGR: TL 5664 2146
Planning Application: BDC/10/01924
OASIS No.: 138076
Dates of Fieldwork: July 2011 & June 2012

1.0 INTRODUCTION

A programme of historic building recording and archaeological monitoring was undertaken by Essex County Council Field Archaeology Unit (ECC FAU) on an un-listed early 19th century forge in Back Lane, Pleshey prior to residential conversion. The work was commissioned by the architect, Mr Paul Sutton, on behalf of the owners and carried out in accordance with a brief issued by the Historic Environment Management team of Essex County Council (ECC HEM), who also monitored the work together with English Heritage.

Copies of the report will be supplied to the ECC Historic Environment (ECC HE) team and the Essex Historic Environment Record (EHER) at County Hall, Chelmsford. The archive will be stored with Chelmsford Museum. An OASIS online record has been created at *http://ads.ahds.ac.uk/oasis/index.cfm*.

The forge was built in the early 19th century and was run by the Hasler family for much of its lifetime until relocating to nearby Ford End in 2007 *(http://www.plesheyforgeltd.co.uk/about-us.html).* In the 20th century the building was subject to two large-scale rebuilding phases. Its location along Back Lane means the site has significant archaeological interest lying along the northern bailey of Pleshey castle, represented by Back Lane, and on the edge of the

medieval town, the area of which is a nationally-designated heritage asset 10002191 (formerly Scheduled Ancient Monument EX22.

2.0 BACKGROUND

2.1 Site location and description

The Old Forge is located in the centre of Pleshey on the junction of Vicarage Road and Back Lane at TL 5664 2146 (fig. 1).

A forge is built from red brick with a tile roof. Parts of the present structure date to the 1920s and 1960s, including a corrugated steel office and storeroom at the front and a small brick toilet at the back that will not be retained in the conversion. There are concrete hardstandings to front and rear.

2.2 Planning background

A planning application for conversion of the forge to residential use and the erection of a new extension at the back was submitted to Chelmsford City Council (CCC) as planning reference 10/01924/FUL. Mindful of the impact of conversion on the historic integrity of the building and the location of the new extension within the scheduled area of the northern bailey, ECC HEM advised CCC that a full archaeological condition for building recording and archaeological monitoring should be attached to the planning consent, based on advice given in Planning Policy Statement 5: Planning for the Historic Environment (CLG 2010), which has now been superseded by the National Planning Policy Framework.

Industrial sites and monuments have been identified as an understudied component of the historic landscape that face a high rate of loss through redundancy, conversion, and demolition in *Research and Archaeology: A framework for the Eastern Counties 2: research agenda and strategy (East Anglian Archaeology occasional paper 8*, 2000).

2.3 Archaeological and historical background

Cartographic and documentary research was undertaken at the Essex Record Office (ERO), Chelmsford, to understand the origins and development of the forge as much as possible. Information was also gathered from one of the clients, Mr Arthur Warren, and Mr John Mitson, who managed the building work. Historic map extracts included in the report have been enlarged to provide greater clarity and pertinent archaeological information is taken from the brief (HEM 2011) with EHER references.

The proposed extension lies in an area of significant archaeological potential within the scheduled area for Pleshey castle and town enclosure (SM EX22, EHER 1126). The scheduled monument is a good example of a motte and bailey type of earthwork, built in the 12th century with an unusually well-preserved town enclosure around the present-day village (fig. 1). It is believed that Back Lane represents the former north bailey ditch. Several medieval pits and ditches have been uncovered along Back lane at the Village Hall (HER 16218) which suggest it follows the line of the ditch, and Medieval features have been uncovered adjacent to the Forge. Further to the south along Back Lane, at Hill House, probable foundations for the medieval church of St. Mary's were discovered (HER 16967).

The forge is believed to have been constructed in 1815, since this date is inscribed on the brickwork above the former front doorway, along with the initials 'I R' and 'G x H', the latter being George Hasler, who founded the forge (Arthur Warren pers. comm.). A building close-by to the rear of the forge appears on the Pleshey tithe map of 1848 and was perhaps the blacksmith's cottage (fig. 2), which is no longer standing. The accompanying tithe award describes the plot as a tenement owned by James Dowsett and occupied simply by 'Hasler, widow'; probably the widow of George.

Whites Trades Directories from 1848 to 1874 indicate the blacksmith to be William Hasler, whose smithy is shown on the 1875 first edition Ordnance Survey map, opposite Bulls corner (fig, 3). The layout is still the same as that shown on the earlier tithe map.

In the early 20th century (pre-1921 fig. 4), an office/stores extension was built on the south side of the smithy. The present structure (fig. 1) is clad in corrugated steel but the original building was more likely clad in weatherboarding.

