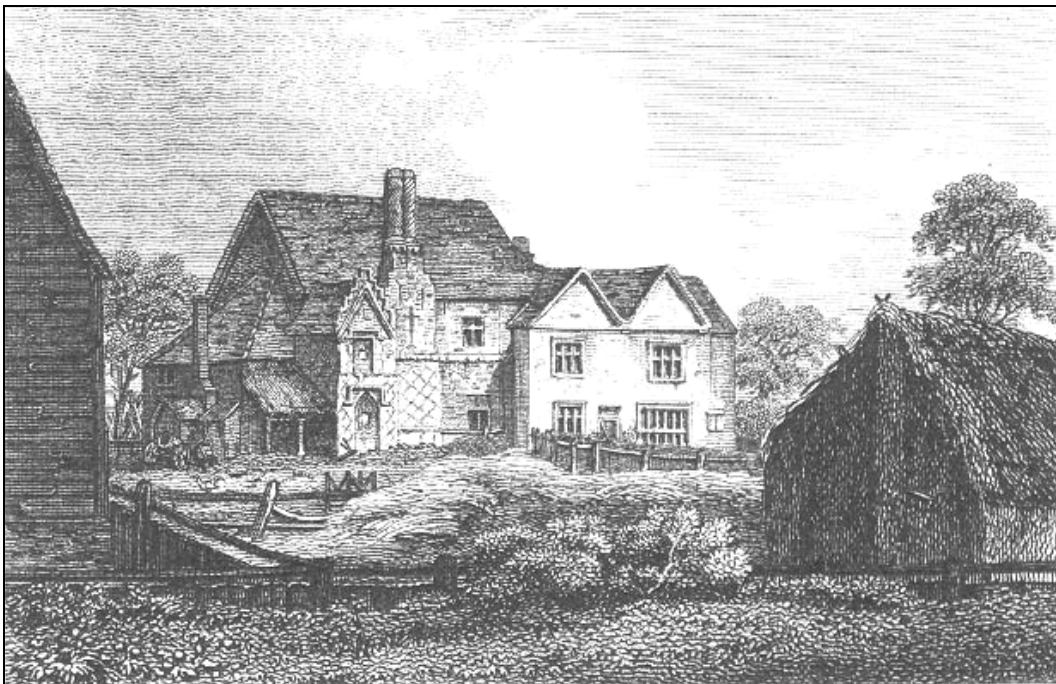


**HISTORIC BUILDING RECORDING OF BARN & OUTBUILDINGS
AT
LITTLE WARLEY HALL FARM
LITTLE WARLEY
ESSEX**



Essex County Council

Field Archaeology Unit

February 2007

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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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CONTENTS

1.0 INTRODUCTION	1
2.0 BACKGROUND	1
2.1 Site location and description	1
2.2 Planning background	2
2.3 Historical background & development	2
2.4 Farming in the post-medieval period	4
3.0 OBJECTIVES	5
4.0 DESCRIPTION OF WORKS	6
5.0 HISTORIC BUILDING DESCRIPTIONS	7
5.1 General description	7
5.2 Barn 1	7
5.3 Stables 2	13
5.4 Stables 3	14
5.5 Stables 4	14
5.6 Covered yard 5	15
5.7 Stables 6	15
5.8 Stables 7	15
6.0 DISCUSSION AND PHASING	15
7.0 CONCLUSION	17
ACKNOWLEDGEMENTS	18
BIBLIOGRAPHY	19

APPENDICES

Appendix 1: Historic engravings of Little Warley Hall

Appendix 2: Miscellaneous modern structures

Appendix 3: Contents of archive

Appendix 4: EHER summary

FIGURES

Fig. 1 Site location and block plan

Fig. 2 Chapman & Andre map, 1777 (plate 22)

Fig. 3 Tithe map of Little Warley, 1838 (D/CT 38B)

Fig. 4 Second Edition 25" OS map, 1896, (sheet 75.3)

