

**BURY FARM, BURY LANE, EPPING UPLAND
ESSEX**

HISTORIC BUILDING RECORDING



Essex County Council

Field Archaeology Unit

March 2006

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BURY FARM, BURY LANE, EPPING UPLAND

ESSEX

HISTORIC BUILDING RECORDING

Client: Mrs M. Sanchez

FAU Project No.: 1499

NGR: TL 4480 0322

Site Code: EPBF 05

Planning Application: EPF/1420/00 & EPF/1421/00

Dates of Fieldwork: 9th & 11th September 2005

1.0 INTRODUCTION

Essex County Council Field Archaeology Unit (ECC FAU) undertook a programme of building recording to a barn and outbuildings at Bury Farm, in advance of conversion work to single residential usage. The work was funded by the owner, Mrs M. Sanchez, and carried out in accordance with a brief issued by the Historic Environment Management team of Essex County Council (Clarke 2005), who also monitored the work.

Copies of the report will be supplied to the client, ECC HEM and the Essex Historic Environment Record (EHER, former SMR) at County Hall, Chelmsford. Copies of the archive will be deposited with ECC HEM and the NMR.

2.0 BACKGROUND

2.1 Site location and description (fig.1)

Bury Farm is situated in picturesque open countryside to the north-west of Epping town, at the junction of Bury Lane and Lindsey Street (B181 and B182). The farm buildings form a south-east-facing U-shaped group partly enclosing a central courtyard. Access is provided from a track off Bury Lane to the north-west. A second track runs roughly parallel and leads to the 15th-century farmhouse to the south of the farm group (fig. 1).

The buildings awaiting conversion are mainly used as stabling by the former owner of the farm, who lives in a converted stables and range in a second yard to the south-west.

The surviving historic farm group comprises sturdy late 18th- or early 19th-century ranges facing the north-east and north-west and a listed 17th-century aisled barn (EHER 33506/LBS 117604), incorporated into the later courtyard plan form (fig. 1. Outside the yard is a late 19th-century cartlodge, attached to the front range). All the structures were built timber-framed, although large areas of framing have been rebuilt in modern concrete block upon conversion to stables. The barn remains unaffected by modern alterations and has a high level of reused timbers in its construction. More recent 20th-century structures, described briefly in the report, are a pre-fabricated cow shed and circular plan horse menage that replaced a 19th-century building range.

2.2 Planning background

Epping Forest District Council received planning/listed buildings applications (EPF/1420/00 & EPF/1421/00) for change of use and conversion of the barn and stables to form a single residential dwelling. Mindful of the possible effects on the historic integrity of the structures and the archaeological importance of the site, a full archaeological condition was attached to the planning permission, based on advice given in Planning Policy Guidance Note 16: Archaeology and Planning (DOE 1990).

2.3 Historic background

Bury Farmhouse is grade II listed (LBS 117603) and dates from the 15th-century, when it was known as Epping Manor House. It stands within the site of Epping Bury, the site of the first settlement. According to the list description, the farmhouse was pre-dated by a moated grange, or farmstead, owned by Waltham Abbey. After the Dissolution this became crown land. Part of the south-east arm of the moat remains to the south-east of the present farmhouse, which, along with the other farm buildings, was built on a new site away from the moat. During the 17th-century the farm was absorbed into the Copped Hall estate, established in the 16th-century and one of the major landowners in Epping (Epping Map Project 2006).

2.4 Farming in the post-medieval period (c.1500-1901)

Medieval farm buildings tended to be scattered around the farm house rather than focused around a courtyard in the later planned form. Farms in the south-east of the country were 'mixed', producing cereals and livestock and consisted of simply a barn, where crops were threshed and stored, a granary and stable. Animals, except for horses, were kept outside or

in temporary shelters. Stables were built with hay lofts over and implements (ploughs, etc) were stored in sheds or on the threshing floor of the barn. Cereals were produced as a cash crop and to feed livestock, with enough kept by to keep a few animals over the winter. In return, the animals provided transport, wool, meat or dairy products and manure for the crops.

Medieval farming worked on the basis of the crop cycle, whereby fields were left fallow on the third year. Improvements in crop rotation in the late 17th century negated the need for a fallow year with the introduction of improved grasses and winter feed crops that also enriched the soil before the next crop. Increased winter feed meant that more cattle could be kept for fattening, and improvements in animal husbandry meant larger animals could be reared. From the 1740s the earlier scattered farmsteads were replaced by 'planned' or courtyard farms to maximise cattle yields. Cattle (beef and dairy) were kept in enclosed yards joined to open-sided stock sheds. Usually the yards were south-facing and entered from this side, with a barn to the north. Manure from the cattle was trodden in with the threshed straw in the yard and the mixture added to the fields, increasing crop and straw yields. The 'model' farm represented the peak of development and large farming estates were established by 'improving' landlords. Some model farms, such as Wimpole Hall in Cambridgeshire, were purpose-built grand designs, architecturally-designed to fit a country estate.

The era between 1840 and 1870 witnessed a 'golden age' of farming, when grain prices were at their peak, leading to acceleration in farm building and improvement. By the 1860s open-sided sheds were provided for cattle on most farms (Barnwell 1998). This era of 'high farming' adopted the courtyard system to its full potential, aided by mechanisation, artificial fertilisers and new feeds. The mixed farm further encouraged the reciprocal partnership whereby food and straw was produced for the animals, which in turn provided manure for the fields (Appendix 2). With economy of labour in mind, buildings were arranged to follow the natural flow of materials. Smaller farmers influenced by the trends in Victorian farming were financially unable to create their own model farms and often remodelled their farms by constructing new housing for livestock whilst retaining some of the more practical older buildings. Usually this was the barn, whose function continued as part of the mixed farm.

However, the golden age did not last long. Bad harvests and a downturn in the world economy after 1870 led to the abandonment of arable land in favour of livestock, butter, cheese milk and market gardening. The 'great depression' lasted until the outbreak of WWII.

3.0 OBJECTIVES

3.1 Historic building survey

The purpose of the historic building survey was, as outlined in the brief (Clarke 2005), to investigate and record the farm buildings to RCHME level 3 standard prior to conversion. The record was required to consider the plan form of the site, materials and method of construction, building chronology, development and phasing, function and internal layout and survival of early fixtures and fittings relating to original or change of usage. The record also aimed to understand the context of the farm within broad trends in agriculture and the local/regional significance/rarity of the buildings.

4.0 DESCRIPTION OF WORKS

The development area was recorded using a site plan supplied by the client's architect and a frame survey commissioned by the FAU on behalf of the client/architect by historic building specialists Brenda and Elphin Watkin. Where appropriate, these drawings are reproduced as figures within the report, with FAU annotations. The full report, with frame survey of the barn, is included as Appendix 1.

The standing buildings were each assigned a number and referenced to a block plan of the site (fig. 1). External and internal architectural descriptions were made and wherever possible the original function of each building was assessed, along with its relationships to others within the agricultural environment.

A series of photographs (digital, colour medium format, colour transparencies and 35mm black & white prints) were taken to record the buildings internally and externally. Specific shots were taken of areas of important architectural detail, fixtures and fittings. A representative selection is reproduced at the back of the report as plates 1-26. The remainder can be found in the archive.

Cartographic and documentary sources (section 5) were consulted at the Essex Records Office (ERO), Chelmsford to understand in greater detail the origins and development of the site and if possible establish closer construction dates, adaptations and phasing.

5.0 CARTOGRAPHIC AND DOCUMENTARY ANALYSIS (figs. 2-4)

There is no clear evidence of the distinctive farm plan form on Chapman and Andre's map of 1777 (sheet 11, fig. 2). Instead it appears to show a 'pre-improvement' landscape with scattered buildings, including Barn 1, representing perhaps an earlier farmstead around the house. Based on this map, the late ranges of the planned farm post-date 1777.

The 1839 Epping Tithe Map (D/CT 131B, fig. 3) refers to the site as Bury Farm. A U-shaped range of buildings (numbered between 2 and 6 in the recent survey) surround a courtyard open to the south-east, with a trackway leading from the road to the north. These represent the first phase of planned development, with the barn and stable ranges included from the current layout. Crucially, the barn is shown in its pre-rear aisled phase, with porch or lean-to extending to the south-west in its original form. A second group of agricultural structures, including a front stable range, now converted to residential use, stand around a yard to the west facing the farmhouse, whose plan form is more irregular to the house seen in later maps. Clearly the moat has been largely filled in by this date and there appears to be at least one fish pond to the west. The accompanying Tithe Award (D/CT 131A) records the owner as John Henry Conyers and tenant as Joseph Kirkby. The holding is 472 acres, of which 260 acres are meadow, 117 arable and 95 acres pasture.

The first edition OS map (fig. 4) was produced in 1881 but surveyed in 1873-4. It shows further development of the farm during the 'golden age of agriculture'. A south-east range has been added and the yard divided into three, with a second entry point to the south-west towards the farmhouse. The grounds in front have been landscaped with trees and the farmhouse, which has been upgraded, since the last map, has its own separate driveway. Another range has been added to the south-west group of buildings.

More detailed analysis is granted by the 1896 second edition OS map, which is drawn to a larger scale. The farm, again referred to as Epping Bury Farm, has developed to its full extent. Cartlodge 7 has been built and the yard is split by an open-sided cattle shed that opens out into yards either side. The yard to the north-west has been divided into two small irregular-shaped yards. The north-east corner is fully open-sided and there appears to be a piggery and small yard close to the gates that lead to the farmhouse, which was remodelled in the previous map, but now has a new bay window on the front.

No identifiable changes occurred between 1896 and 1936, the date of the OS new Series revision (Appendix 1). In the post-war modern period the late 19th-century structures that

enclosed the yard to the south were demolished to make way for the modern cowshed and horse ménage. the ranges were converted to stables after the stables in the south-west farm group were converted to residential use.

6.0 BUILDING DESCRIPTIONS

6.1 General description

The existing plan form closely resembles that of the mid 19th-century tithe map, the first phase of the early planned farm (fig. 3). All structures were built in post and truss construction with timber-framing and weatherboard cladding on brick plinths. They are single storey and, either partly or wholly, timber-framed. All except the first range are currently used to stable horses and are therefore clean and well-maintained. However, the historic integrity of the animal ranges has been compromised with the replacement of original stud walling with concrete block infill in the post-war period. Nevertheless, roof framing remains. The barn is the oldest and most complicated of the structures.

No evidence for further yard divisions were seen during the survey and it is likely they were lost when a new concrete yard was laid in the post-war period. Although the stables were still in use during the survey, the opportunity was taken where possible to record the range interiors whilst the horses were out to pasture.

In the following descriptions, each element of the farm complex has been given a number with reference to the block plan (fig. 1). The contemporary structures that form two sides of the planned farm layout are described in the specialist report, included as Appendix 1, as ranges I-IV. Both numbers are included in the titular head of each description and in fig. 1.

Although representing one build, there are distinct changes between the ranges due to later alterations, change in use and certain minor structural changes. Therefore they are discussed separately rather than as a group.

6.2 Barn 1 (figs. 6, 7 & 8, plates 1-10)

The barn is the main building of the group historically and architecturally, though its development is difficult to establish due to the high level of reuse (Watkin 2005). It is the oldest surviving structure in the group and is located in the south-west corner of the farmyard, with Stock House 2 built onto its north corner. Currently used as a store for horse feed and bedding, it is in good condition, well-maintained and watertight, although the plinth

has crumbled in places and in some areas its cladding looks dishevelled and is falling away. The list description (listed in 1987) describes it as:

“Barn circa early 17th century. Timber framed and weatherboarded, with plain tile roof. 3 bays. Aisled (to south-west an addition). Queen post roof. Midstrey to north-east side.”

Recent examination shows the barn was built in the early 18th- rather than the 17th-century as a single aisled structure incorporating a large proportion of reused 15th-and possible early 17th-century timbers (Watkin 2005). The rear aisle was added in the ?late 18th-early 19th century, probably when the planned farm was constructed. As the barn contains such a large amount of reused timbers, it is difficult to assess whether it has undergone repair using reused timbers or was assembled from secondhand timber of different ages and sources (Watkin 2005), but the latter seems more plausible.

The barn (plate 1) is arranged perpendicular to the later north-west ranges, forming a partial south-west flank to the yard. In the high farming era, the maps show a building, possibly a piggery, with small yards attached to the south-east beside the farmhouse yard entrance (figs. 4 & 5). The front wall of this structure was noted in the survey and is shown in plate 2. A modern board-clad shed (also plate 2), not recorded during the survey, now stands within the former yard area.

In general terms, the barn is oblong in plan and set on a north-west to south-east alignment. The front and rear sides (north-east and south-west) are aisled, with porch set within the front aisle, facing onto the yard (plate 1). The gables on the short ends are unhipped, with the remains of louvred windows placed above the eaves either side, which, except for the main doors, is the only source of light. The frame is clad in weatherboard and rests on a high c.75cm partly-obscured brick plinth, displaying several phases of build and repair. The south-east corner is built from large 230 x 115 x 60-65mm (9 x 4½ x 2½") 18th-century bricks in hard lime mortar in two stages: English bond below and Flemish (with some burnt headers) above, finished with queen closers. Towards the front of the barn (north-east elevation) the bricks change to Flemish bonded 19th-century bricks, slightly narrower at 230 x 110 x 60mm. The rear south-west wall (plate 3) mixes these red bricks with yellow stock bricks, also used in the plinth walls of the stock ranges, implying contemporary repairs to the barn plinth.

Access to the yard is from the open-fronted porch; the doors to which are removed, leaving the large iron strap hinges idle. The opposing door to the rear porch/lean-to was removed

when the later rear aisle was added. Entry into the adjoining range is internally from the east corner, where the range has been cut into the barn frame.

The roof is clad in plain tiles, possibly when the ranges were added, as most have the same material. Initially there may have been a thatch roof. Certainly the roof pitch is steep enough at 50° for thatch, grading down to 40° over the secondary rear aisle. The front porch, which appears to be contemporary, is built into the aisle with a high 50°-pitch gabled roof.

Internally, the barn adopts the three bay form, with a short aisle to the north-east and later broader aisle to the south-west (plates 4, 5 & 8). The three bay layout, with bays either side of the midstrey is a common form to small Essex barns (B. Watkin pers. comm.). When constructed, the main part of the barn measured c. 5m (1 rod) by 13m, with a 2m-wide front aisle. The rear aisle further increased its depth from 7 to 11m (roughly half a chain). The outer bays are the same width at 4.4m, while the midstrey is slightly shorter at 3.7m. Often the midstrey is the widest bay, to provide space to unload wagons at harvest time and room to swing the flail on the threshing floor.

The structure rests on four heavy arcade posts (c.18cm²) surrounding the central bay (fig. 6) with mainly square-cut 'gunstock' jowls facing inwards (plate 4, left). Their character suggests reused oak timbers from a 15th-century barn (Watkin 2005). Wattle marks and scribed carpenters marks are unrelated to this build and there are empty mortices for shores and aisle ties on the rear sides of the posts (fig. 7 section C-C1) that do not relate to the height of the existing midrail, which, on the north-east wall is original. On the other hand, chiselled carpenter's marks on the posts to the north-east of the midstrey denote trusses II and III, relating to the existing build (fig. 6). Chiselled marks are evident on structures from the early 17th-century onwards (Barnwell 1998). They are arranged in ascending order from the north-west, indicating the direction of build from the north-east.

The posts are mainly connected to the midstrey aisle plates with heavy pegged curved braces contemporary in style to the posts, with later iron straps (plates 4-10). The only exception is on the north aisle post that has a straight, reused, brace housed within the existing mortices (fig. 8). The braces against the rear aisle have straight diagonal trenched braces, often inserted into existing mortices and perhaps contemporary with the creation of the second aisle.

Arcade plates either side of the midstrey are joined by edge-halved and bridled scarf joints (plate 6) indicative of 15th-century construction but, as they are relatively short in length, are

probably later in date (described as 'archaic' in Appendix 1). Empty stud mortices on the south-west aisle plate soffit indicate the earlier studded rear wall that presumably pre-dated the rear porch/lean-to (plates 6 & 7 (partly obscured in 7)). Unless the porch was original and those mortices on the plate on the south-west of the midstrey belong to an earlier structure. No structural evidence of a rear porch was found in the survey. Either way, the shallow, unpegged, mortices represent wall framing largely consistent with the north-east wall that contains reused medieval studwork. Empty mortices on the tie beam between bays 2 and 3 (fig. 6), allied with facing mid rail mortices on the arcade posts either side, indicate a former dividing wall between bays 2 and 3 (fig. plate 7); useful to keep animals separate or store different crops.

Modern cement render to a height of 1.75m, obscures almost half the bottom parts of all the internal wall framing. This is generally a result of post-war (animal) hygiene legislation and is probably contemporary with the concrete floor and concrete blocks around the aisle posts.

The internal north-west gable wall-framing (plate 5) comprises a mixture of rough, primary braced timbers (c.10cm-wide) that do not match the earlier pegholes and mortices of the wall plate. Above the plate are more sturdy, 15cm-wide, tenoned studs c.35cm apart, that reach to the roof apex. Their dimensions and spacing suggests reused medieval studwork, although there are no pegholes, indicative perhaps of a 17th-century date (Watkin 2005). Empty mortices on the insides of the arcade posts show the mid rail has been raised from 2.1m to 3m, with the addition of the (late) primary bracing in the 18th-century and perhaps the raising of the plinth (Appendix 1). The studs appear to be lapped over the tie beam, but much is obscured by timber planking across the face of the beam. The north-west arcade post is not jowled and its regular mortices running up the post show this is a reused horizontal timber, either a tie beam or mid rail. Aisle wall framing in the north-east corner was removed when the Stables 2 range was built into the barn.

Wall framing on the opposing south-east wall (plate 8) again comprises late primary bracing and a replaced, formerly jowled, post, fitted contemporary with the rear aisle. Empty pegged mortices on the inside of the south-east arcade post suggest the mid rail was heightened when the rear aisle was constructed, or may simply show that the building from which the posts were reused had a lower aisle. There are some machine-sawn 19th-century studs at this and the other end; the product of ongoing maintenance to the barn. Such timbers are positioned either side of the louvred windows, indicating a contemporary insertion.