In 1928, the forge was partly rebuilt, the date for which appears on the south-eastern gable in hand-forged numerals. The outline of the catslide roof, perhaps rebuilt to its original form, is still evident against the later brickwork.

Pleshey forge is mentioned in an article from the John Bull magazine from 1949 entitled 'Science calls on the Smithy', which discusses how modern blacksmiths had diversified into welding and maintaining farm vehicles and machinery (ERO A12117). At the time the forge was being run by two brothers, Len and George Hasler, great grandsons of the forge's founder. The article records how electric cables were being hung to run electric motors powering a lathe, drilling machine and a blower for the forge.

After the Hasler brothers retired in the 1960s, the forge was taken on by Harold Clements, whose advertisement is featured on the front of the report (ERO A12117). Towards the start of his occupancy, some major improvements were undertaken to the structure by raising the gable walls to increase the height of the building and replacing the roof (John Mitson pers. comm.). The forge flue was probably rebuilt at the same time and it is likely the toilet was around this time, perhaps coinciding with the loss of the old blacksmith's cottage at the rear of the plot.

When Harold Clements retired in 2007 the old forge closed down and the business was handed down to his son who started a new firm at Ford End, near Chelmsford, as Pleshey Forge Ltd *(http://www.plesheyforgeltd.co.uk/about-us.html).* When the new owners purchased it, the old forge was empty apart from the forge structure itself. Since then it has been used as a storage facility, prior to conversion works commencing in 2012.

2.4 Historic smithys

Forges and smithys had an important role in the 19th century rural economy and the skills were passed down in the family from father to son. As a farrier to horses and to make and repair tools for the villagers and nearby farms, they were a necessary part of village life.

Traditionally the forge was situated in the village centre, quite often at a crossroads providing easy access. Chestnut trees are associated with smithies for the shade they would provide on hot summer days. A forecourt was needed for waiting horses and vehicles, supplied with a drinking trough and tethering loops. A 6-foot diameter wheel-plate was embedded in the ground often at the rear of the building to hold wooden wheels that were to be shod with iron tyres.

The forge itself was a raised, usually brick-built, hearth with a canopy and chimney above and bellows connected to the fire by a blast pipe or 'tuyere.' An open-topped tank was located behind the hearth to cool the bellows (Bailey 1977).

Other equipment and tools were sited close to the forge to use while the iron was still hot. The most obvious is the anvil, located close to the forge, floor mandrel (for hooped articles), swage blocks (for shaping iron) and various hammers, tongs and other items made either by the smith himself or his forebears, all kept close to hand around the forge. Raw materials, tools, etc hung off nails on the surrounding walls.

3.0 OBJECTIVES

The purpose of the historic building record was, as outlined in the brief, to provide a detailed record of the forge in its present state prior to conversion, known as 'preservation by record'. As part of the work, the survey was required to address the following: materials and method of construction, dating and phasing, function and internal layout and original fixtures and fittings.

Archaeological monitoring works were directed to provide evidence for the earlier origins and development of the site, particularly medieval remains within the scheduled area or those associated with the 19th century forge.

4.0 DESCRIPTION OF FIELDWORK

The structure was recorded using drawings (floor plans, sections and elevations) supplied by the architect, Paul Sutton. A block plan was produced to show the location of the forge within the historic townscape, the proposed extension and the area covered by the monitoring works (fig.1). A series of photographs (digital and 35mm black & white print) were taken to record the building externally and internally. Specific shots were taken of any areas of important architectural detail, fixtures or fittings. A representative selection of photographs is reproduced at the back of the report as plates 1-16. The remainder can be found in the archive.

Monitoring visits observed the excavation of a new waste water pipe trench after the rear hardstanding had been removed. No monitoring works were carried out on the extension foundations, which were designed to cause minimal impact by being carried on shallow concrete corner piers (HEM 2011).

5.0 BUILDING DESCRIPTIONS

The forge is an oblong three-bayed structure standing on a north-east to south-west alignment. The walls are constructed in 14-inch brickwork representing built phases dated to the 19th and 20th centuries, indicated by changes in brick bond and character. Both reused and new bricks are used in the later builds. The roof, which was rebuilt in the 1960s, is

pitched at 45º and clad in pegtiles; those at the front are reclaimed handmade tiles while those at the back are machine-manufactured.

The four main building phases are outlined below, which are illustrated in the floor plan (fig. 6):-

- Phase 1: original 1815 forge. Flemish-bonded soft red bricks in lime mortar, perhaps with a catslide roof to the rear.
- Phase 2: addition of lightweight timber-framed early 20th century office/stores on south side and rebuilding of connecting wall around the front doorway.
- Phase 3: 1928 rebuild of east wall in English bond using reused red bricks and new Fletton bricks bonded in cement.
- Phase 4: modern refurbishment (1960s). Overall height increased by c.1.00m to allowing extra room at the back. Stretcher-bonded red bricks with internal Flettons and brick piers.