Fig. 5 New series OS map (third revision), 1938

Fig. 6 Ground floor plan of barn & stables

Fig. 7 First floor above dairy

Fig. 8 Section A-A1 through Barn 1

PHOTOGRAPHIC PLATES

- Plate 1 Barn & farm buildings viewed from south-west
- Plate 2 Barn and Covered Yard viewed from south-east
- Plate 3 Barn and Covered Yard viewed from north-west
- Plate 4 Interior of Covered Yard & stables either side of Barn porch, viewed from south-east
- Plate 5 Barn and Stables 2 viewed from south-west
- Plate 6 Rear of Barn & Stables 2a from west
- Plate 7 Interior of Barn viewed from north
- Plate 8 Interior of Barn viewed from south-east
- Plate 9 Variations in wall framing between upper and lower registers in bays 1 & 2 east
- Plate 10 Typical edge-halved and bladed scarf joint in wall plate
- Plate 11 Bridle scarf joint with squinted abutments and over-lipped face in ground sill
- Plate 12 Possible reused ship's timber
- Plate 13 Barn porch viewed from south-west to Covered Yard
- Plate 14 Interior of Dairy viewed from south
- Plate 15 Interior of Dairy viewed from north-east
- Plate 16 Roof-space above Dairy viewed from south
- Plate 17 Openings on bays 4 & 5 south-west wall of Barn
- Plate 18 Interior of Stable 2a viewed toward cow doors
- Plate 19 Interior of Stables 2b
- Plate 20 Gable to earlier brick structure preserved within south wall of Stable 2c
- Plate 21 Barn porch and Stables 3
- Plate 22 Interior of Stables 3 showing external daub render to Barn
- Plate 23 Stables 4 inside Covered Yard viewed from north-east
- Plate 24 Feed mixing machine inside Stables 4
- Plate 25 Interior of Covered Yard viewed toward south-east (Stables 6)
- Plate 26 Reused partition inside Stables 6
- Plate 27 Stables 7 viewed from south-east
- Plate 28 Interior of Stables 7

HISTORIC BUILDING RECORDING OF BARN & OUTBUILDINGS
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LITTLE WARLEY
ESSEX

Client: Mr & Mrs M. Sahirad

FAU Project No.: 1709

NGR: TQ 6038 8860

Site Code: WARW 06

OASIS No.: essexcou1-23658

Planning Application: BRW/55/2006

Dates of Fieldwork: 1st-2nd November 2006

1.0 INTRODUCTION

A programme of historic building recording was undertaken by Essex County Council Field Archaeology Unit (ECC FAU) prior to conversion to residential use of a 16th/17th century barn and 20th-century farm outbuildings. The work was funded by the owners, Mr & Mrs M Sahirad, 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.

Copies of the report will be supplied to ECC HEM and the Essex Historic Environment Record (EHER) at County Hall, Chelmsford. An OASIS entry has been created. The archive will be stored with HEM and the NMR.

2.0 BACKGROUND

2.1 Site location and description (fig.1)

Little Warley Hall is a grade II* listed early 16th-century brick structure (LBS 373493) standing to the west of the village (TQ 6038 8860) and to the south of the A127 trunk road that splits the village in two. The farm and hall traditionally had shared access off Little

Warley Hall Lane and a minor road that leads westwards past the church (fig.1). However, the hall now has exclusive access by its own track south of the church.

The farmstead was tied to the hall and it was not until after it was bought by Essex County Council in 1919 that it began to function separately. The main structure is the barn, which is timber-framed and believed in the architect's survey (Clarke 2006) to date to the 16th-17th century although, like many barns, its built history is complicated. Despite its age, the barn is not listed. Most of the other buildings are stables set either side of a covered yard, with additional stabling and outbuildings on the peripheries (fig.1). These, including the farm house to the west, were built in the 1950s, when the farm functioned as a livery stable for horse breeding.

Topographically, the farmyard occupies an area of fairly level ground that slopes away to the south. The landscape is essentially arable in character, with farms and houses spread along the Lane and fields either side. Along the busy main road there are garages and other services. As the farm has only recently ceased to be a working unit, the buildings are in good repair and vegetation has not been allowed to grow up around the structures, presenting ideal conditions for recording.

2.2 Planning background

Brentwood District Council received a planning application (BRW/0055/06) for change of use and conversion of farm buildings to residential use in March 2006. Mindful of the possible effects on the historic integrity of the farm complex and primarily the barn, ECC HEM attached a full archaeological condition to the planning permission, based on advice given in Planning Policy Guidance Note 16: Archaeology and Planning (DOE 1990).

2.3 Historical background & development

Cartographic and documentary research at the Essex Records Office (ERO), Chelmsford, provided information regarding the development of the farm. Where appropriate, their references are included within the text. It appears the farm grew gradually around the hall during the 19th-century and it was only in the 1950s that the farm expanded in its own right.