Framing on the north-east wall is completely different, containing medieval close studding set within a reused frame (plate 9). The wagon porch is built into the aisle, its gabled roof set high at arcade plate level. Here the studs are 15cm-wide, sharing the same dimensions as those in the north-west gable. They also share the same gap between (c.35cm) as part of the initial build alongside the less-elegant primary braced gable ends. Most are pegged and tenoned but some are solely tenoned into the mid rail. Those in bay 1 are placed in line with the aisle rafters, but those in bay 3 are joggled; a product of reusing existing mortices in a utilitarian structure. The height of the wall plate here (2.75m) corresponds well with the height of the removed midrail on the opposing long wall (south-west) at 2.5m, which match up better with the existing mid rails on the end walls.

The queen post roof trusses have purlins trenched into the collars and collars pegged to primary rafters and queen posts. Raking struts are later feature attached to secondary purlins (plate 10). Raking strut trusses are also a feature of the livestock ranges, arguing for a contemporary insertion as part of a refit to the barn. The rafters are dimensionally the same as the medieval studwork and also reused. Some of the rafters are smoke-blackened and empty rebates show the positions of earlier collars in a crown post roof as part of a medieval open hall (Watkin 2005; plate 10). In contrast to the marks recorded on the aisle posts, the carpenter's marks evident on the rafters are scribed, but are mis-matched, relating to previous use. The south-west aisle, being a later feature, has thin regular 5 x 10cm rafters that correspond to later studwork below. The ancient trusses and rafters are broken up by nailed diagonal wind braces and additional purlin sections probably added in the 19th-century, along with the raking struts, to strengthen the roof frame.

6.3 Stock House 2 (Range I) (figs. 6 & 9, plates 11-14)

Stock House 2 and Stables 4 form the main façade to the farm complex, with Entrance Porch 3 in between, facing onto the main farm entrance and driveway (plate 11). The structure is linear in plan form but now empty, except for its vacant blockwork stalls. Although contemporary with stalls in the rest of the ranges, these are not lined and are likely to have housed more robust animals such as cattle or pigs rather than horses.

This is the most altered of the livestock ranges and its original function has been lost, but is likely to have been an enclosed shed for cattle. Originally fully-framed on all sides, its timber-framing was replaced in the modern period with concrete blockwork, leaving only the rafters, roof trusses and north-east gable.

The main elevation, to the north-west, shows modern blockwork and associated apertures, built onto a 0.9m high (maximum) brick plinth, mainly rebuilt using yellow stocks in Flemish bond. Inside, remaining wall plates show the position of original studwork and apertures, and where later apertures have been created. No evidence of original fixtures or fittings was recorded.

A modern wide central aperture, cut through the plinth but now blocked (plate 12), represents a former stock entrance, allowing access either to meadows over the road for grazing, or perhaps a dairy in the south-west farm group. A second aperture, for the herdsman, is blocked close by (fig. 6, plate 12, right). To the north-east of this is a half-heck door into the range, probably reused from the earlier phase, with modern fixed four-light glazing over (plate 12). A shallow granite sett ramp remains here, a later animal access that appears to respect the alignment of the stalls inside (fig. 6). A modern fixed window frame, devoid of glass, has been inserted into an existing aperture. Below this, part of the plinth is built from red brick in English bond, with some stock brick repairs.

The south-east elevation is also formed from concrete blockwork. Plate 13 shows a diesel tank in the west corner, where the range is built into the barn forming a valley, partly obscured by a modern horse transporter. Further along the elevation, the block walling is broken up by four high 0.7m deep plastic/iron-meshed thin wood framed vents, located below the eaves (fig. 6). A modern corrugated sliding door and internal ramp creates animal access from the third bay onto the yard (fig. 6). A large infilled area on the north-east gable may signify a blocked modern entry point out into the covered entranceway. However, this is not apparent internally.

The south-west elevation was covered in ivy during the survey, but internal inspection showed a window hatch set into the concrete gable (fig. 6).

The roof, like Stables 3, is gabled at both ends and pitched at 50° under tile cladding. Modern sheet metal-capped air vents supported on slight timber frames have been cut into the ridge in the centre and at the south-east end (plates 11 & 12). Three other such vents are positioned over the frontage to Stables 3.

Tie beams divide the interior into five bays. Built onto the concrete floor are blockwork partitions for five stalls, with a corridor to the south-east leading from the corner of Barn 1 to the doors either side at the north-east end (fig. 6). Each of the stalls has a thick wood panel gate with iron and steel fixtures (plate 14). In the south corner, where the range is built into

the barn, the weatherboarding and aisle wall plate have been cut through and the latter supported on a plain cast iron column and bolted angle iron bracing (plate 14). Since the concrete block rebuild, similar iron brackets act as replacement braces to the tie beams. All bays are roughly equal in width at c. 3m, except the south east bay which is shorter at only 2m. Reused oak tie beams are used throughout, accompanied by empty mortices and peg holes for braces and queen posts. The ties are supported on oak and elm wall plates joined by short, face halved and bladed scarf joints (Watkin 2005) indicative of a post-medieval date. The current trusses comprise raking struts (some of which are machine-sawn) tenoned to the tie beams, trenched and nailed to the collar and cut to allow the purlin to pass (fig. 9). The purlins are splay scarf-jointed where the sections meet and the whole is kept in tension by an iron rod screwed into a ridge boss at the top and down to the tie beam soffit where it is secured by a square nut (fig. 9).

The rafters are uniform in size, but some are reused and appear contemporary with the reused trusses. The only surviving wall-framing, on the north-east gable, comprises 7 x 10cm studs c.25cm apart.

6.4 Entrance Porch 3 (fig. 10, plates 11-13 & 15)

The central covered wagon entrance is a light, timber-framed and tiled, open bay structure with a gabled tiled roof in accordance with the contemporary frontage, but set at a slightly shallower 40° pitch. The opening is high, to admit loaded wagons during the harvest, and its wall plates are supported by nailed and tenoned arch bracing. It is made secure by a modern five-bar gate. No earlier gate fixtures were recorded.

The roof frame is set on two crudely cut tie beams laid on a cross beam that passes between the adjacent ranges (fig. 8). Raking queen post struts connect from tie beam to purlin either side by simple lap joints. These and the rafters appear to be modern replacements or additions, and the roof-felted underside shows the tiles have been re-laid in the modern period in brindled plain tiles. The roof is further supported on studs extending from principal rafters on either side.

6.5 Stables 4 (Range II) (figs. 10 & 11, plates 11-12, 15-17)

Stables 4 forms an L-shaped structure around the north-east corner, with buildings 5 and 6 to the south-east, Cartlodge 3 to the north-west and Entrance Porch 3 to the south-west (fig. 1). In contrast to Stock House 2, the external weatherboard cladding has remained throughout, although on the front north-west elevation it is in a relatively poor state, not helped by a lining of cement render added on the inside (partly seen in plate 15). Two boarded-up vents are

positioned just below the eaves, with a third, by the entranceway, latterly glazed. These went out of use when the roof vents were fitted (three on this side and two on the other- see plate 16) at the same time as the modern stalls. A blocked window or hatch is fitted on the other side of the glazed vent, its use unknown, but of sufficient height (c.2m) to preclude animal usage and was probably for feed, suggesting stores at this end. Where cladding has been removed, the diagonals for primary bracing can be seen (plate 15, bottom right).

The rear north-east elevation, and all of this side that borders the stream and woodland, was badly overgrown with elder, but was cleared before the survey began in earnest. This revealed a weatherboarded exterior with 2.5 to 3m-wide open vents below the eaves and no other features.

Inside the courtyard, the corner range is laid out six bays to the north-west and five to the north-east, with those in the corner overlapping. The first two bays of the south-west arm have partial boarding to a height of 1.7m, to bring in light and circulate air, while the other two are open, providing access onto the yard (plate 16). Empty studwork mortices on the wall plate soffit show the partial opening in the first two bays is not original. It is possible the main opening on the third and fourth bays has been modified too, though this is hard to prove as any mortices to the wall plate soffit are obscured by a second plate inserted beneath the original. Bay posts are positioned on every second bay, with plain 9cm cast iron columns on the bays between (plate 16) which post-date the stables, but appear contemporary with the laying out of the concrete yard and stable conversion. The attached south-east arm is enclosed with timber framing, with a five light open vent below the eaves (plate 16, right).

The roof is pitched and clad in the same manner as Stock House 2, but is hipped in the corner and has wider ridge vents; three on the south-east and two on the south-east arms (plate 17). The plinth wall is built from reds and yellow stock bricks in Flemish bond. The inclusion of yellow stocks (post-1800) suggests an early 19th-century, rather than late 18th-century, construction date.

Inside, the interior is lined-out in cement render to a height of 1m and further covered in pine boarding, obscuring the wall frame. The stalls are clearly modern, free-standing and built from the same material nailed to a sawn wood frame up to the height of the tie beams. Each has a half-heck door, the bottom section of which is identical to and contemporary with those in all the ranges, and the upper section secures the stall at night. Some stalls are fitted with stainless steel grills (plate 17). All fixtures and fittings are modern.

A corridor runs the length of the building, with four stalls to the north-west and a single stall and tack room (inaccessible during the survey) to the south-east (fig. 10). The queen strut oak trusses are identical to Stock Shed 2 (fig. 11, section D-D1), but here the purlins are butted rather than splay scarf-jointed together and short cross pieces have been added in the middle section to support additional purlins. Tie beams measure 18 by 22cm and like the rest of the roof timbers are limewashed. Some are reused, as are most of the rafters, and others have tenoned straight bracing. Chiselled carpenter's marks indicating truss three (fig. 10) suggest construction from the entranceway end. Another truss has the marks I and II to tie beam and struts (Watkin 2005). Primary braced studwork remains in the gable wall against Stables 5.

6.6 Stables 5 (Range III) (figs. 12 & 13, plates 18-19)

Stables 5 is built onto the south-east end of Stables 4 but is still part of the pre-1838 planned layout. Between 1873-4 and 1896 a central open-sided cattle shed was added to its last two bays, splitting the yard into two (figs. 4 & 5). Despite the removal of framing to front and back, some evidence of the lost range remains.

The structure is presently open-fronted, but was originally enclosed in timber-framing that was removed, apart from the end walls, with the stable conversion. Facing onto the yard, the trusses are now supported by secondary 7.5cm-wide plain cast iron columns. Empty mortice holes in the re-used wall plate show the positions of original doorways out onto the yard. The first, in the second bay from Stables 3 was for animals, while the second, in the fifth bay at the opposite end was narrow, and intended for the herdsman (fig. 12). This final bay is wider than the rest (4m rather than 3.5m) and relates strongly to the size of the wider pre-1838 bay onto which the central shed was partly built onto (fig. 5). Part of a c.1.3m-high lime-rendered brick wall remains against the inside of the end wall, in the exact location of the shelter shed (fig. 12), defining the position of its south-east wall.

Cast iron columns support the trusses on the rear wall too, which has been completely rebuilt in concrete blockwork, with a long 50cm-deep plastic-mesh-covered vent below the eaves. A blockwork lining has been added against the north-west end wall that partly hides the wall framing and a door that led into Stables 4 (fig. 12). This door is now obscured on the other side by internal boarding.

Inside, the range is divided into five bays, with five stalls independent of the bays and constructed the same as those in the other ranges. The interior is limewashed. Oak wall plates are joined by face halved and bladed scarf joints and three of the tie beams (18 x

20cm) are reused and contain mortices and peg holes for braces. Otherwise the trusses are same as in buildings 2 and 4, minus the central tension rod (section F-F1, fig. 13). The oak rafters measure c.5 x 10cm, a standard size for the ranges and the gabled roof has a 40°-pitch, common to the ranges, but is clad in pantiles rather than plain tiles.

6.7 Loose Box 6 (Range IV) (figs. 12 & 13, plates 19-22)

Loose Box 6 is built onto the south-east end Stables 5 and contains a tack room (serving both ranges) and two loose boxes. Loose boxes provide space and security and were used for sick or birthing animals. They therefore provide more room than the stalls. Externally the structure remains relatively unaltered, with weatherboarded timber framing on all sides under a gabled roof, slightly higher than the others. The roof is mainly clad in pantiles, but from the open doorway leading south-eastwards (fig. 12, plate 20) is covered in plain tiles, likely to be the original material.

On the front elevation (plate 19), the tack room is normally accessed from the yard by brick steps, but was inaccessible during the survey. Its door is modern, contemporary with the partitioning of the ranges. The main animal entrance lies to the south-east, and empty stud mortices indicate it is wider than the original (fig. 12). It is now secured by a steel five bar gate. There are no fixtures to earlier gates. The blockwork wall beside the opening has a brick plinth which seems to represent the plinth to the late 19th-century end range (plate 19). Manure is kept the other side, which explains the rendered weatherboarding of the wall here (plate 20). The rear wall is weatherboarded and built blind.

Inside, the structure is divided into five bays, accessed from the main open stock door. The wall-framing is lined out in timber boarding. Oak wall plates exhibit face halved and bladed scarf joints (fig. 10). They are reused with mortices for queen struts and braces, some of which are used in the truss construction (section G-G1, fig. 13). Otherwise the roof framing is identical to Stables 5.

6.8 Cartlodge 7 (figs. 10 & 11, plates 11, 15 and 23)

This three-bay open-side structure stands outside the farmyard and its late 19th-century date makes it later than the existing buildings, but contemporary with the removed central cowshed shown on the 1896 OS map (fig. 5) and mentioned in section 6.6. It is built perpendicular onto Stables 4, on a north-west to south-east alignment (fig. 10). Some light storage has occurred here in recent years but apart from an episode of a pantile re-roofing, which has kept the insides dry, little or no maintenance has been carried out. As a

consequence, weatherboarding is missing from the rear wall leading to some studwork displacement. The front wall plate is sagging badly (plate 23) due to the weight of the tiles.

Unusually for Bury Farm, the Cartlodge was built from new materials, in soft wood. In fact it is a good example of a late Victorian cartlodge (Watkin 2005). It is also hardly altered, being outside the functioning main yard. The north-west end is hipped and the opposing end open-framed, built directly onto Stables 4. Bay divisions are shown externally by tarred posts with tenoned and pegged arch bracing (plate 23). Inside, the framing is primary braced using machine-sawn timbers with wall studs tenoned into the wall plate and nailed to the braces. A rudimentary side halved scarf joint is used in the construction of the wall plate. The trusses are similar in construction to those in the main ranges, with queen struts raking to purlins trenched into the collars, below ridge piece and plate (fig. 11 section E-E1). Tie beams retain straight bracing to the wall posts.

On the outer walls, a low brick plinth is hidden under cement render. There is an earth floor.

6.9 Horse Menage 8 (fig. 1, plates 24 & 25)

The presumed horse menage is a modern structure located away from the main yard in the south corner and used as a horse trainer. It remains unaltered since its last usage and is described briefly for group value and its comparative rarity. Its circular plan form is constructed from a high, slightly battered concrete plinth and boarded and pine-slatted walls (plate 24). The roof is felted, with a shallow-pitch and capped top that provides ventilation through an internal electric fan (plate 25). There sole entrance is on the north-west side.

6.10 Cowshed 9 (fig. 1, plate 26)

The cowshed is a large modern concrete block and corrugated iron structure with pens inside used by horses, but was originally built to hold cattle on the working farm. The double pile roof is supported on an angle iron frame representing the two internal bays and the floor is concreted. On the second gable, to the right of plate 26 and barely seen, is the CESD logo and close by the legend "a structure by CESD Cambridge".

7.0 DISCUSSION AND PHASING

Five main phases of development have been identified during the survey of Bury Farm, dating from the early 18th to 20th-centuries. The suggested phasing is based mainly on observations by the buildings specialists B. A. and T. E. Watkin (included in Appendix 1) and

findings by FAU staff during the building recording survey. Because of the high levels of reused timber in Barn 1 it has been difficult to judge whether the barn was gradually evolving from the medieval period or whether it was built from a collection of reused medieval timbers and some contemporary timbers in the 18th-century (Watkin 2005). Having completed the survey, it seems the latter is the more likely. 19th-century maps have been useful in showing, in some detail, the extent to which the layout of the farm buildings was influenced by important developments in agriculture during this period.

This development is summarised as follows:

Phase 1: Early 18th-century

Barn 1 survives from this phase, post-dating the c.15th-century farmhouse. Its original plan was single-aisled with integral porch. The structure contains an extraordinary amount of reused timbers, mainly, it appears from two buildings. The majority of the main framing contains major components of a 15th-century aisled barn: namely the arcade posts, and probably braces. Soot-blackened rafters used in the roof originate from a separate structure: a medieval open hall (Watkin 2005). Studwork to the original aisle and north-west gable have medieval origins and it seems likely that areas of wall framing since removed i.e. the original rear wall and the midstrey/bay 3 partition were built in the same reused materials.

Unpegged mortices on some wall plates may indicate a slightly later reuse date of the late 16th or 17th century. Away from the grander frame elements, the 18th-century build indicators are more subtle, but, viewed as a whole, form a viable case. The most obvious features are the queen posts trusses and crude primary-braced gable walls. Brickwork in the plinth wall has also been given this date (Watkin 2005), although the plinth could of course have been added later. Chiselled marks on the arcade posts belong to the post-1700 period and are numbered to represent the barn build. They are mixed with earlier scribed marks, providing further evidence of reuse.

The layout of the farm in the early 18th-century is unknown. No other structures survive from this period and pre-19th-century cartographic sources viewed during the study contained little detail. It is assumed, therefore, that the barn formed part of a scattered farmstead around the farmhouse, which itself has 15th-century origins, contemporary with main elements of the barn framing. The timbers to the new barn could therefore come from an earlier barn on the site and other timbers from adaptations to the farmhouse or some other medieval structure in the vicinity or part of the estate.