5.1 External description

South-west elevation

The front elevation is dominated by two 20th century features- the corrugated steel office and heavy steel doors (plates 1 and 2). In the centre of the two features is a well-preserved section of original walling, containing an early wooden hatch. Original bricks are laid in Flemish bond in a lime mortar and are characteristically soft reds with frequent flint inclusions and dimensions of c.220 x 105 x 70mm. The dimensions are unusual, being quite deep and not very wide, but the high level of inclusions suggests an 18th or early 19th century brick (Ryan 1996).

The central hatch is an early feature built from timber planks joined and operated by pintel hinges, the kind of fittings that would be made in a village forge. A multi-pane wooden window was inserted behind it, probably during the 1928 rebuild.

Original handmade pegtiles cover the roof on this side, giving a good effect. The western part of the roof and much of the office roof is covered in ivy, which also obscures the chimney.

The office/storeroom extension at the front of the forge was built in the early 20th century, pre-dating the 1928 re-build of the forge (fig. 4). Whether the current building and that shown on the historic map are the same is unclear, but the dimensions would argue that it is, though its existing corrugated steel walls and roof are probably a modern replacement for more traditional weatherboarding. The office has its own door (ledged braced and battened with

modern T-hinges and a letterbox) on the north-east elevation along with a wooden multi-paned window and a similar, second window on the south-east elevation, again slightly obscured by ivy (plate 2).

South-east elevation

This elevation faces onto Vicarage Road and clearly represents the evolution of the structure in the 20th century for it shows the two later phases together and provides a firm date for the 1920s rebuild of this gable.

The extent of the 1928 build is evident from the slightly darker-coloured brickwork that forms the catslide roof (plate 3). It also shows the raising of the rear wall from 1.5m to 2.4m during the 1960s phase. English-bonded brickwork forms the bulk of the construction on this side, laid in two distinct bands. The first comprises the original bottom thirteen courses in soft reds supported by low 'tumbling in' buttresses. A third buttress on the north corner was probably lost when the north-east wall was rebuilt. Above this band begins the 1928 build, where the header courses are substituted with Fletton bricks (plate 3), which were commonly used throughout much of the 20th century. From the eaves upwards the brick changes to stretcher bonded red bricks, only one brick deep. At the apex of the 1928 roof is a 'date plaque' made from hand-forged numbers (plate 4). The existing phase 4 roof is built over the 1920s roof, adding another 1m to the overall height of the building and elevating the height of the rear wall, perhaps to create a larger entrance at the back. It is characterised by stretcher-bonded red brickwork and at the top is a brick vent (plate 4).

The window close to the north corner is a 1920s feature that has been sealed-off by a steel sheet (plate 3).

North-east elevation

The rear elevation (plate 5) is entirely of phase 4 construction and all the main features are modern, including the roof tiles. The central bay is occupied with three sheets of corrugated steel sheeting which signifies the doorway though there is no frame left or any other remains. To the right of this is a multi-pane metal-framed window situated beside the toilet extension.

The outside toilet (plate 3) is a modern structure at the back of the forge, probably post-dating the phase 4 construction phase since it is not tied-in to the main structure. The likelihood is that it was built when the blacksmith's cottage was demolished and its brickwork, a mixture of English and stretcher bond, and similar iron-framed window and c.1960s style utility door suggest it is broadly contemporary with the phase 4 modern refurbishment. It has

a shallow-pitch pantile roof. The structure was locked during the survey and therefore not entered.

North-west elevation

Only part of this elevation was observed since it is located in the neighbouring back garden. The gable is the same build as the opposing one, displaying the outline of a catslide roof, and there is a modern window close to the apex (plate 6).

5.2 Internal description

The interior is described in two sections; firstly a general description followed by a description of the forge structure itself and the modern office/storeroom extension.

General description

The interior (plates 7 & 8) is open-planned and divided into three bays by timber trusses laid on brick piers. One of the trusses is built onto a steel joist (RSJ in fig. 6). The former cart entrance at the front is now taken up with a large steel door (plate 7), but posts to the earlier frame survive. The smaller door into the office leading directly to the forge has smithy items such as a small iron hammer and horseshoe attached to the lintel over the threshold as good luck charms (plate 9). The forge itself (plate 8) stands nearby and contains the cinders from its last use (fig. 6). The wall behind the forge is broadly original up to eaves level, above which is the rebuilt 1928 gable and the 1960s addition (plate 8).

Around the western corner are nails and iron rods protruding from the wall for implements, etc (fig. 6). The north-west wall is built from Fletton bricks on this side which are tied into the brick piers that support the roof trusses. The opening in the central bay may be assumed to be a former rear cart doorway but there are no fittings associated with it and the opening is now blocked with corrugated iron sheeting.