Little Warley was known as Warley Parva before the Norman Conquest (Harper 1956). At this time it consisted of a long strip of land running north to south covered in woodland and scrub. There were 12 people living in the village around the manor, i.e. the present day hall. Marshes and the 'Mardyke', a stretch of river used to ship cargo, marked the southern boundary. The Mardyke was an important route for bringing all sorts of goods up from

Tilbury, especially building materials and sea coal, but is now only a small stream (Harper 1956).

The barn is described as 16th/17th-century in the brief (HEM 2006) and has several post-medieval characteristics. It could be contemporary with the building of the hall in the early 16th-century or later works in the 17th-century (listedbuildingsonline 2007). It is first shown, in isolation, on Chapman and Andre's map of 1777 (fig.2).

In the 17th-century, Oliver Cromwell stayed at Little Warley Hall on his way to property in Halstead. His guards are said to have stayed in the barn (Mr. N. Stockley pers. comm.).

Early 19th-century engravings depict the main north façade of the hall with farmyard in front (cover and Appendix 1a). The first of these, drawn by W. Willis in April 1817, shows a fenced yard with a barn along the west side and a thatched animal shed or haystack and deeply-littered yard. The barn is not the same as the one that stands today to the east of the paddock (fig.1). The second, drawn in 1833 (Appendix 1b), shows a brick-walled yard with sheep dogs feeding in the foreground. In front of the house, maids are throwing grain for the hens. Unfortunately, as the farmstead only provides the setting to the hall rather than the focus, the barn subject to the recording condition is not included. However, it is a good document of the range of farmyard activities on the more relaxed 'unimproved' farmsteads.

Little Warley tithe map of 1838 (D/CT 38B, fig.3) depicts a narrow range along the north end of the barn (cattle shed?) forming an L-shape, the other barn and an unidentified building (since removed) in the north-east corner. It is hard from the map to decipher the precise layout of the barn and other buildings that appear to adhere to it. The tithe award (D/CT 38A) gives the owner of the hall as Charles Winn, and John Parson the occupier. Plot 146 is described as 'the homestead', but individual structures are not named. Plot 147 to the rear of the barn is referred to as 'barn meadow'. In all the holding amounts to around 100 acres; a high proportion of which is arable land (73 acres). Winn owned much of the western side of the parish. Clearly a large landowning family, George Winn, perhaps Charles' father, had sold Warley Common for the East India Company barracks in 1805 and built Warley Lodge c.1820.

By 1872, when the first edition OS map was produced (not shown), there has been little change to the farm. The area to the south of the barn porch has been filled-in by a structure pre-dating stables 4, and the yard divided internally. Both features are seen more clearly in

fig.4, the second edition OS map published in 1896. Both maps show separate yards either side of the drive to the hall that now form the eastern paddock (fig.1).

The farm was compulsory purchased by Essex County Council in 1919 (VCHE 1978) and continued to be rented out to tenant farmers as before. The same L-shaped layout continued and is replicated on the 1921 OS map, again with further slight divisions (not shown). By the 1938 OS map (fig.5), the barn has become the only early building left standing, and other structures have been added. These are likely to have been associated with a dairy herd of 12 cows (Mr. Stockley pers. comm.).

During the 1950s, under the tenancy of Mr. John Beard, the farm was reorganised to become a livery for horses. Mr. Beard had been a submariner during the war. He enlarged the farm by adding the covered yard and stables, as well as the farmhouse (Mr. Stockley pers. comm.).

In 2006 the farm was sold by the Council and the livery closed.

2.4 Farming in the post-medieval period (16th-18th century)

Medieval farm buildings tended to adopt an unplanned plan form, scattered around the farm house rather than around a central courtyard. Farms in the south-east of the country were 'mixed', producing cereals and livestock and consisted of a barn, where crops were threshed and stored, granary to store the grain (although the farmhouse was often used instead) and stable, built with internal hay lofts. Except for the horses, animals were kept outside or in temporary shelters. Implements (ploughs, etc) and wagons were stored in sheds or in the threshing floor of the barn. The relationship between crops and livestock was close. Cereals were produced as a cash crop and to feed livestock, with enough to keep by for a few animals over the winter. In return, the animals provided transport, wool, meat or dairy products and manure for the crops.

The medieval system worked on a three-year crop cycle, the third year being fallow to replenish the soil before the next crop. However, in the late 17th century, improvements in crop rotation, with the introduction of improved grasses and winter feed crops, heralded its end. Also, increased winter feed meant that more cattle could be kept for fattening and improvements in animal husbandry meant larger animals could be bred.