Phase 2: Late 18th to early-19th-century (1777-1839)

Phase 2 events provide early indications of evolution toward a planned farm as the emphasis shifts from agriculture to livestock rearing in the period of improved animal husbandry. The U-shaped plan of stock houses and sheds (buildings 2-6) is built onto Barn 1 and around a central yard, open to the south-east. Parts of these structures contain more reused elements, this time from queen post buildings of 18th-century date. However, based on the use of yellow stock bricks in the plinths, a construction date of the early 19th-century is more realistic.

The tithe map indicates a rear porch or lean-to on Barn 1, perhaps a precursor to the second, rear, aisle. It is not known if the porch was built in this phase, but internal evidence indicates it was not part of the original build. Its purpose was to enable wagons to be drawn into both sides of the barn. The south-east end bay of Stable 5 was originally built larger, perhaps as a loose box or feed store, but evidence has been lost with later improvements and modern modifications for horse accommodation.

A second yard is established in front of the farmhouse with a range across the top end. Some of these buildings still stand and, with other modern farm structures have been converted to residential and commercial usage. Again, the emphasis here was on stock rearing, but the stable block at the front was larger and grander due to its roadside location and proximity to the farmhouse.

Phase 3: Early to late 19th-century (1839 to 1873-4)

The open south-east side of the yard is enclosed with an end range. The yard is divided to manage the stock more effectively, with access points to north-west and south-east. Part of the plinth wall to the end range remains, suggesting a timber-framed structure, in harmony with the others.

Phase 4: Late 19th-century (1873-4 to 1896)

In the final phase of Victorian improvement, an open-sided cattle shed is built in the centre of the yard opening to smaller yards either side. Part of a brick wall was recorded in the correct position to its rear wall against an end wall of Stable 5. Cartlodge 3 is built outside the yard. No other enhancements were carried out.

Phase 5: Early 20th-century onwards

No identifiable changes occurred before 1936, the date of the OS new Series revision (Appendix 1). After this date, in the post-war period, the central and south-east ranges were

demolished and the remaining structures adapted to modern livestock farming by replacing timber-framing with concrete blockwork and inserting new openings. The yard was resurfaced and new floors laid inside the buildings. Stalls were created in blockwork and timber boarding for animals, primarily horses (probably after the stables in the south-west group were converted). Earlier fixtures and fittings were removed or else covered up during this process, making precise functional identification of the structures difficult. The focus of arable activity moved to large pre-fabricated modern sheds on the opposite side of the road and the barn became used as a store for feed and bedding.

8.0 CONCLUSION

Bury Farm contains structures from two main phases of agricultural use. The barn survives from an early, probably scattered 18th-century farmstead and is assembled in part from at least two quality medieval buildings. Reused 18th-century timbers provide the surviving framework to much of the cattle ranges, which date from the late 18th- or more probably, early 19th-century. The plan form of ranges stood around a yard and open toward the warm south side is common on planned farms. So is the retention and incorporation of significant earlier structures in the plan form, such as the barn, to continue its role on the mixed farm. As the emphasis on livestock increased, influenced by periods of agricultural depressions and low corn prices, further ranges, since demolished, were built from the middle to late part of the 19th-century.

Of all the structures, the barn retains much of its historic integrity and presents an unusual study in the application and reuse of earlier timbers, whose source would be interesting to provenance. Through conversion in the 20th-century the cattle ranges have lost much of their character by removing areas of framing and inserting stalls for horses. This has meant, however, their continued survival in mainly excellent condition. Often farm buildings are neglected after farming ceases and without proper maintenance start to deteriorate.

The introduction of intensive stock rearing by the Copped Hall estate in the early 19th-century reflects the acceptance of new ideas by large landowners, who were exposed to the prevailing farming philosophies and techniques, and had the wealth to implement them. On many Essex farms, improvement occurs in the middle of the 19th-century rather than the beginning. At Bury Farm two planned units were installed on the site prior to 1837, pre-dating the tithe map, which on many Essex farms is the last record of the pre-improvement farming phase.

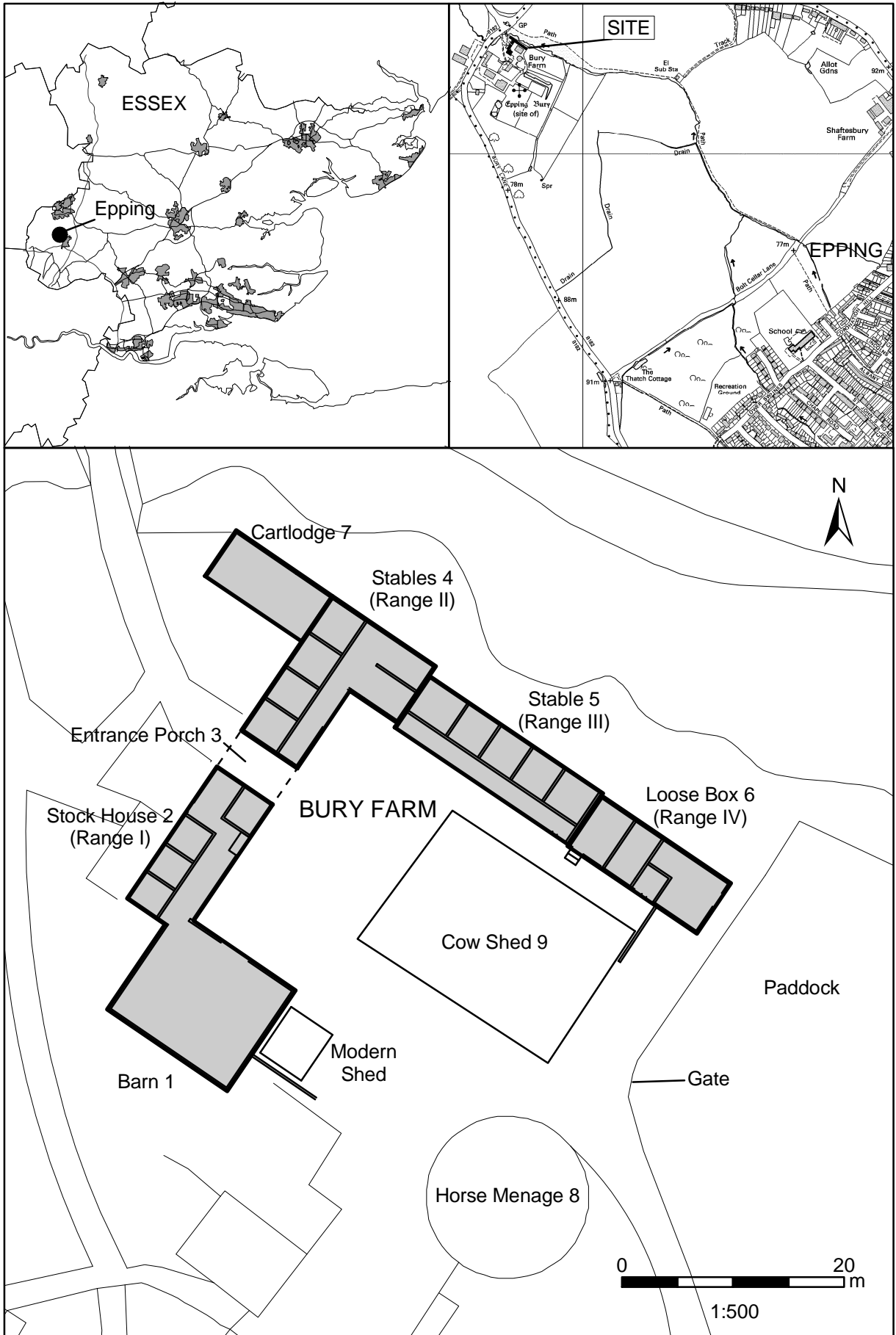
Over the centuries, farming has had a profound impact on the rural landscape. The research framework for the Eastern Counties (Glazebrook 1997) has identified the importance of studying surviving farm groups from the two main historic periods of agricultural improvement: the agricultural revolution (1750-1820), when new crops and rearing techniques were developed with the introduction of the planned and model farm, and Victorian High Farming (1840-80), when farms were remodelled to bring about increased livestock (invariably cattle) yields. Pre-dating the Victorian era of high farming, the layout on Bury Farm is an early planned form. The establishment of not one, but two co-existing planned complexes, surviving relatively well from the pre-High Farming era, is unusual. The barn itself is a significant building in its variety of sourced timbers, their ages and differing construction techniques. The cattle ranges retain their form and group appeal despite loss of fabric. As such, this is a significant group of structures reflecting the development and changes to farming in the county over the past two hundred years.

ACKNOWLEDGEMENTS

The survey was undertaken by ECC FAU on behalf of the owner, Mrs. M. Sanchez. The report was based in part on a timber survey and buildings analysis by Historic Building Specialists Brenda and Elphin Watkin, commissioned by the FAU. Thanks are also due to the architect, Doug Lees for providing site plans in the early stages and staff at the Essex Records Office for their help and enthusiasm during the research stage. The project was monitored on behalf of ECC HEM by Vanessa Clarke.

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Fig.1. Site location

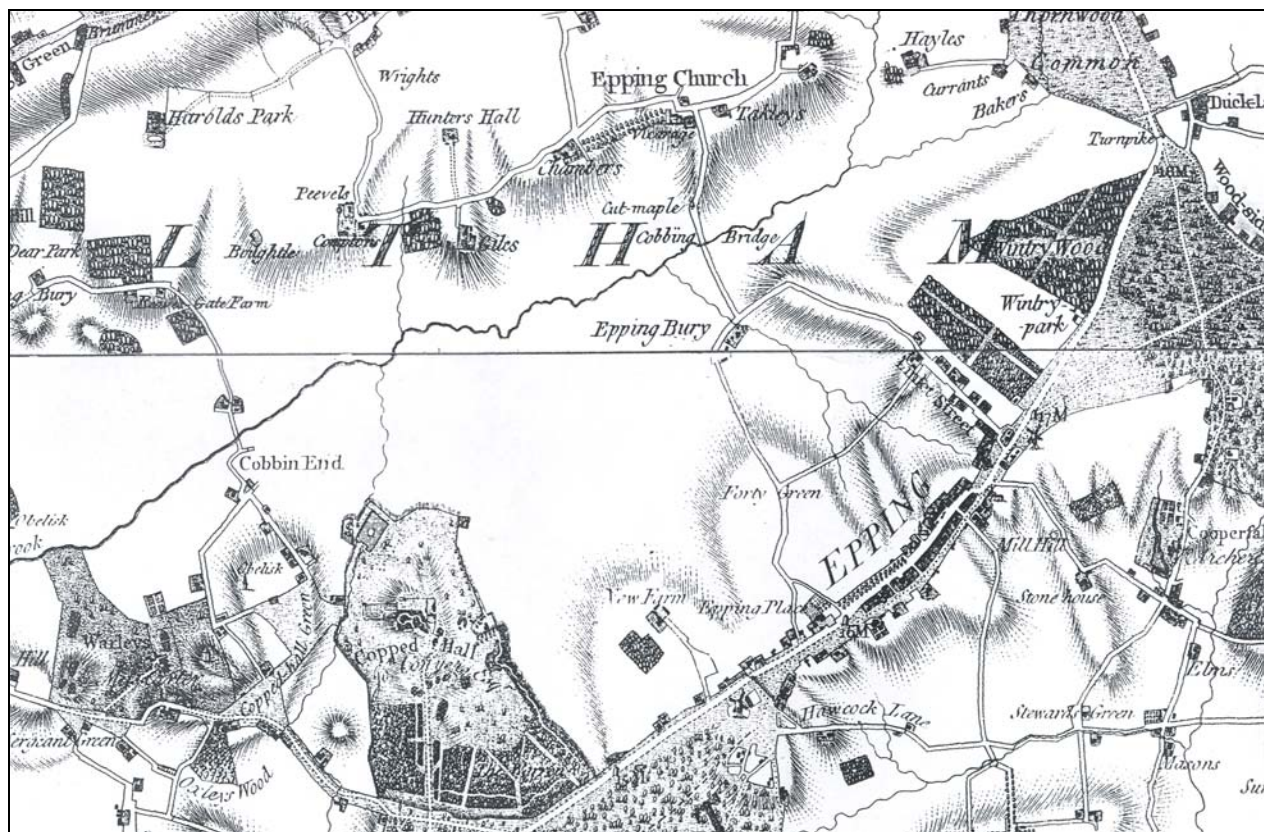


Fig. 2 Chapman and Andre, 1777 (plates XI & XVI)

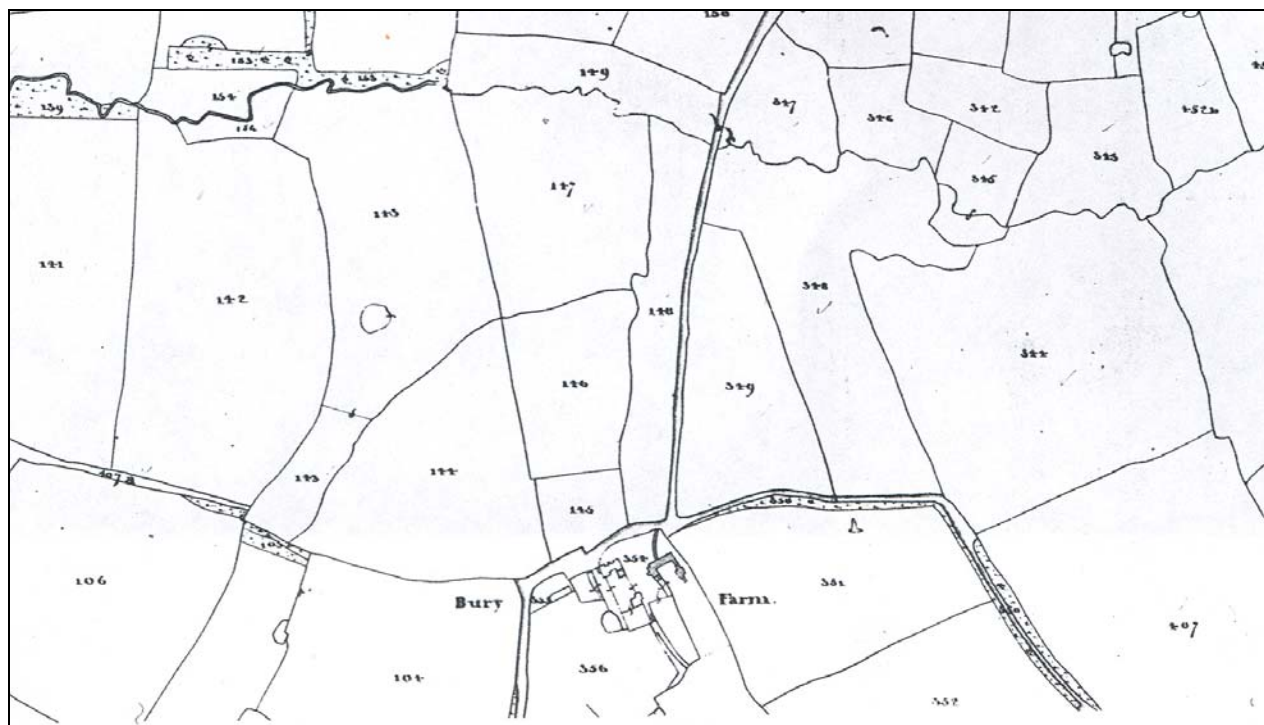


Fig. 3 Tithe map of Epping, 1839 (D/CT 131B)