In the north-east bay is a raised concrete ramp leading from the steel doors. The soot-covered end wall clearly shows the outline of the 1928 forge and four old iron cart tyres have been left up in the gable, below the brick vent (plate 10).

The roof frame dates entirely to the 1960s, with purlins trenched into square queen post trusses connected by iron L-shaped brackets (plate 10). It is built from machine-sawn timbers and has been maintained and felted.

The forge

The forge (plate 11) stands against the west wall next to the central brick pier, slightly offset from the centre. It occupies a total area of 1.25 by 2.30m (fig. 6) and is constructed in the same bricks as the original building, but laid in a mix of Flemish and stretcher-bond rather than pure Flemish bond. The flue has been rebuilt in Fletton bricks.

At the front, the forge has low dwarf walls to either side, and a small recess into the square brick chamber, presumably for better access around the hearth. The hearth is raised and surrounded by a thin cement bed with an iron back-plate and steel smoke visor over the top, which also encouraged up-draught. Either side are apertures in the brick work, the largest of which, on the north face, is likely to have carried the bellows or, latterly, the blower pipe from the electric motor installed in 1949 (see section 2.3). The other aperture may have held a damper to regulate airflow. Underneath the hearth are modern cast iron mountings and an iron tuyere that connected to the blower pipe and (plate 12). A square plate above the aperture has been removed.

Office/stores

Situated inside the office is a rebuilt section of wall containing a doorway between the office and forge (fig. 6)? The join between this and the early wall is clearly seen, since the brickwork around the doorway is in English rather than Flemish bond (plate 13), more typical of the 1928 build. Whether or not there was a doorway here originally is not known, but it is interesting to see the inscribed bricks mentioned in section 2.3 above the rebuilt brick lintel (plate 14). Perhaps the bricks were re-sited here during the rebuild. Inside is a partitioned office, washing area and storage space (plate 15).

6.0 ARCHAEOLOGICAL MONITORING

The concrete yard area at the rear was removed in the vicinity of the new extension exposing a rough topsoil mixed with brick rubble.

A waste water pipe trench was cut from the north corner of the forge into the existing system that runs parallel to the back wall of the forge, within the area of the extension (fig. 6). The pipe trench was up to 1m wide and 1.2m deep, revealing a 0.3m depth of cindery topsoil overlying a 0.46m thick layer of undisturbed brown chalky clay subsoil and natural chalky boulder clay beginning 0.76m below ground level (plate 16). No archaeological deposits or features were observed and no finds were collected.

No opportunity was afforded to observe the groundworks.

6.0 DISCUSSION AND CONCLUSION

The Old Forge at Pleshey provides a good example of a local rural industry whose working life lasted almost two hundred years, from the early 19th- up until the early 21st century. Until the 1960s the building was in the ownership of the Hasler family and passed down through the generations.

The forge was well-located on the junction between Back Lane and Vicarage Road close to the village centre to take advantage of both incoming business and that from the village itself, with perhaps the blacksmith's cottage located to the rear. Parts of the original walls of the forge survive in the walls facing Back Lane to the south-east and the neighbouring cottage to the south-west, including historic features such as the cart doorway at the front, a wooden shutter and the forge itself (apart from the flue) though the changes between brick bond suggests some rebuilding may have occurred, which would not be unusual considering the extent of its use. The original structure of the roof and its outline is unclear since the gables were rebuilt in 1928, the date for which is commemorated on the south-east gable. However it is likely the rebuild mimicked the original catslide form. The reason for this rebuild is not known and there is no historic record of a fire occurring at this time, which would be the most likely reason.

A large part of the existing structure belongs to a later building phase from the 1960s when the roof was heightened, presumably to allow for a larger doorway on the back alongside the main doorway at the front. Along with the increase in height, the roof structure was re-built and the toilet added. By this time (after 1949) electric drills and lathes had been installed, which were removed from the premises before it was sold.

Forges such as the one at Pleshey were important in an age when horse power, both on the road and on the farm, was relied upon. Every village had a forge where horses were shoed, farm machinery repaired and carts serviced and repaired for the local farmers and tradesmen. As horse use decreased, forges became used to working on motor vehicles, carrying out welding and engineering tasks and employing more machinery, though still performing their traditional role. In recent years several smaller forges have closed down, no longer sustained by local demand, and mobile farriers have set themselves up to trade

further afield. In the light of this, it is good to know that the business continues to trade as Pleshey Forge Ltd from premises at nearby Ford End.