From the 1740s, the courtyard 'planned' or 'model' farm, established by 'improving' landlords, began replacing the earlier scattered farmsteads. Cattle were fed in one or more enclosed

yards, with an entrance to the south and a barn to north for shelter. In the yards manure was trod into threshed straw and the mixture added to the fields, increasing crop and straw yields.

Between 1840 and 1870, the period known as the 'golden age of farming', such improvement accelerated; based on increased demand for milk, meat and bread by the urban centres, utilising the growing railway network for distribution purposes.

However, the expense of the planned model farm in its purest form was a barrier to smaller landowners. Rather than demolish and build afresh, many farmers remodelled their farms. Thus some of the larger buildings, inevitably barns, were retained with new housing for livestock attached around a courtyard layout. This was the prevailing trend in Essex.

The golden age finished in the 1870s when bad harvests, coupled with importation of cheap American grain and refrigerated beef from Argentina, signalled the start of the Great Depression in agriculture. With protectionism a thing of the past, farmers had to survive by cutting costs and improving efficiency still further. Although the worst was over by the end of Victoria's reign, the depression was not ended until after the First World War.

Many Essex farmsteads today are composites of post-medieval barns integrated into a 19th-century courtyard layout and supplanted by 20th-century pre-fabricated structures, usually to one side of the traditional farm core. Inevitably in Essex, Britain's entry into the EEC in the 1970s accelerated the move to more intensive agriculture, amalgamation of estates and a shift away from mixed to arable farming. With larger economies of scale through larger machinery and crop yields, the smaller traditional farm buildings no longer have a role and, with the housing market booming, offer an attractive prospect for conversion.

3.0 OBJECTIVES

The purpose of the historic building survey was, as outlined in the brief (ECC HEM 2006), to investigate and record the timber-framed barn to RCHME level 3 standard prior to conversion. Associated structures, stables and loose boxes built in the 1950s were not included as a requirement, though brief descriptions are offered in the report to provide a complete record of the farmstead in its present state.

The record was required to consider the plan form of the site, materials and method of construction, building chronology, development and phasing, process flow, 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 historical trends in agricultural development and the local/regional significance/rarity of the buildings and context within immediate contemporary landscape.

4.0 DESCRIPTION OF WORKS

The barn and stables either side that are to be refurbished during the conversion works (buildings 1-4, fig.1) were recorded using base drawings (existing floor plans and sections) supplied by the architect and checked during the survey. The structures to be demolished to re-expose the historic barn date from the 1950s and are of limited architectural merit, but were surveyed roughly and general descriptions made as part of the record. The buildings were numbered and shown on the block plan of the site (fig.1). Three other structures outside the main farm focus are shown on the block plan and included as photographs in Appendix 2 at the back of the report but are not described in the text (i.e. modern stables, horse boxes and Dutch barn).

Existing architect's plans and sections were checked and annotated during the survey and are reproduced in the report as figs. 6, 7 & 8. External and internal architectural descriptions were made and building function assessed; although it is clear that all but the barn were built to stable horses.

A series of photographs (digital, medium format and 35mm black & white print) were taken to record the buildings internally and externally. Specific shots were taken of areas of important architectural detail, fixtures and fittings. Space for taking photographs was limited internally and externally because of the proximity of the structures to one another and partitioning inside the barn. The two long elevations of the barn were hidden in part by later additions but where their main areas of interest were photographed from inside the later structures. A representative selection of all photographs is reproduced at the back of the report as plates 1-28, and the remainder can be found in the archive.

Cartographic and documentary research was undertaken at the Essex Records Office (ERO), Chelmsford to understand the origins and development of the farm (section 2.3). Additional information was provided by Mr. Stockley and his wife, former farm tenants.

5.0 HISTORIC BUILDING DESCRIPTIONS

5.1 General description (fig.1)

The traditional dispersed farmyard was centred on the hall, with yards at the front and to the north-west, defined by an L-shaped planned layout. It was not until the main yard was covered, stabling added and farmhouse built that a more compact, inter-dependant layout was formed.

The modern farm layout (plates 1-3) forms a basic north-west to south-east aligned oblong block either side of the sheltered yard. The barn, which is clearly the oldest structure in the group, has been absorbed into the current layout between stables and covered yard. Stalls facing out onto the covered yard allow direct access to exercise, whilst stabling either end face either onto the paddock to the north or a small yard to the south for the same purposes (fig.1).