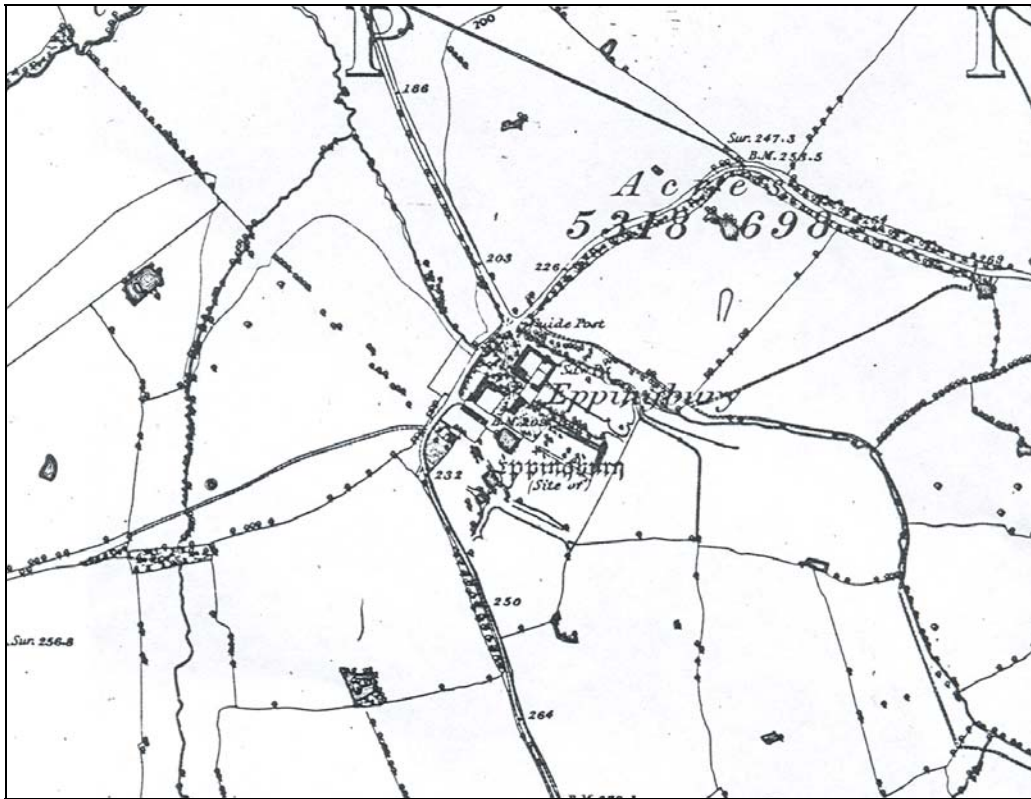


Fig. 4 First edition 6" OS map, 1881 (surveyed 1873-4) sheet 50

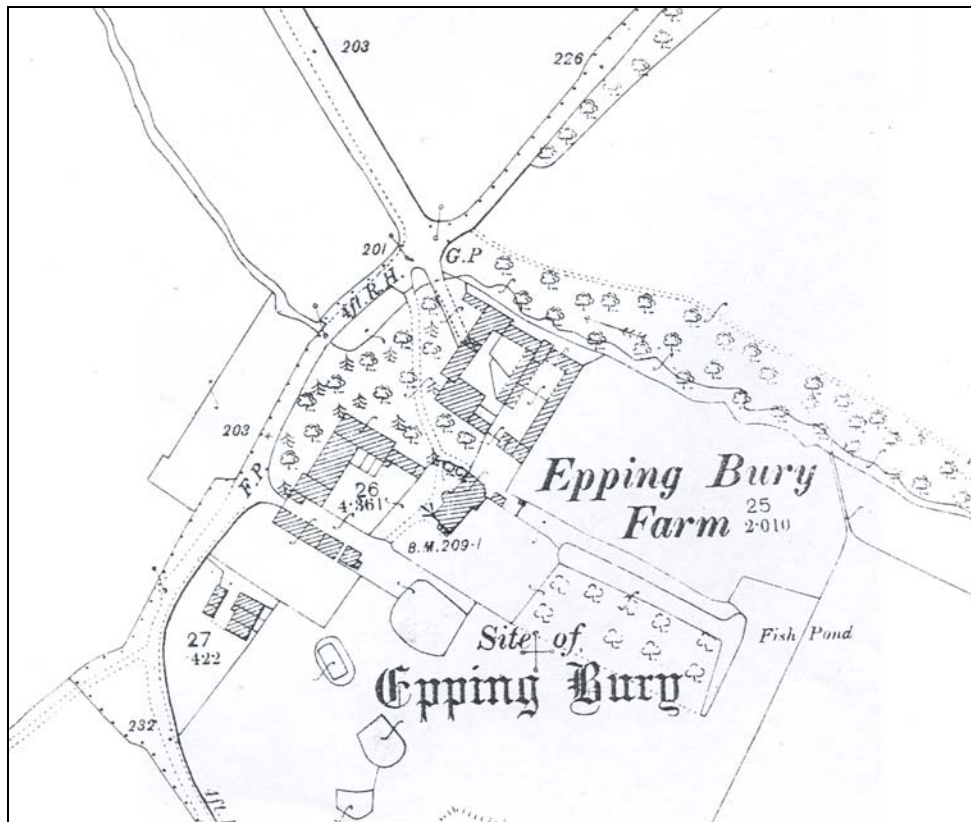


Fig. 5 Second edition 25" OS map, 1896 sheet 50.9

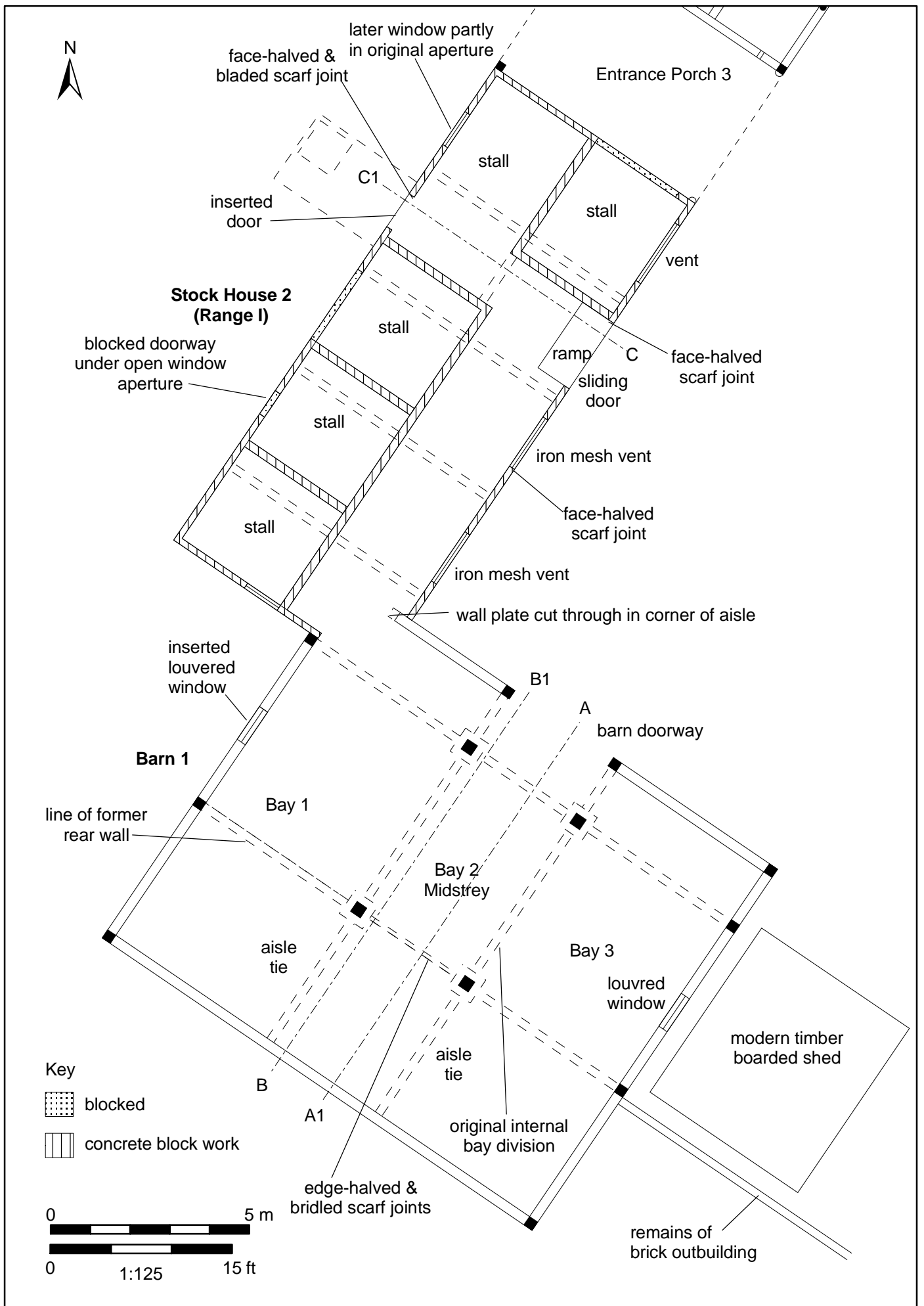


Fig.6. Barn 1 and Stock House 2

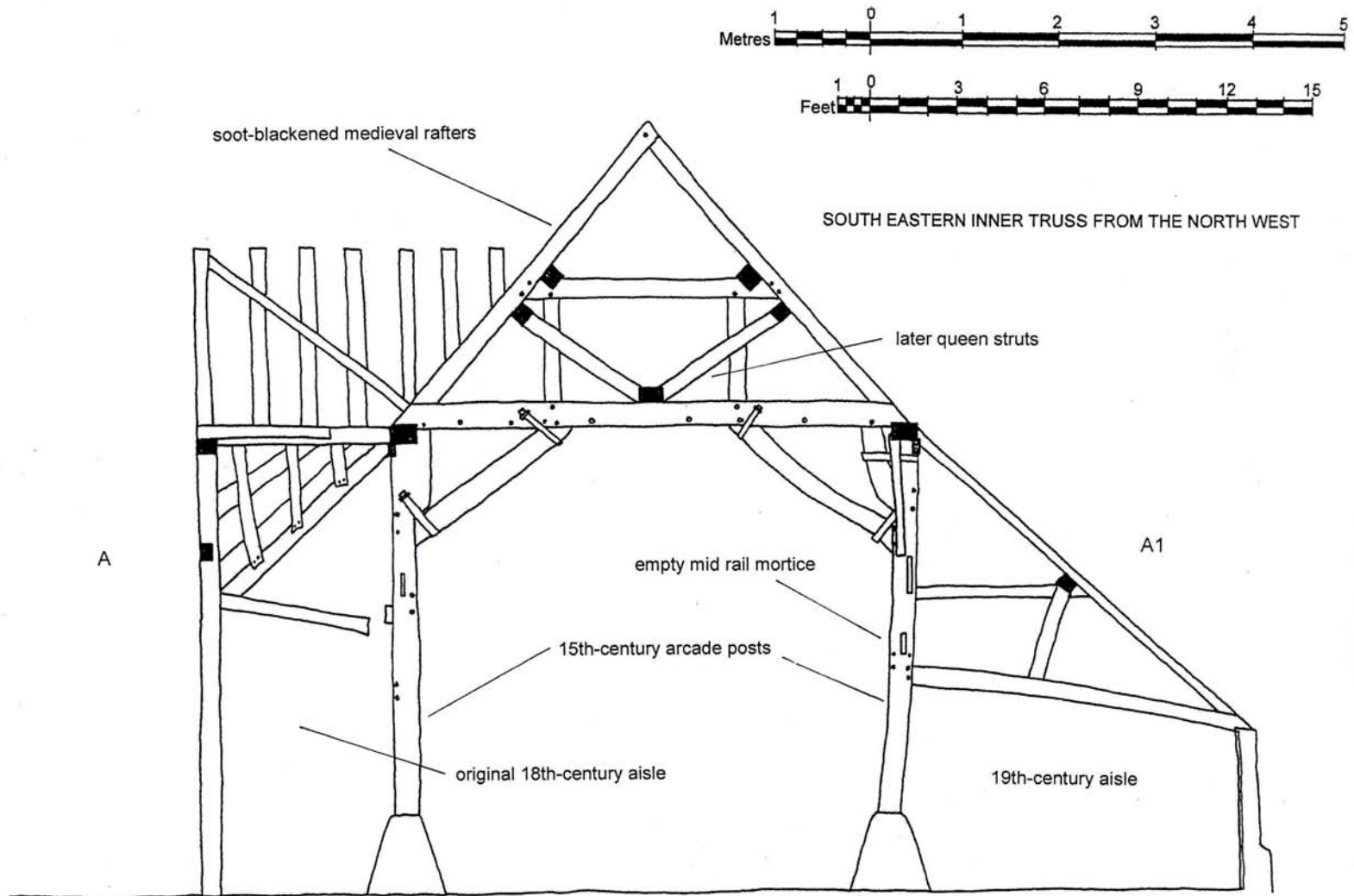
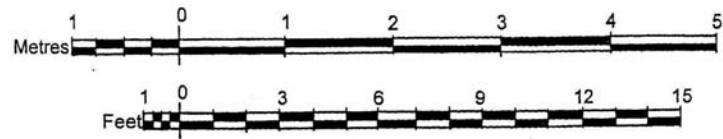