Little is known about the development of the site prior to the establishment of the forge but its location along Back Lane signifies archaeological interest as part of the Scheduled Monument. Archaeological monitoring showed undisturbed subsoil at the back of the forge and no finds or archaeological deposits were noted, suggesting that in the medieval period it either lay within the hinterland between the edge of the medieval town, represented by Back Lane and the northern bailey of Pleshey castle and the town defences to the north, or the area was too small to encounter any remains that may be present.

ACKNOWLEDGEMENTS

Thanks are due to the architect, Paul Sutton of PS Planning and Design, for commissioning the works on behalf of the clients and for supplying drawings used in the survey and this report. Thanks also to Arthur Warren and John Mitson for their help and information. The assistance of staff at the Essex Records Office is also acknowledged. Fieldwork, recording and photography were undertaken by the author. Illustrations were prepared by the author and produced by Andrew Lewsey. The project was managed by Adrian Scruby and monitored by Richard Havis and Alison Bennett of the ECC HE team on behalf of the LPA.

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ECC HEM	2011	*Brief for Historic Building Recording & Monitoring at the Forge, Pleshey (*ECC HEM unpub.)
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Appendix 1: Contents of Archive

Site name: The Old Forge, Back Lane, Pleshey

Project no.: 2441

Index to the Archive:

Document wallet containing:

1. Introduction

1.1 Client/archive report

1.2 Unbound version of report

1.3 CD containing digital photographs architect's drawings & copy of report, pdf-formatted

2. Site Archive

2.1 Photographic record (digital 7 monochrome prints)

2.2 Photographic register

2.3 Site notes and annotated architect drawings

Appendix 2: EHER Summary Sheet

Site Name/Address: The Old Forge, Back Lane,	
Parish: Pleshey	***District:*** Chelmsford
NGR: TL 5664 2146	***Site code:*** None
Type of Work: Building recording	***Site Director/Team:*** Andy Letch ECC FAU
Date of Work: July 2011 & June 2012	***Size of Area Investigated:*** N/A
Curating Museum: Chelmsford	***Funding Source:*** Client
Further Work Anticipated? No	***Related HER Nos.*** SM 22, EHER 1126
Final Report: Summary in EAH	
Periods Represented: Early 19th & 20th centuries	

SUMMARY OF FIELDWORK RESULTS:

Building recording and archaeological monitoring was carried out at the Old Forge at Pleshey prior to its conversion to residential usage.

The forge was built in the early 19th century and was run by the Hasler family for much of its lifetime. An inscribed brick carries the date 1815 and initials GH and IP. It was built as a small single storeyed structure of brick and red tile (possibly catslide) roof and a cart door at the front. Map evidence shows a possible blacksmith's cottage at the back, which is no longer standing. In the early 20th century (pre-1921) an outbuilding was constructed against the front for offices/stores and in 1928 the two gable ends were rebuilt. In the 1960s the building was heightened.

The forge closed in 2007 and relocated to nearby Ford End. At which point the interiors were stripped-out apart from the forge itself, which had been refitted in the late 1940s with modern fixtures for an electric blower.

Archaeological monitoring in the area of an extension at the back of the forge showed undisturbed ground and no finds or archaeological deposits, suggesting that in the medieval period it lay within the hinterland between the edge of the medieval town and the town defences to the north.

Previous Summaries/Reports: none	
Author of Summary: Andy Letch	***Date of Summary:*** 22nd November 2012