Apart from the covered yard, all the structures, including the main element, the barn, are built in clapboard-clad primary braced timbers. Having been used and maintained until recent times, the buildings are in good order; clean and largely free from damp, except for some missing roof tiles in the barn.

5.2 Barn 1 (figs. 6-8)

The barn is clearly the oldest and most architecturally interesting of the group and is the main subject of the survey. 18th-century mapping (fig. 2) shows it standing on its own to the north-west of the hall. In the 19th-century farm it was the dominant component of the north-western yard, with easy access from the fields at harvest time. Since the 1950s the structure has been somewhat engulfed by stables and associated structures of varying architectural merit. The reasoning behind their refurbishment/removal in the new development, put simply, is to re-expose the original building and enhance its landscape setting (Clarke 2006).

When first constructed, the barn was an important functional element for storing and processing grain. At harvest time, wagons would have brought the crop into the barn through the porch and unloaded. During the winter the corn was threshed on the threshing floor, in the middle bay. In recent years, the function of the barn has been less clear, though it is possible that the small cattle herd wintered in here. A dairy was incorporated into the south-eastern bays in the early-to mid-20th-century date, possibly in a part already partitioned-off for storage or livestock use. More recently, when horses were stabled at the farm, stores

were created inside the main part to store animal feed, and some processing may have happened here too. At the same time, hay and straw may have been kept here also.

Some of the studwork has woodworm, but much is in good condition. Most of the main framing is sound. Along the roof line, the rafters sit at a slight angle due to racking and there is a small amount of spreading, where some of the tie beams are unlocking from their posts from the weight above. However, most timbers are dry in good condition. Only a few are machine-sawn modern versions.

5.2.1 External description

Today the barn stands to the west of the farm complex, with its central wagon porch facing into the covered yard to the east. Either side of the porch are two-bay modern stable infills (buildings 3 and 4) and this side is largely hidden by the wide span of the covered area. Areas either side of porches are often filled-in later, or, on planned farms, used from the beginning as lean-to stores or animal sheds. The structure is raised on a 0.65m-high brick plinth that is largely hidden beneath modern render on both sides. However, exposed areas of brickwork in the wagon porch show 19th-century red bricks sized approximately 22 x 11 x 7cm (approx. 8½ x 4¼ x 2¾) laid in English bond. The walls are mainly clad in clapboard but there are areas of daub hidden by later additions that is likely to be the original covering. The boarding has weathered and been patched-in in places and requires re-coating in tar or similar. Boarding has been replaced since stables 3 were constructed, as the two are clad together (plate 3). Stables 3 and 4 occupy the sites of earlier structures, seen on 19th-century mapping (figs.3 & 4).

The roof is pitched at 45°, which is steep enough to take thatch, but now takes nicely-mellowed plain pegtiles. Either end is gabled, while the wagon porch is hipped (plate 4) although this is difficult to see. The southern gable end is clearly racking (plate 2) by c.0.7m which, although not excessive, is something that will require addressing during the conversion works (Clarke 2006).

Clapboarding on the north gable elevation crosses from the barn to stables 3 (plate 3), perhaps indicating the last time the barn was clad; probably in the 1950s when other structures were erected in the same material. The cladding has a somewhat mottled appearance from patching in fresher boards to the faded earlier ones. A door leads into the barn at ground floor level, whose wrought iron strap hinges are of some age, though are more likely to be 19th than 16th-century date. Above it, positioned centrally up to eaves level,

is the 'pitching door', where hay or straw could be pitched into the barn from a cart outside (Peters 2003) to fill the final bay (fig.6, plate 3).

The opposite gable, on the south-east dairy side has few, if any, primary features. A large area of boarding between the door and window on ground floor level has been replaced (plates 1 & 5) although original studwork on the inside shows there are no former openings here. However, the plinth has been rebuilt in concrete to control the outward bulge of the wall and perhaps the cladding was stripped when the plinth was repaired. Windows on both levels are modern plain wooden insertions of four (ground floor) and six (first floor) panes (plate 5).

Viewing of the two long elevations was difficult because of the later structures built onto them. The south-west elevation is mostly covered by the lean-to stables 2, which were partly occupied during the survey and not entered fully. The exposed northern bays have no features except for a narrow aperture cut high up in the boarding (plate 6) that may be associated with grain transfer or processing. Further to the south, behind Stables 2, are early features and others that are contemporary with the 20th-century additions to the barn. Of the latter is the boarded-up former cattle entrance to the dairy and another is an inserted doorway into the modern utility room 2a (fig.6). Earlier features are the two window/pitching hatch apertures on first floor level set into the open frame against Stables 2b/c (fig.6).