Fig. 7 Section A-A1 through Barn 1



NORTH WESTERN INNER TRUSS FROM THE SOUTH EAST

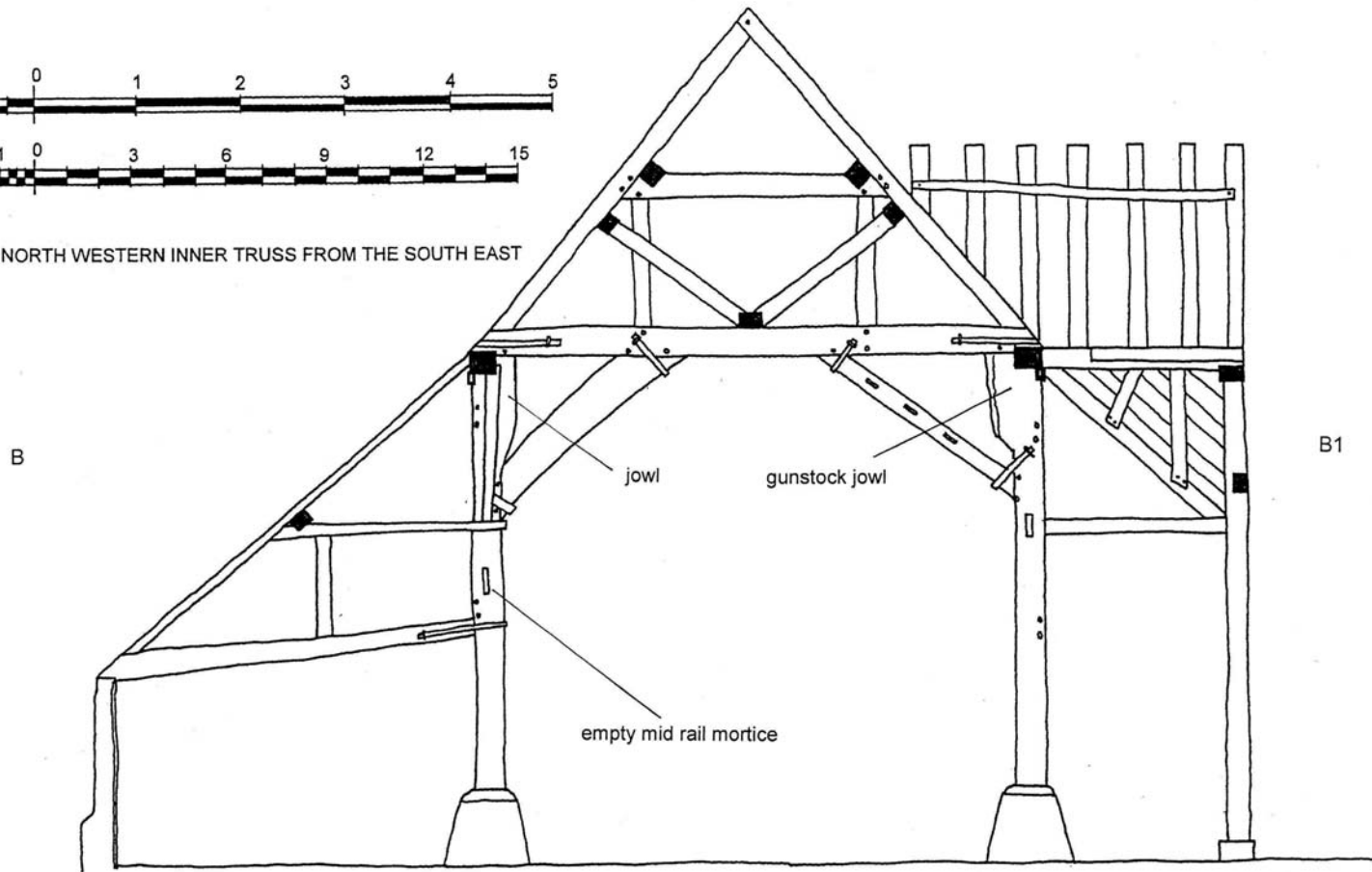


Fig. 8 Section B-B1 through Barn 1

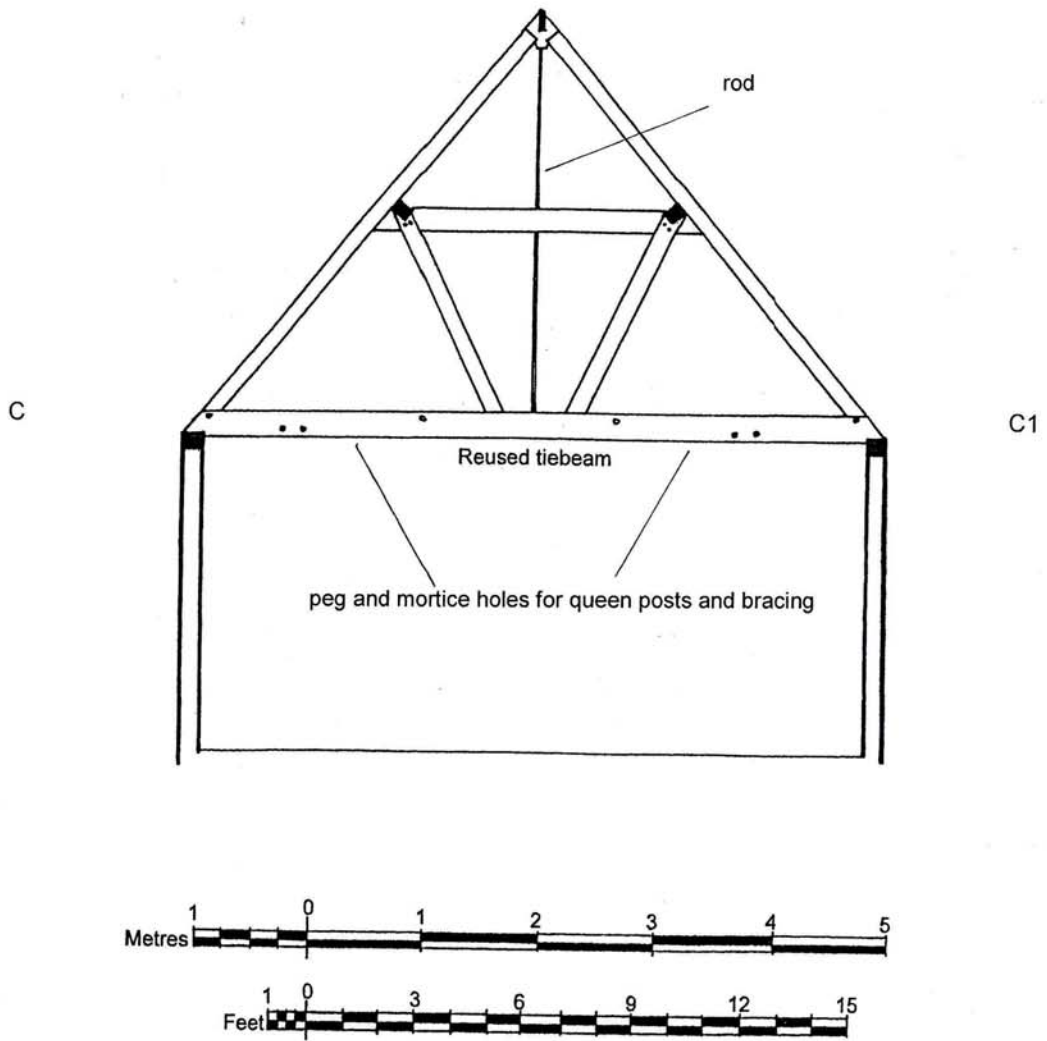


Fig. 9 Section C-C1 through Stock House 2

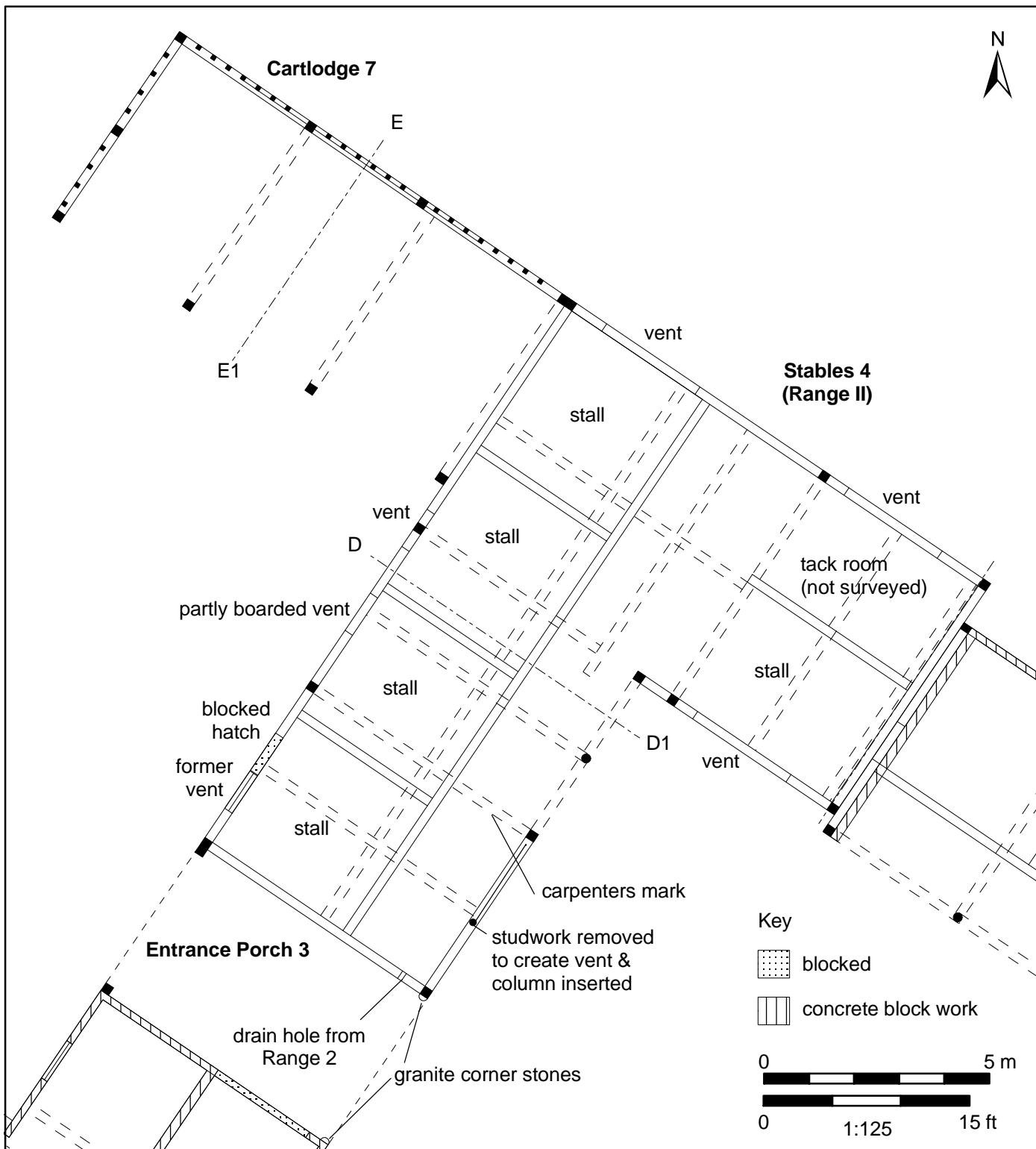


Fig.10. Cartlodge 7 and Stables 4 (Range II)

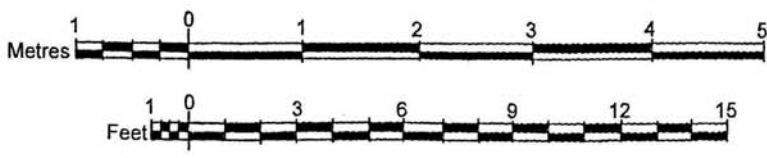
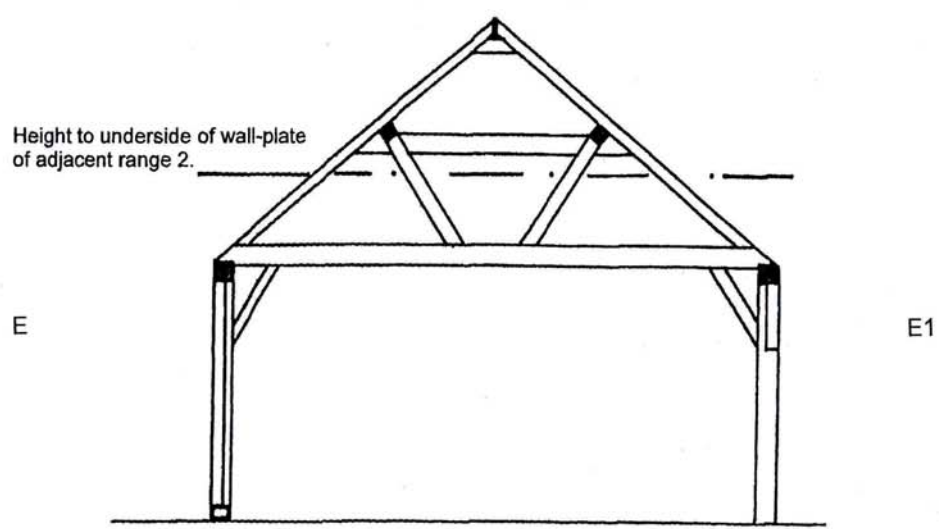
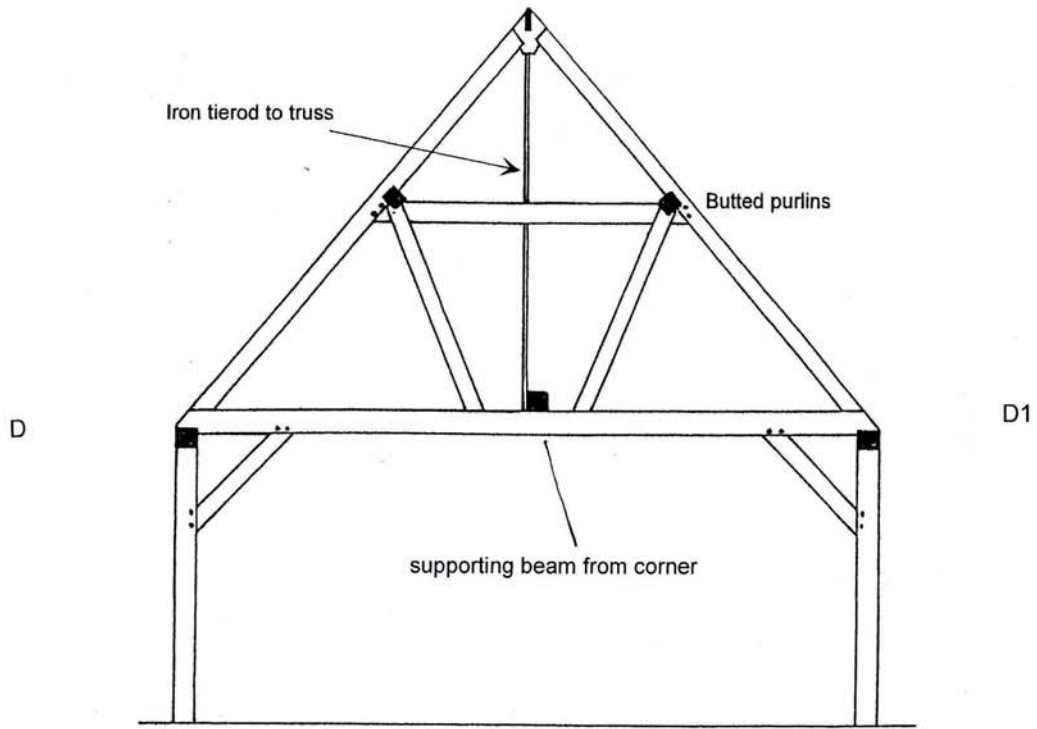


Fig. 11 Sections D-D1 and E-E1 through Stables 4 and Cartlodge 7

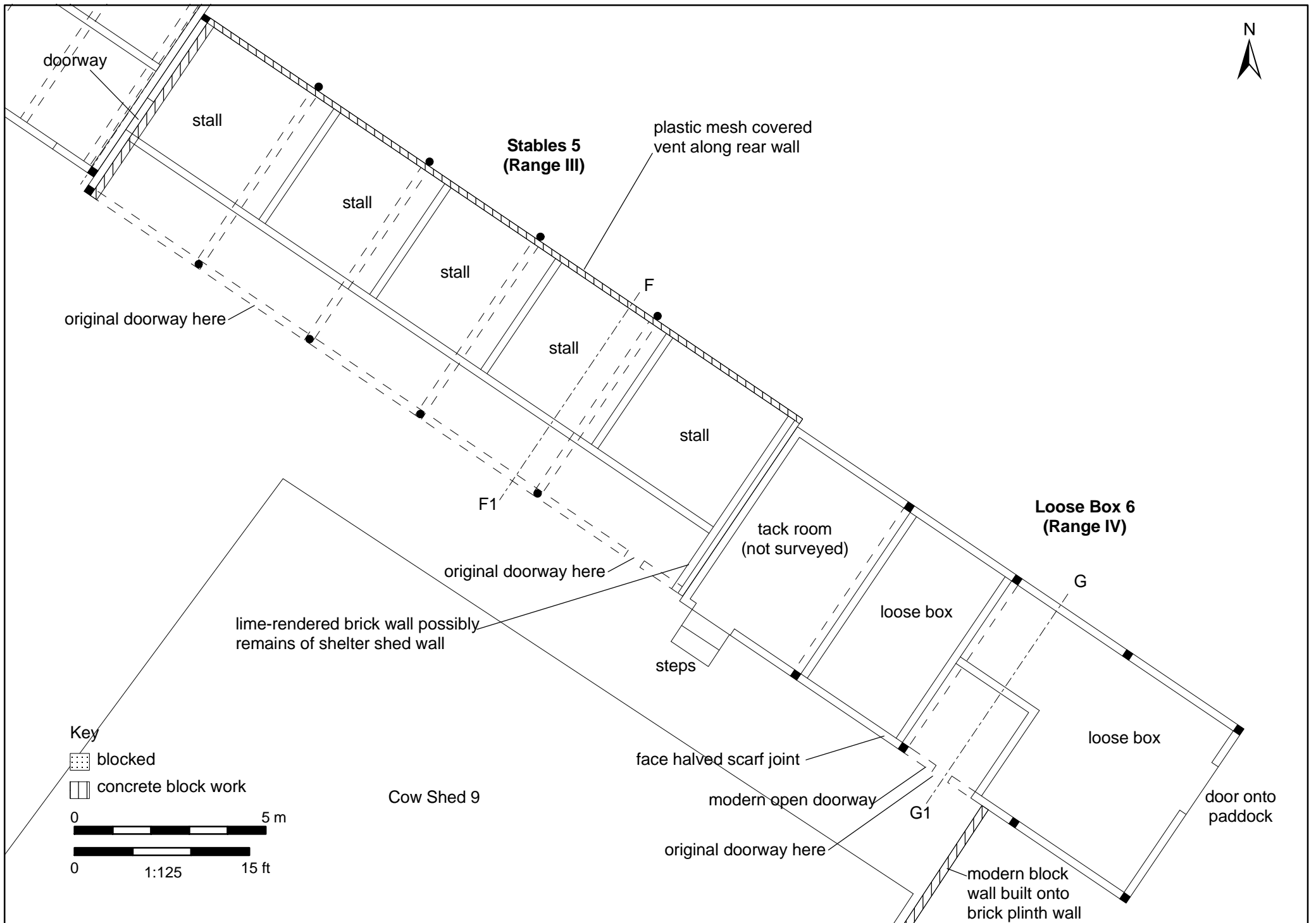


Fig.12. Stables 5 and Loose Box 6

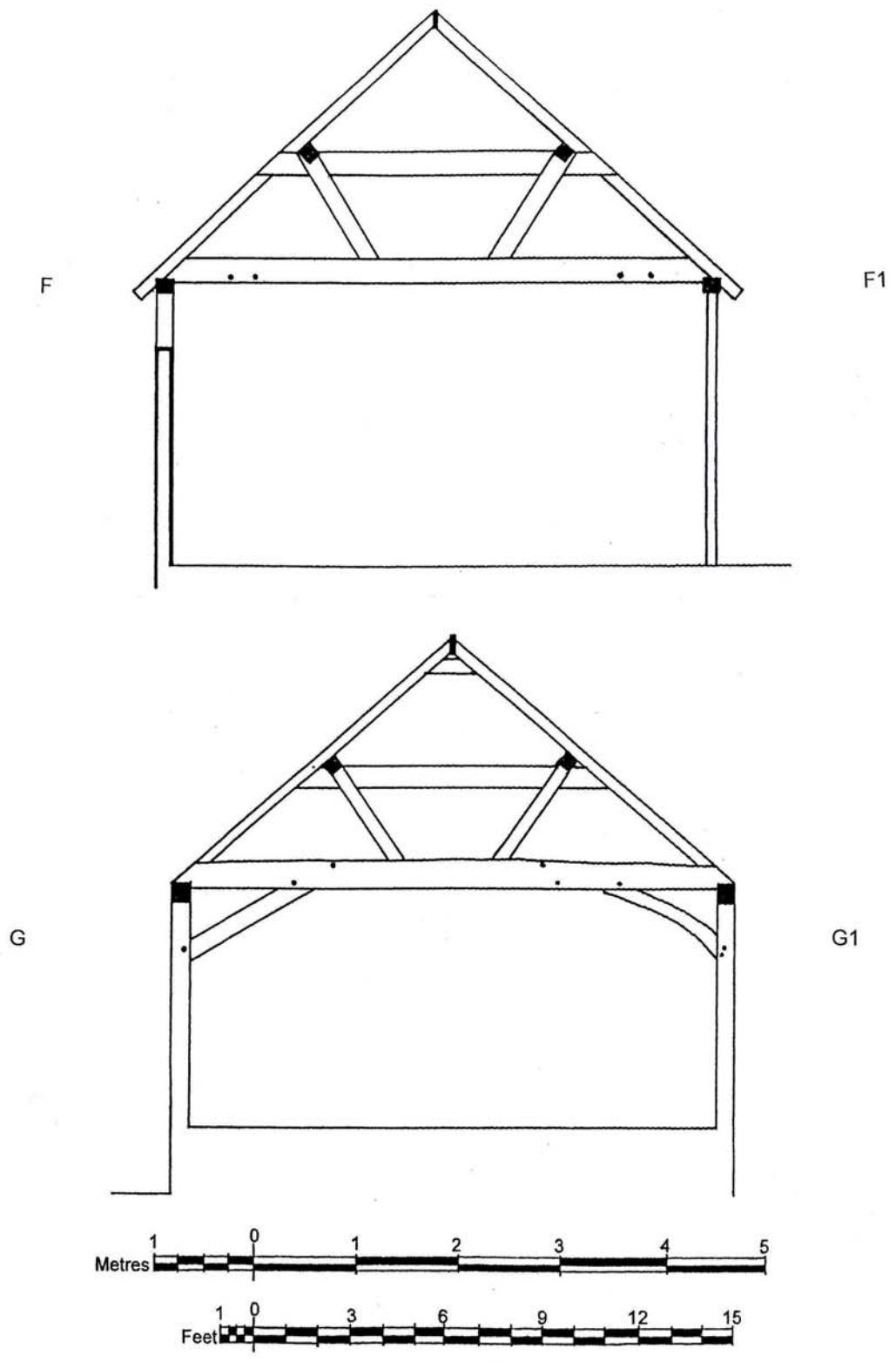


Fig. 13 Sections F-F1 and G-G1 through Stables 5 and Loose box 6



Plate 1 Barn 1 and Stock House 2 in north corner of yard



Plate 2 Barn 1 viewed from south-east showing modern shed and corner of 19th-century outbuilding (left)