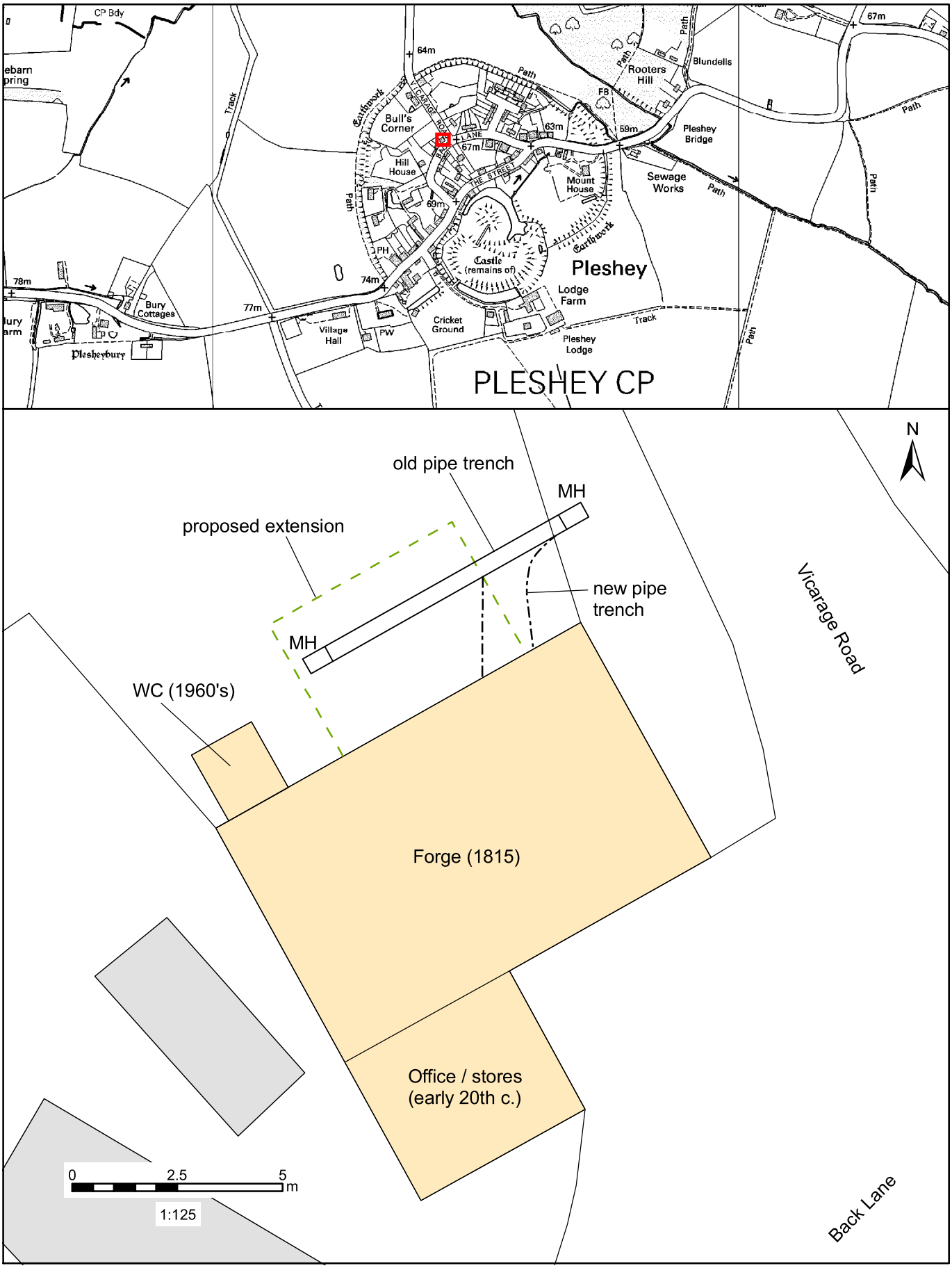

Fig.1. Location, block plan and area of archaeological monitoring

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Fig. 2 Pleshey tithe map, 1848 (D/CT 275)