Plate 3 Rear of Barn 1 and front range viewed from south-west



Plate 4 Interior of Barn 1 viewed from north



Plate 5 Interior of Barn 1 viewed to north-east end



Plate 6 Archaic bridle scarf joint in south-west arcade plate

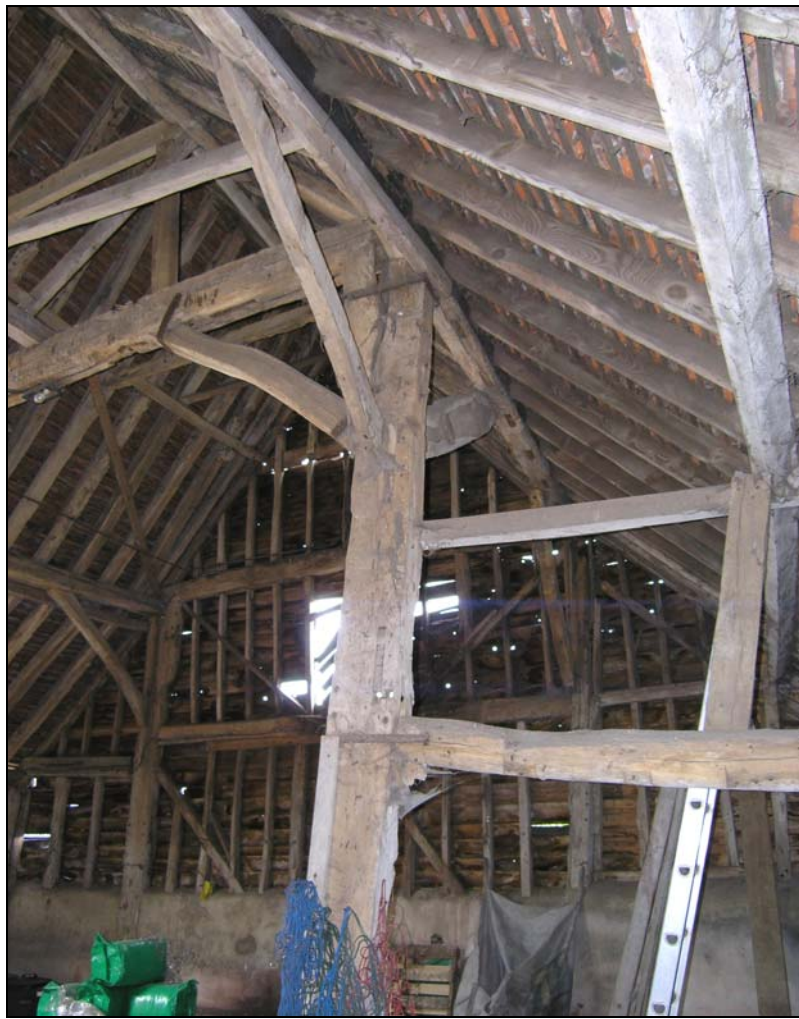


Plate 7 Empty mortices for midrail and studs for original south-west (rear) wall



Plate 8 Barn 1 viewed to south-east end

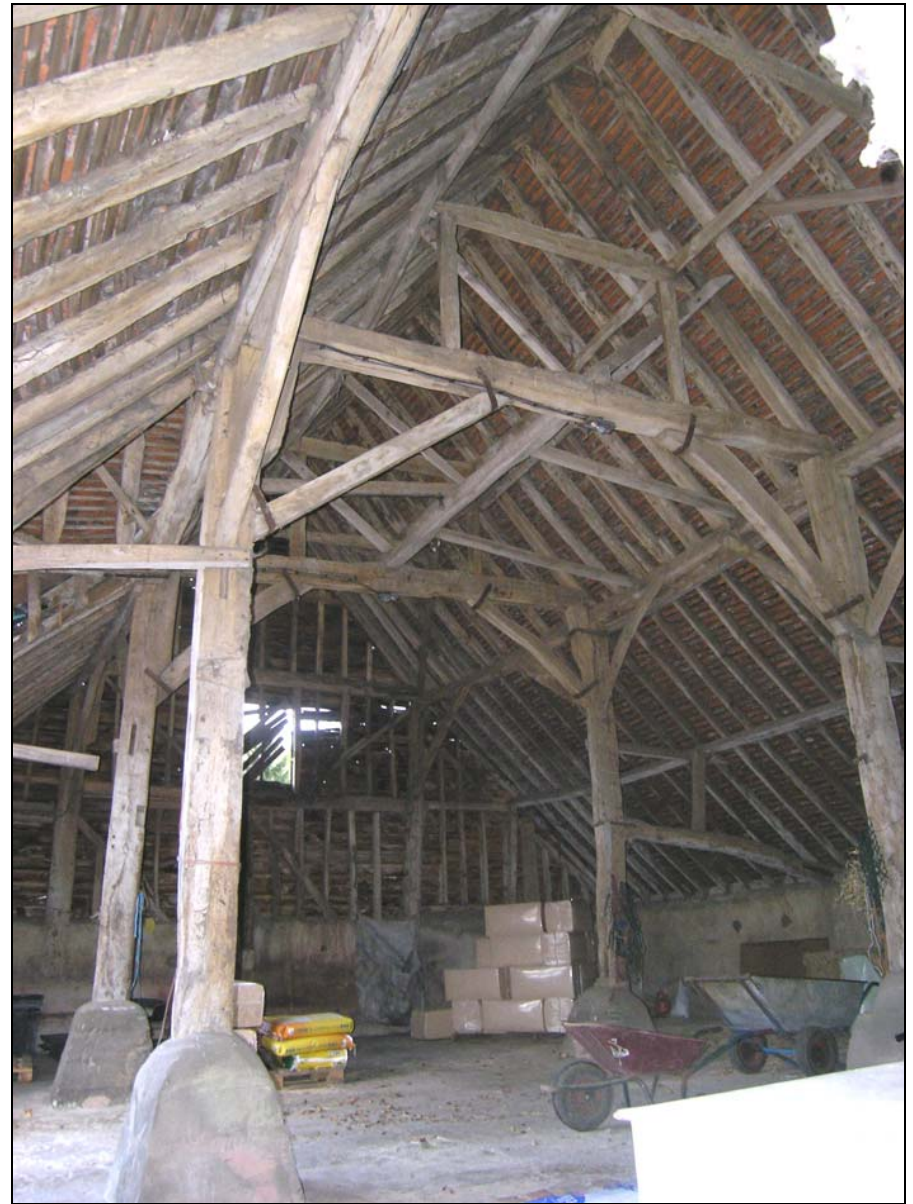


Plate 9 Reused medieval studs in north east frame and removed north corner

Plate 10 Truss detail showing soot-blackened rafters in Barn 1



Plate 11 Front range from driveway with Cartlodge 7 to left



Plate 12 Stock House 2 and north-east range viewed from north



Plate 13 Stock House 2 and Entrance Porch 3 viewed from inside yard



Plate 14 Interior of Stock House 2 showing sawn off wall plate and weatherboarding to Barn 1

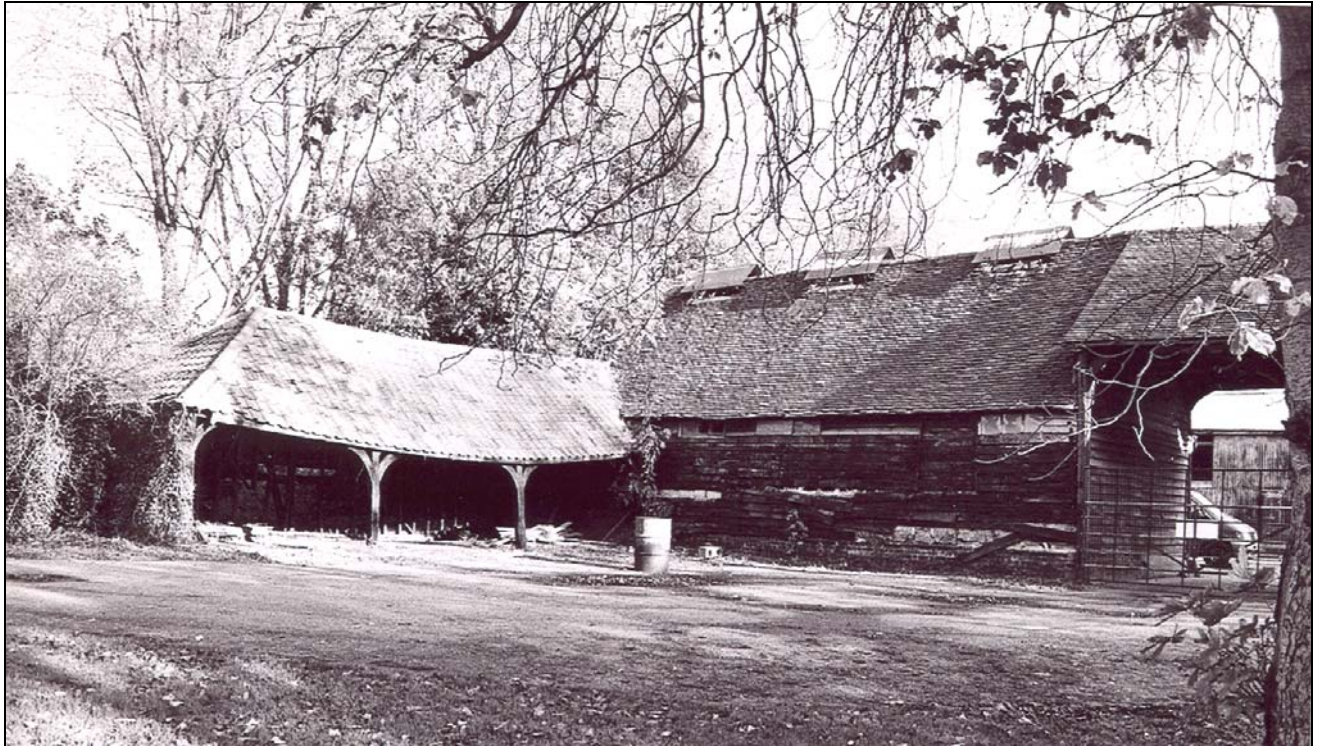


Plate 15 Front of Stables 4 with Cartlodge 7 viewed from west



Plate 16 Stables 4 viewed from south, inside yard

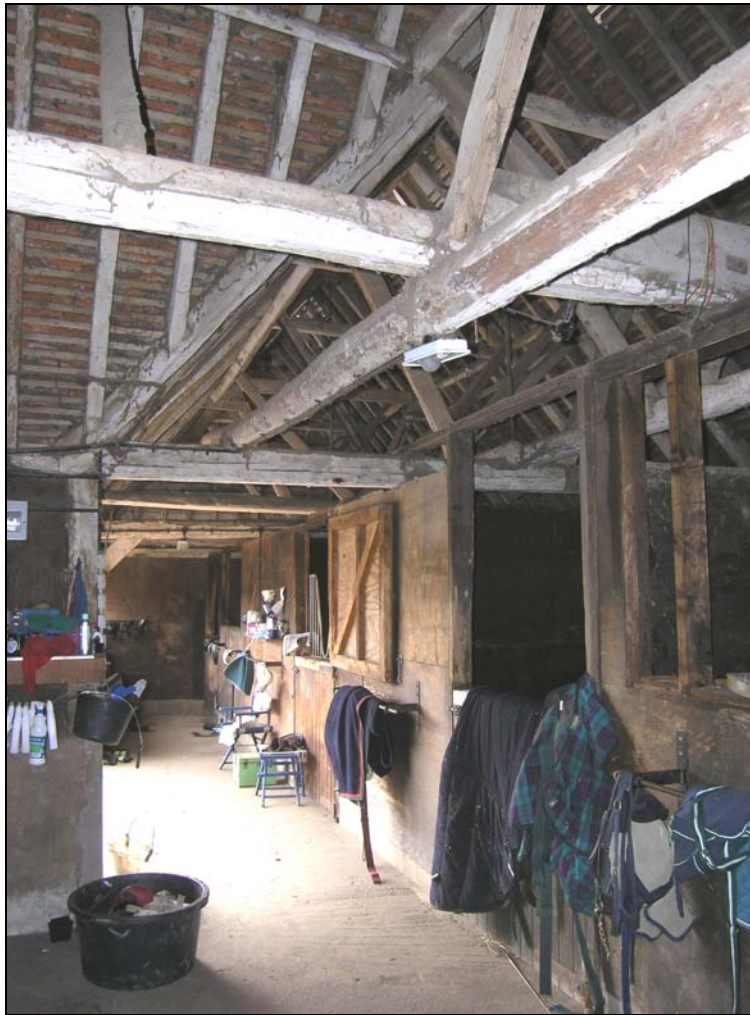


Plate 17 Interior of Stables 4 viewed from north-east



Plate 18 Stables 5 viewed from west



Plate 19 Stables 5 and Loose Box 6 viewed from west



Plate 20 Loose Box 6 and Cowshed 9 viewed from paddock south-east



Plate 21 Inserted door into Loose Box 6 and plinth wall to late 19th-century south-east range



Plate 22 Interior of Loose Box 6 showing roof truss and viewed to paddock



Plate 23 Cartlodge 7 viewed from west

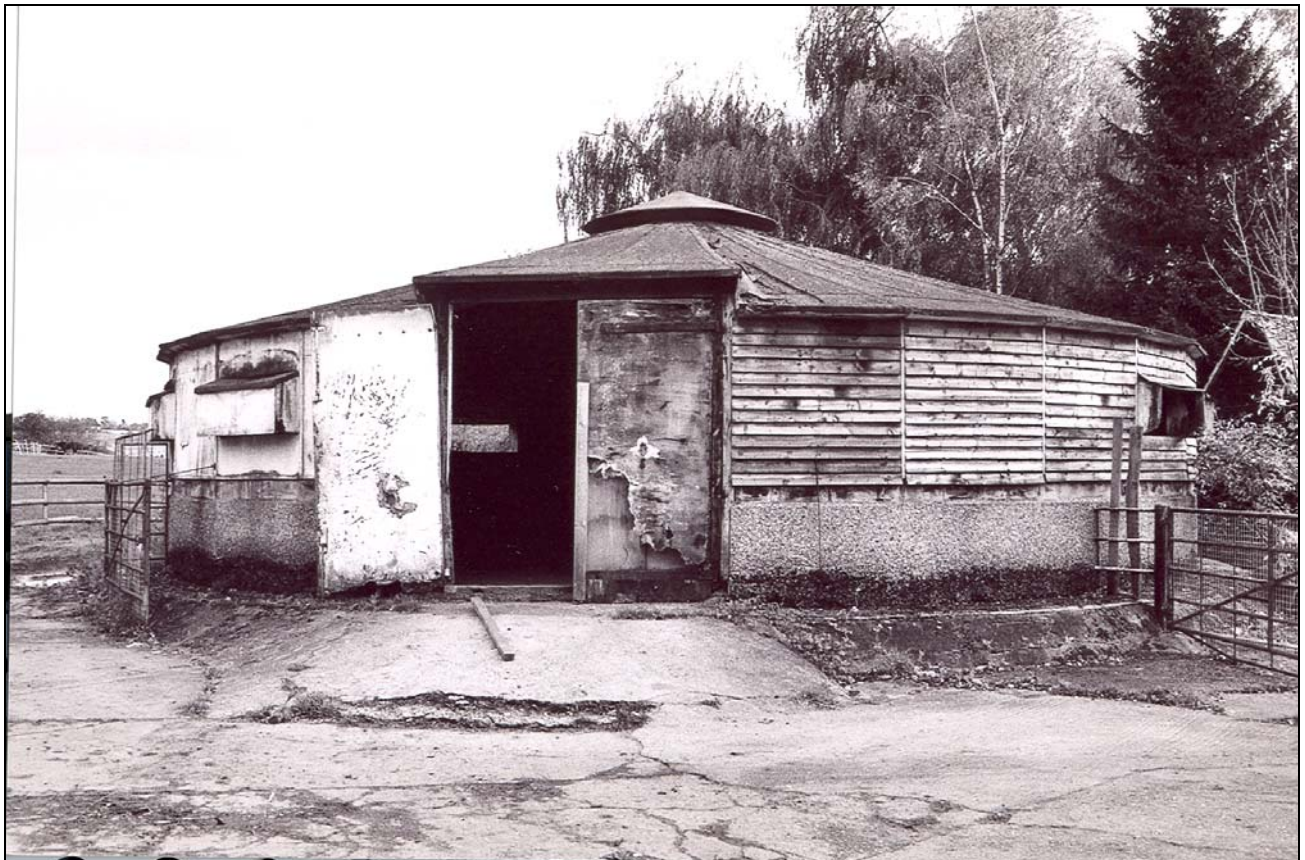


Plate 24 Horse Ménage 8 viewed from west



Plate 25 Interior of Horse Menage 8



Plate 26 Cowshed 9 viewed from south

BURY FARM: EPPING UPLAND

INTRODUCTION

Bury Farm, formerly known as Epping Bury Farm, was part of the Copt Hall Estate and recorded in the Tithe Award, dated 28.02.1838, as the tenancy of Joseph Kirkby with the estate being in the ownership of John Henry Conyers. The collection of farm buildings, situated to the NE of the farmhouse, and the subject of this survey, are depicted on the Tithe Map as forming a U shaped complex with the southern end open. However, the Chapman and Andre map of 1777 shows the house block centrally on the site with buildings to the north and south and the stream, flowing SE to NW, crossing the lane and forming the NE boundary of the farmstead. There is no first edition OS map in the Essex Record Office but by the second edition, 1896, the farm buildings are mapped as a complete courtyard form with open shelter sheds running across the centre of the courtyard from NE to SW. The stream still forms the NE boundary of the farmstead but is now culverted under and along the lane marking the northern corner of the site before continuing to form the NE boundary of the farmstead. Was this a C19 diversion of the stream to allow additional area for the new complex shown on the Tithe map? The SE side of the complex is enclosed and the cart shed to the NW of the complex is another addition. Very little change took place between the second edition map and the new series, revised in 1936, except for an internal change to the boundaries of the shelter yards. The main access was constant on all three maps, through a covered way in the NW range of buildings and with a secondary opening in the SW range of buildings that gave access between the farmhouse and the yard.

The overall size of the farm at the time of the tithe survey was approximately 472 acres with the largest land use being meadow c. 260 acres, arable c. 117 acres and c. 95 acres of pasture. As with any tenanted farm the woodland was controlled by the owner. The buildings reflect the dominant livestock farming regime, a small three bay barn and the rest of the complex relating to animal husbandry.

THE BARN

This building contains some of the oldest elements of timber-framing within the existing farm complex that was the subject of this survey. Much of the timber is reused and it is now difficult to state if the barn has been the subject of constant repair, using second-hand timber, or if it represents a collection of timbers from various sources assembled to provide a barn to the NE of the farmhouse. The 1777 map evidence supports the scenario that the barn was definitely before the addition of the complex relating to animal husbandry. This is typical with few animal buildings in place before the C18

The main structure of the aisled barn consists of two pairs of jowled arcade posts, axe converted to a box section from oak trees. These posts have empty mortices at the top, facing into the aisles, for shores. These were bracing timbers taken down from the posts, crossing the aisle ties, and connecting with the side walls or a return cill. There are also empty mortices, below those currently housing the aisle ties showing that the original external walls would have been 0.75m. lower. The arcade posts to the SE of the midstrey have mortices, facing into the main body, consistent with a mid rail to form a division across the barn. This was convenient when storing different crops within the one building. The tie beam also has additional mortices for studs rather than the typical double pegged mortices for a pair of braces.

The NW end wall has one jowled arcade post at the end of the NE arcade that has similar empty mortices for a shore and aisle tie as the central pair. The mid rail has been raised from the original position, perhaps as the result of building onto a plinth. The NW arcade post is a replacement as evidenced by the empty mortices at regular centres up the face of the post. The tie beam has empty mortices for regular pegged studs that do not line up with the existing infill which is a late primary braced framing. The aisle framing to the NE has been lost when the corner was cut out to accommodate the adjoining building and the aisle to the NW is a later extension.

The SE end wall also has one original jowled arcade post at the end of the NE arcade that has empty mortices matching those of the other arcade posts and the lower mortices for mid rail and aisle tie. The arcade post to the end of the SW arcade is again a replacement making it likely that when the aisle was altered the corner posts were replaced. Again the infill is of late primary framed bracing.

The arcade plate is joined by edge halved and bridled scarf joints to both sides of the central arcade posts. The scarf joint also has a face peg consistent with a C15 date but the scarf joints are short in length, average 0.37m. with bridles of average 0.12m. length, suggesting a later date. There is also the inconsistency of brace mortices to the arcade posts either side of the midstrey bay but no brace mortices to the underside of the NE arcade plate. Similarly there are empty mortices to the underside of the SW arcade plate, consistent with this being a fully framed wall of a single aisled barn, but they are short in length and un-pegged as in later timber framing. Braces both to the main cross frames and the arcades are not matched pairs and represent a mix of various ages.

The framing in the NE external wall is of mainly reused medieval studs, of similar size to the rafters, but again the mortices in the underside of the aisle wall plate do not match up with the existing stud positions. The rafters to the NE aisle are reused whilst those to the NW aisle are modern 0.100 X 0.050m. section. The wagon entrance to the barn is through the great doors in the NE wall where additional height has been gained by a gabled roof set at arcade plate height. There is no projection beyond the aisle walls to form a wagon porch. There is now no evidence of an opposing low door as the aisle has been rebuilt.

The roof construction is of side purlin form with collars morticed into the principal rafters and queen struts down to the tie beam. The paired common rafters show signs of soot blackening and also have collar cut-outs consistent with a former use in an open medieval hall with crown post roof. This roof has then been strengthened with additional purlins and struts. Many of the paired rafters have scribed carpenter's marks but there is no pattern to their use either in position or pairing. Other carpenter's marks were noted such as the wide chiselled I to the back of the arcade post to the NW of the midstrey. This would have been consistent with the marking of the various framing elements for erection in the C18.

The brick plinth appears to have been of at least two builds and consists of bricks of C18 date on the SE corner with the lower courses in English bond and Flemish bond above both finished with queen closers at the corner. The plinth to the front of the barn, NE, is built in C19 bricks and all in Flemish bond.

Range 1

This range laps round the north corner of the barn and forms part of the front enclosure from the barn to the covered access entered from the NW. Formerly a timber-framed building the walls have now been replaced with concrete block leaving

the timber wall plates, oak and elm, joined with short fully bladed face halved scarf joints, four roof trusses and the timber gable adjoining the covered way. The tie beams incorporated into the stressed timber trusses are of oak and reused and have empty mortices for queen struts and braces. The stressed oak trusses are formed from rafters and ridge boards set into the ridge boss that has an iron bar taken through the collar and tie beam to a square nut set into the soffit of the tie beam. The collars are tenoned into the rafters of the truss and cut to take the purlins. These are also supported on struts nailed to the collars and set into the tie beams. The rafters are a mix of reused and those contemporary with the trusses. The gable wall is of typical late close studding with the studs, 0.100m x 0.07m average section, at approximately 0.4m centres.

Range 2

Of L shaped plan this range forms the remaining section, from the covered way across the front elevation and returning to form part of the NE side, of the U shaped complex shown on the Tithe map. The building is timber-framed but as it is clad externally with feather-edged weather boarding and sheeted internally the form of framing cannot be determined. However, where the wall has been removed the unpegged empty mortices for studs at 0.375 centres can be seen in the soffit of the oak wall plate. Stressed oak trusses are used at bay divisions and although these are very similar in design to range 1 the purlins, in this range, are set into both the collar and the rafter. In range 1 the purlins are joined with splayed scarf joints however in this range they are butted at each truss. Additional bearers have been added mid span and support struts from the purlins. Rafters are mainly reused. One truss has clear chiselled carpenter's marks, I and II to both tie beam and bottom of the struts. Braces, contemporary to the trusses, survive on some trusses. The gable wall to the adjoining range 3 is simply of close studding running from rafter to tie beam.

Range 3

This range is clearly added to range 2 and has had the rear wall replaced with concrete block and the front wall removed leaving evidence of unpegged mortices for studs in the soffit of the wall plate. The wall plates are of oak and joined by fully bladed face halved scarf joints. The four oak timber trusses are of conventional housed side purlin form with struts giving additional support between the purlin and tie beam. Three of the tie beams are reused and it is only the furthest one from range 2 that appears contemporary to the roof truss. At this end on both the second edition and the new series a narrow span building is shown at right angles to the main ranges. Does the new truss represent an extension to the range when the central shelter sheds and building where demolished? Oak rafters are of the standard section 0.10m x 0.05m.

Range 4

Constructed as a timber-framed building the frame is now hidden by external feather edged weather boarding and internal sheeting. The oak wall plates are joined by fully bladed face halved scarf joints and the timber roof trusses of similar form to those in range 3. The oak tie beams are reused and have mortices for queen struts and for braces, some of which have been used. The oak rafters are all of standard section, 0.10m x 0.05m, as range 3. The existing wide entrance has meant the removal of original studs, shown by empty mortices, and was also the position of the original narrower door.

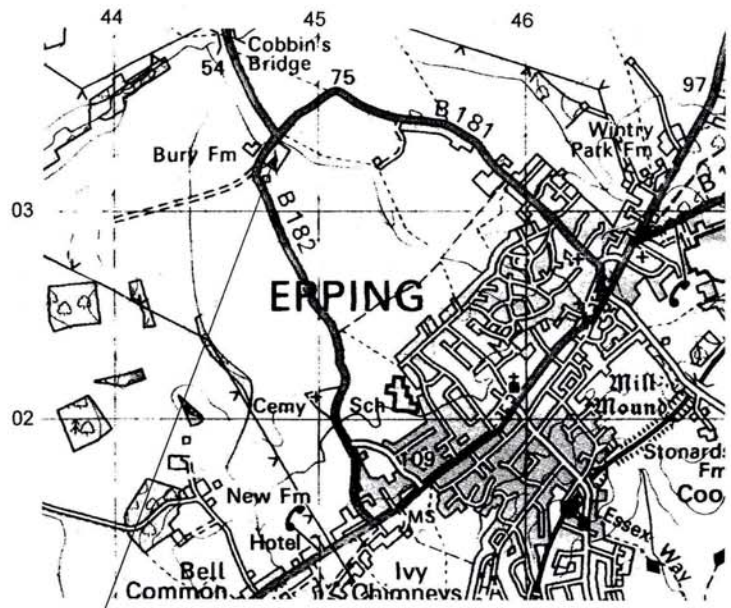
Cart Lodge

This is the only building within the complex that has been built using all new materials and in soft wood and represents a good example of a late Victoria cart lodge. The NW and NE walls are constructed from primary braced framing and although the studs are tenoned into the wall plate they are not pegged and simply nailed to the diagonal braces. The wall plate is now joined by a simple halving joint. The roof is hipped to the road and comprises of two trusses with an open frame against range 2. The open SW elevation has posts at the main bay divisions and curved braces tenoned into the post and wall plate. The roof trusses are of simple side purlin form with the purlins supported on struts down to the tie beams and straight braces tenoned into tie beam and post. Between the trusses the purlins are supported by collars.

Conclusion

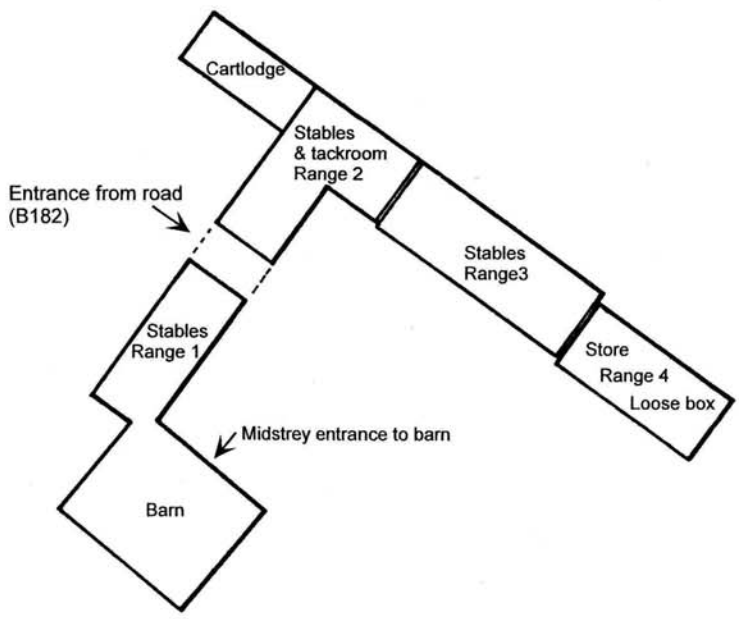
From the map evidence and that of the buildings it is suggested that the barn was rebuilt using salvaged timbers from a number of buildings in the early C18. The main arcade posts appear to have come from a 15th century barn with the rafters and possibly some studs from a medieval open hall/s. The primary braced infill is typical of early 17th century framing and although the arcade plates exhibit archaic scarf joints the un-pegged mortices in the soffit of the SW arcade plate also sit happily with this period making the original form of the barn as single aisled. The addition of the first single storey ranges, to the NE and NW, took place late 18th century or early 19th century and mark the period of improved animal husbandry. This improvement was continued through the 19th century until the plan emulated those of a planned farmstead. The second edition, 1896, clearly shows the addition of the cart lodge and a date of late C19 century would be appropriate for this type of structure built of standard softwood sections in primary braced construction. As such the remaining buildings of the complex show how the changes in animal husbandry to maximise on beef and milk production were implemented during the 19th century.

Bury Farm, Epping Upland, Essex.



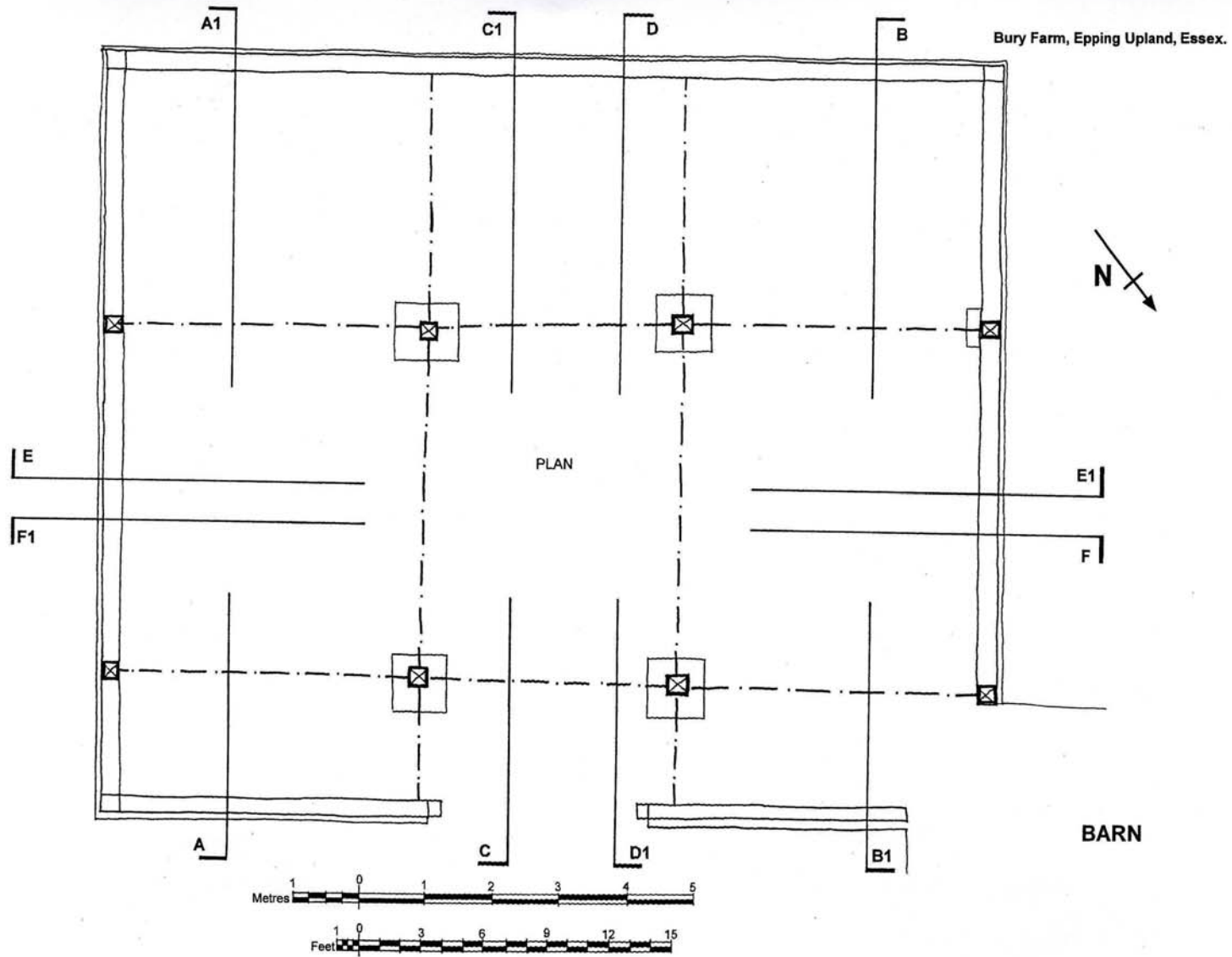
Bury Farm site; map ref. TL4478 0329

Surveyed & drawn by B A & T E Watkin, September 2005. BuryFarm10.CNV/MD

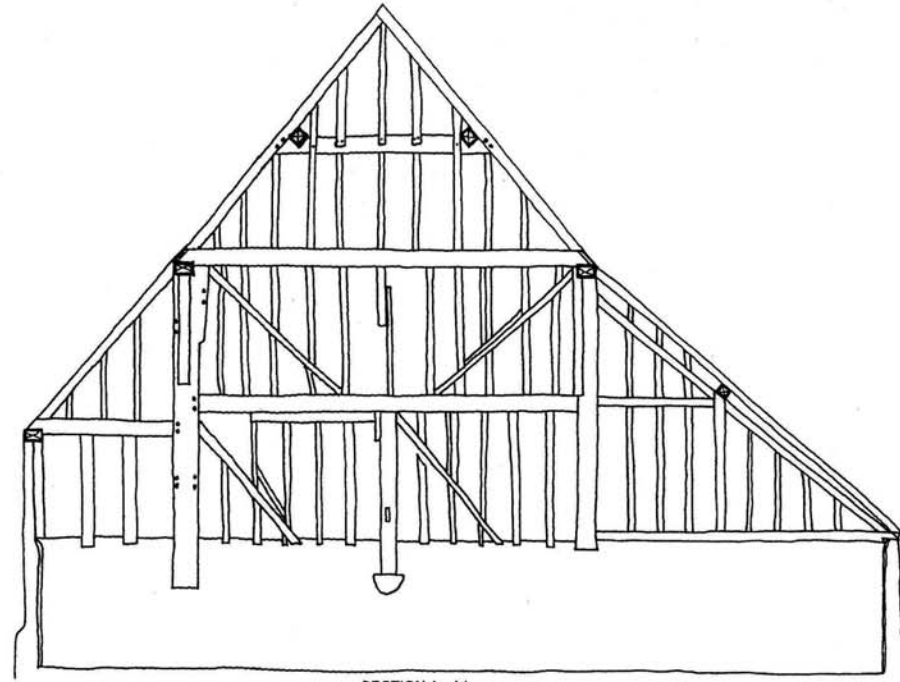


LAYOUT OF FARMYARD AT SURVEY
 (Only surveyed buildings shown)

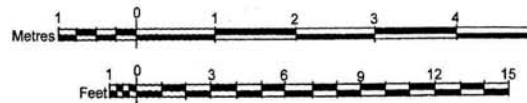
Surveyed and drawn by B A & T Watkin, Sept. 2005. BuryFarm15.CNV/MD.



Bury Farm, Epping Upland, Essex.



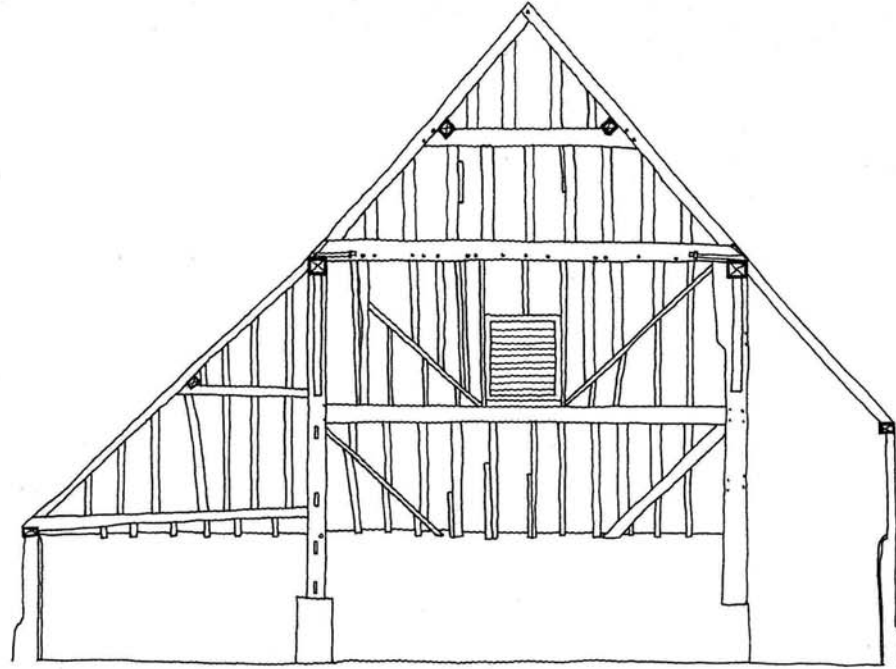
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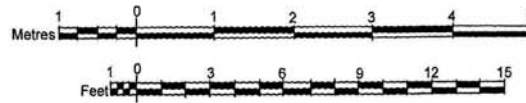
INSIDE OF SOUTH EAST WALL

BARN

Bury Farm, Epping Upland, Essex.