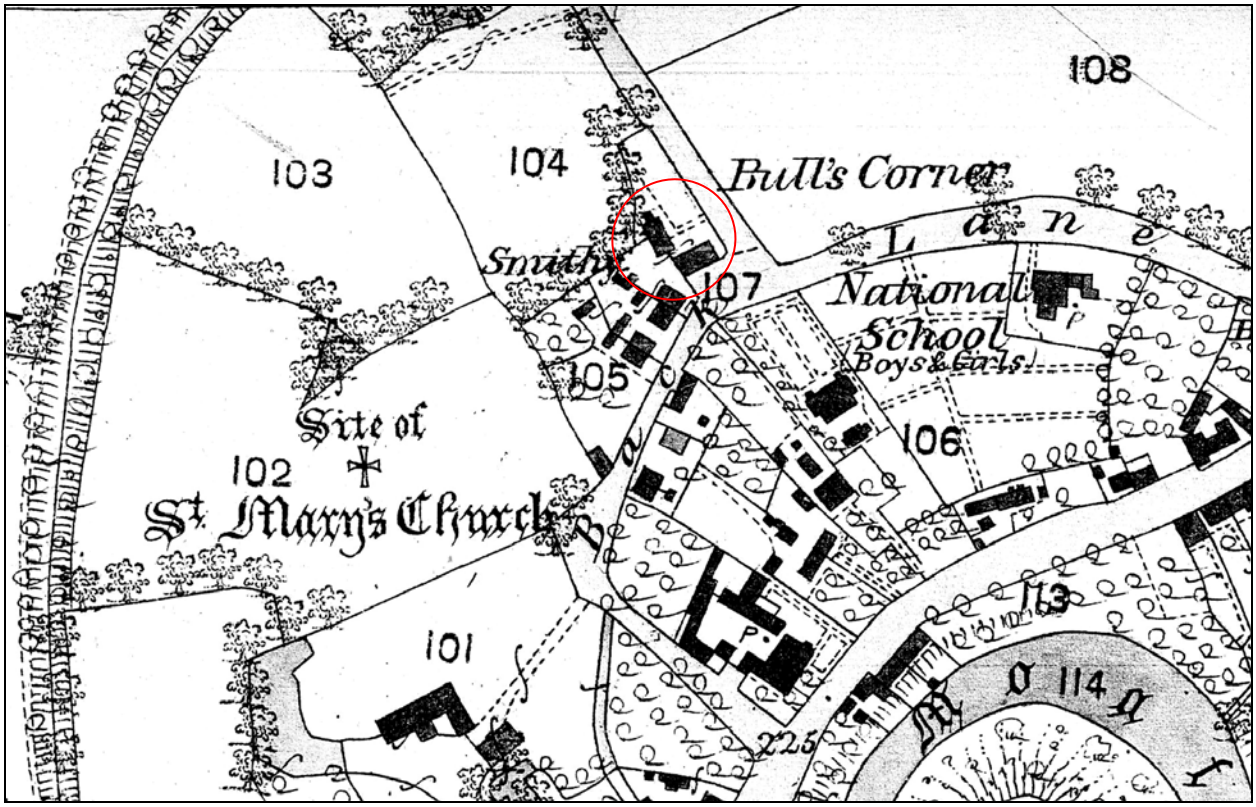

Fig. 3 First edition 1875 25” OS map (sheet 43/2)

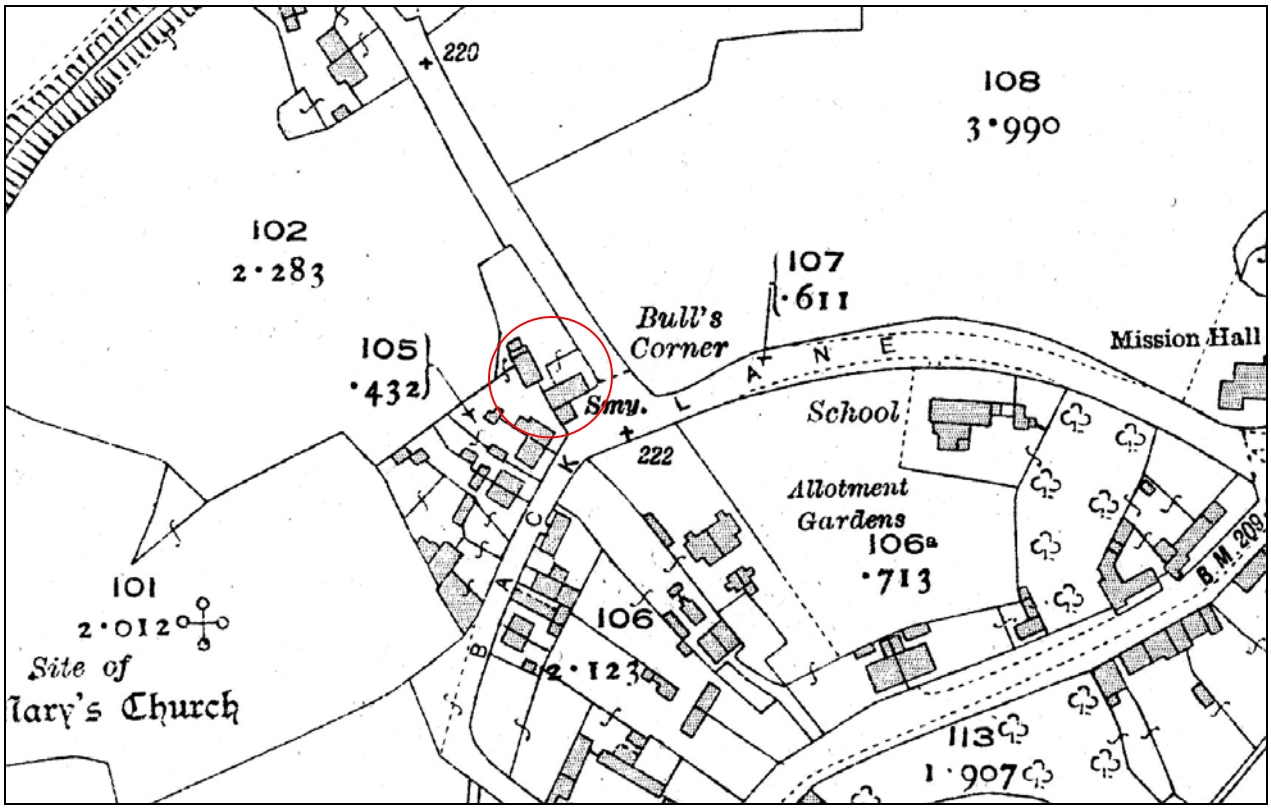

Fig. 4 New Series 1921 25" OS map (sheet 44/9)

Fig. 5 Postcard of Pleshey Forge from after 1928

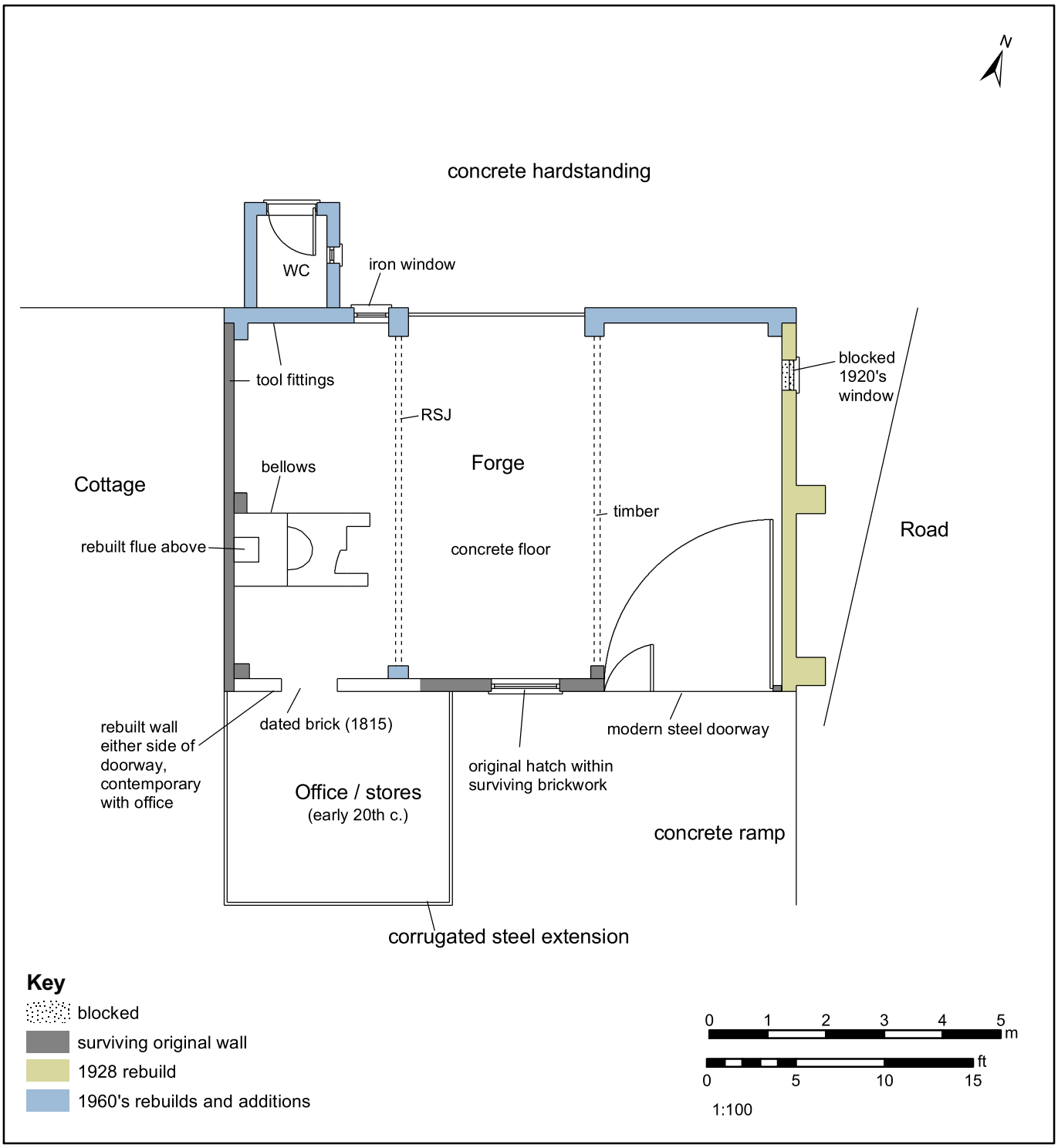

Fig.6. Floor plan

Plate 1 Forge viewed to north

Plate 2 Forge viewed to north-west

Plate 3 Forge viewed to south-west

Plate 4 Outline of earlier roofline on north-east elevation

Plate 5 North-west elevation

Plate 6 Forge viewed to east from behind neighbouring property

Plate 7 Interior of forge viewed to east

Plate 8 Interior of forge viewed to south-west

Plate 9 Doorway into modern office/storeroom

Plate 10 Outline of earlier forge on north-east wall

Plate 11 Forge viewed to south

Plate 12 Cast iron tuyere and mountings

Plate 13 Blocked walling around doorway from office into forge

Plate 14 ‘I P’ and G H (George Hasler) initials over the doorway, dated 1815

Plate 15 Office/storeroom interior viewed to east

Plate 16 Typical section through pipe trench, viewed to east