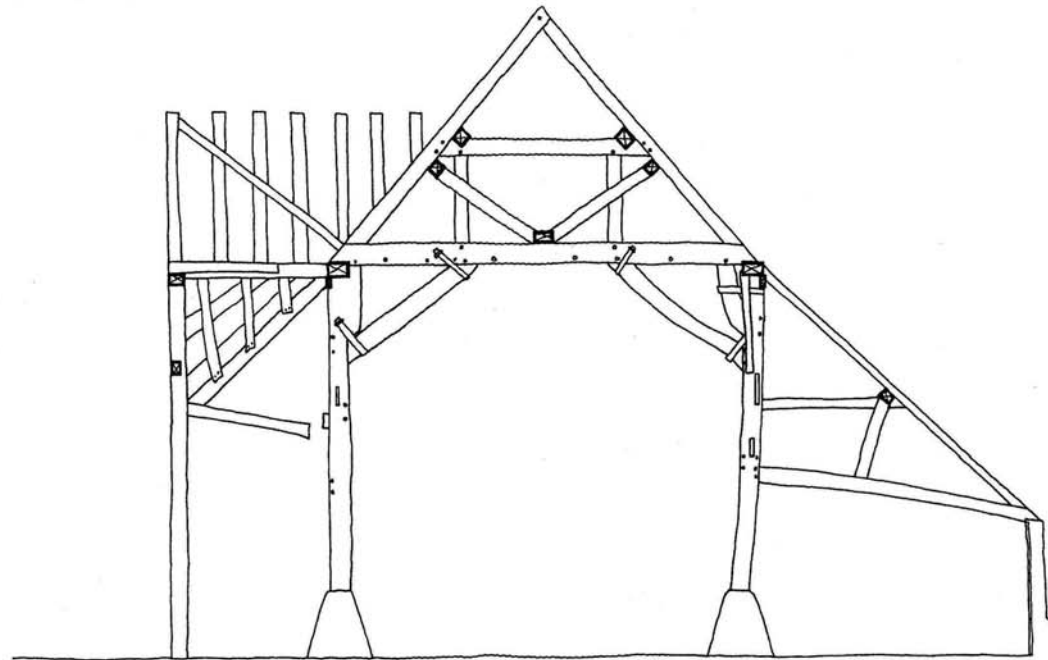
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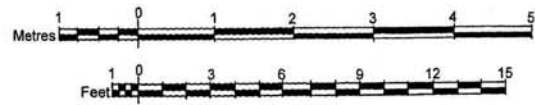
BARN

INSIDE OF NORTH WEST WALL

Bury Farm, Epping Upland, Essex.



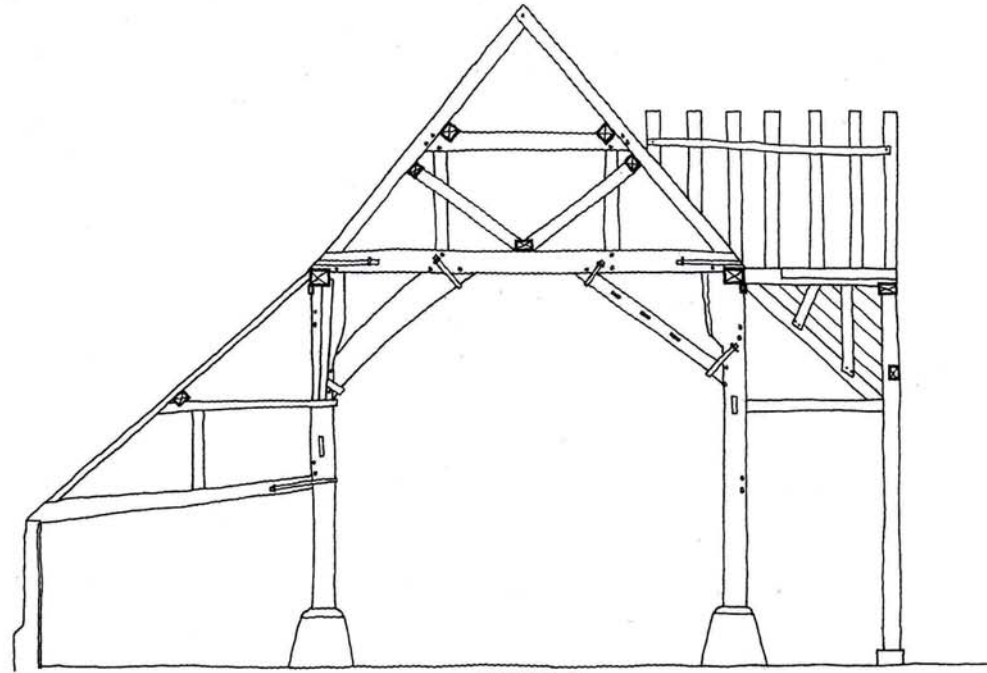
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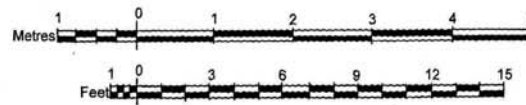
BARN

SOUTH EASTERN INNER TRUSS FROM THE NORTH WEST

Bury Farm, Epping Upland, Essex.



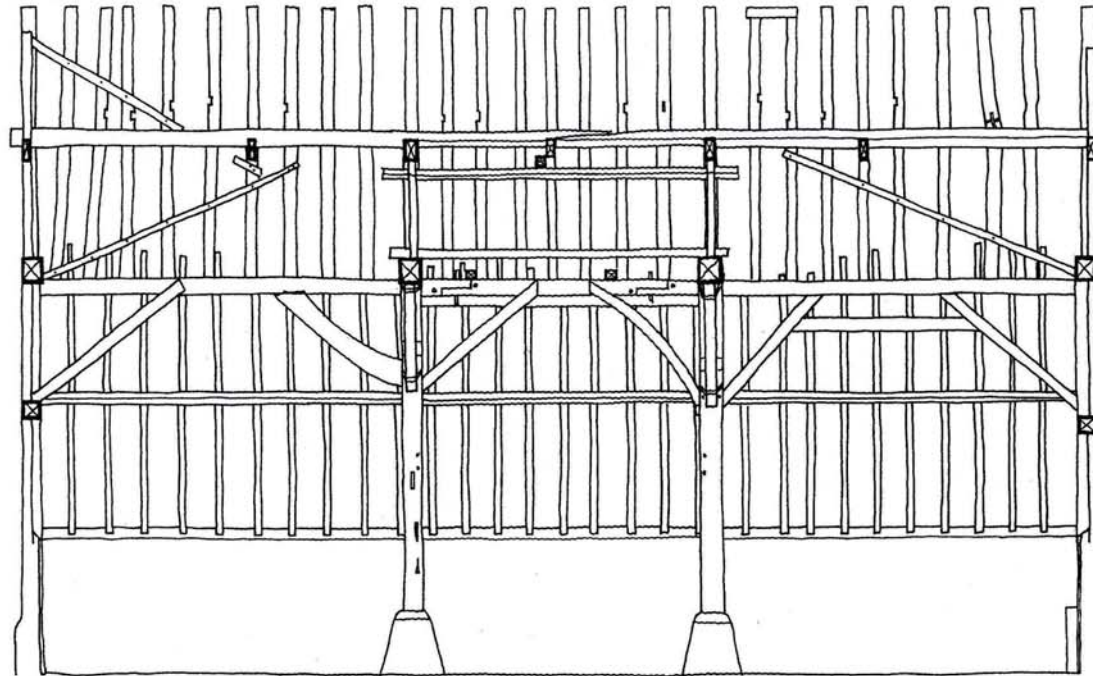
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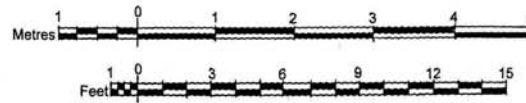
NORTH WESTERN INNER TRUSS FROM THE SOUTH EAST

BARN

Bury Farm, Epping Upland, Essex.



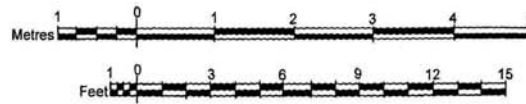
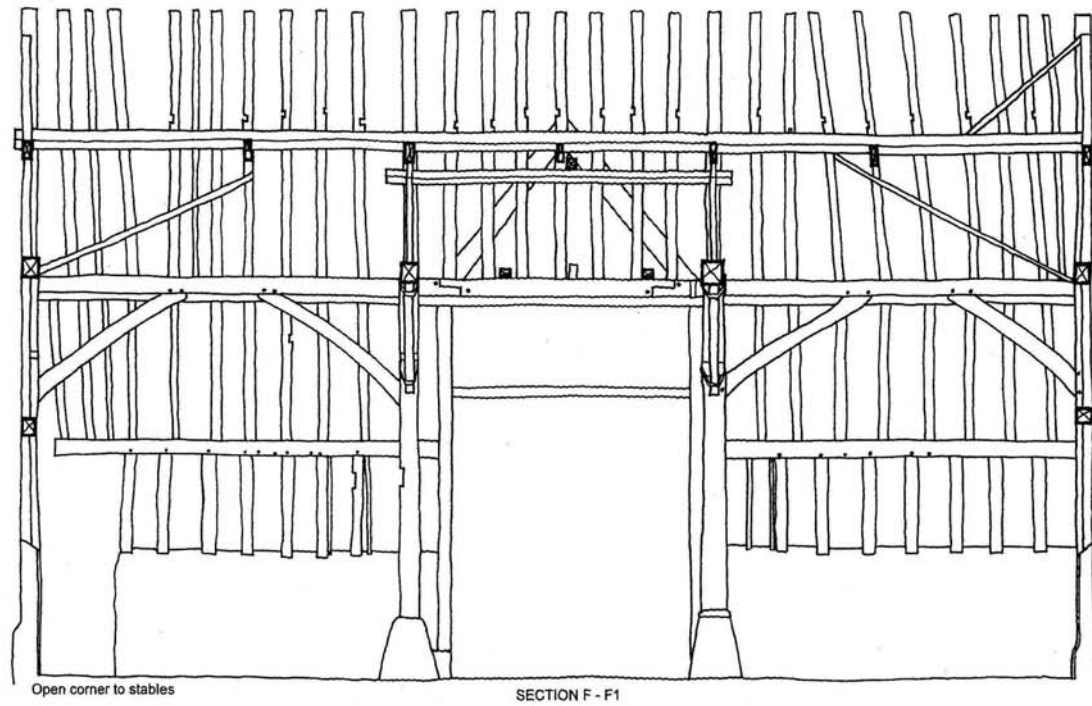
SECTION E - E1



BARN

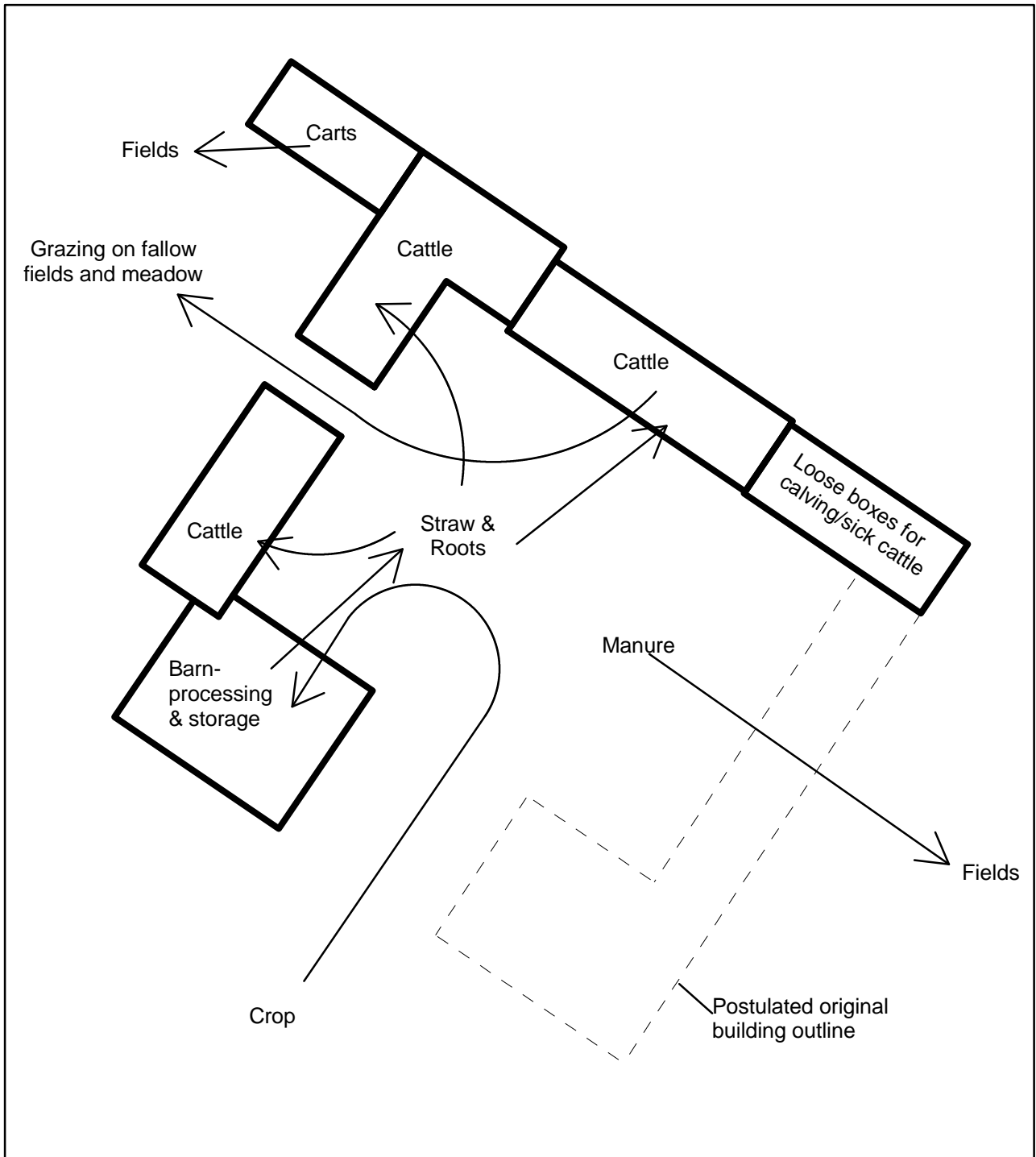
SECTION TO INSIDE OF SOUTH WEST WALL

Bury Farm, Epping Upland, Essex.



SECTION TO INSIDE OF NORTH EAST WALL

BARN



Appendix 2: Process flow diagram

Appendix 3: Contents of Archive

1. Introduction

- 1.1 Brief for works
- 1.2 WSI

2. Research Archive

- 2.1 Copy of report
- 2.2 Copy of report pdf-formatted

3. Site Archive

- 3.1 Site photographic record (digital images, 120mm colour prints, 35mm monochrome prints and transparencies)
- 3.2 Site notes & plans
- 3.3 Specialist report and timber frame survey

Appendix 4: EHER Summary Sheet

Site Name/Address: Bury Farm, Bury Lane, Epping Upland, Essex	
Parish: Epping Upland	District: Epping
NGR: TL 4480 0322	Site Code: EPBF 05
Type of Work: Historic building recording	Site Director/Group: Andrew Letch ECC FAU
Dates of Work: 9th & 11th September 2005	Size of Area Investigated: N/A
Curating Museum: N/A	Funding Source: Mrs. M. Sanchez
Further Work Anticipated? None	Related EHCR Nos.: EHER 33507
Final Report: Summary in EAH	
Periods Represented: post-medieval to 20th-century	
<p>SUMMARY OF FIELDWORK RESULTS:</p> <p>Recording of a late 18th/early 19th century planned farm complex was undertaken prior to residential conversion. The buildings comprised an early 18th-century barn and U-shaped group of ranges open to the south-east to the north of the grade II listed 15th-century farmhouse. A second contemporary planned farm group stands to the south-west, which is unusual; outside the area of conversion. The site has Saxon origins as the location of 'Epping Bury.'</p> <p>The earliest structure was the barn, originally built single-aisled with a possible porch lean-to on the rear (1838 tithe map). In the mid-late 19th-century this was replaced with a second aisle. Framing comprises a significant amount of reused timbers from a 15th-century aisled barn, medieval hall house, and perhaps other medieval structures. Queen post trusses, primary braced framing and brick plinth wall are all contemporary with the original build.</p> <p>The early 19th-century animal ranges are arranged in an inverted U-shape, open to the south-east and incorporating reused queen post roof trusses. Large areas of primary braced walling were rebuilt in the modern period when the ranges were converted to stables. This action either removed or obscured earlier fixtures and fittings.</p> <p>Bury Farm is an early example of a planned Essex farm, whose owners, the Copped Hall estate in Epping, were able to use their wealth to 'improve' their farmstead in lines with high farming ideals in the early 19th century. Although not a model farm as such, the layout of cattle ranges set around a central yard open southwards was an established form that was built onto throughout the Victorian period. It was not until the middle and later parts of the century that the planned farm became widespread in Essex.</p>	
Previous Summaries/Reports Bury Farm Epping: building report & frame survey by B. A. & T. E. Watkin, commissioned by FAU	
Author of Summary: A. R. Letch	Date of Summary: 3rd March 2006