The main elevation, on the eastern side is now, apart from the porch, completely hidden by stables contemporary with the covered yard and is thus difficult to describe without describing the interiors of other structures themselves. The part of the elevation now housed within Stables 3 has significant remains of a daub render attached to it (plate 22), while Stables 4 displays only untarred clapboarding replacement. Porches were useful as parking areas for carts during a wet harvest and for storing carts and implements over the winter. The main wagon doors are Victorian in date, but were cut down in the 1950s to open into the new low covered yard. Rebates remain either side in the in-filled upper section where the door ledges were housed when shut. Threshold leaps are located either side of the doorway to contain the grain during threshing, and to keep animals in the yard out. The opening has been boarded up inside, but a half-heck door was inserted to control movement of livestock from the dairy/barn into the yard. There is an original door in the south side of the porch (fig.6) for the farmhands to use.

5.2.2 Internal description

Inside, the barn is laid out over five bays with a central wagon porch extending from the midstreys onto the former yard. Each bay is represented by heavy 24 x 26cm, slightly arched,

tie beams supported on pegged slightly curved braces. Except for the midstrey, the bays are uniform in size at 3.5m wide. It is usual for the middle bay to be wider, to allow the carts to be unloaded with ease. In this case it is 4m-wide. The two south-eastern bays are partitioned-off to form the dairy, and this change of use pre-dates the stabling. The rest retains its open plan, except for some small storage areas on the west side (fig.6).

The barn floor is made from concrete, probably laid in the post-war period. Many farms replaced the old threshing floors at this time which, unfortunately, accounts for their low survival. The plinth was rendered, covering the sill beam in many places. At the same time, the walls were lined-out in cement infill/concrete block work to a height of 1m, perhaps because livestock used the barn. This now obscures the base of the wall framing (plates 7 & 8).

The main framing is oak and consistent below and above the midrail, even though there are marked differences between the timberwork in the upper and lower registers (plate 9). Heavy posts (c.20 x 24cm) divide the bays, double pegged to plates top and bottom with rails across the middle, of similar scantling. The posts are plainly carved, without jowls, suggestive of a 17th-century date. Wall plates are approximately one bay in length and are joined together by edge-halved and bladed scarf joints (plate 10), which were introduced in the mid 16th-century but became common in the next. The only exception to this is on an exposed part of sill plate on the east side of bay B2 where a short bridle scarf joint with squinted abutments was discovered (fig.6). This is a typical medieval ground sill joint (Hewett 1980) and is likely to be a reused timber. The face is over-lipped, to prevent water penetration (plate 11).

Structurally, the wall framing is formed from two distinct builds (plate 9). Much of the lower register is original close-studding, with wide (c.18 x 12cm) studs set between 27 and 35cm apart, six per bay. They are tenoned, but seldom pegged, indicative of later (16th-17th century) carpentry. Most have axe cuts on the sides to hold wattles, indicating that originally the barn had wattle and daub walling. The lower register contains several studs with rebates to hold trenched bracing. Unfortunately, many have been turned or swapped around so they do not form a pattern. It is possible that they are reused timbers from an earlier building, but there is no other evidence to suggest this. It is unclear whether the building was braced internally or externally, but identifying the bracing type would help in dating the structure.

In contrast, the studwork in the upper register has been rebuilt in primary bracing, a construction technique adopted during the 16th century (Walker 1994) but more prevalent

during the 17th and 18th-centuries when good building timber was in short supply. Bracing in the upper register was removed to facilitate the rebuild, leaving empty mortice holes on the sides of the bay posts. Primary bracing is a functional, less attractive, method of construction, where the studs are nailed to pegged diagonal braces that divide the studs into two parts (plate 9). It enabled walls to be rebuilt without lifting the roof. Studs of similar scantling to those of the lower register (12 x 16cm maximum) have been sawn and nailed to the primary braces along with hand-sawn elm timbers of lesser scantling (c.7 x 9cm). In turn, these have been inserted into existing, wider, plate and midrail tenons. Consequently the gaps between the studs are wider in the top part of the frame.

An interesting piece of reused timber is the post that stands between the first two northern bays (fig.6). This has some unusual characteristics that appear not to conform to normal timber-framed building construction. The timber has been worked to produce a profile whose face tapers away from what is now the midrail point to the wall plate, forming an indiscernible joint at the top (plate 9). Of further interest are a series of random circular 1" indentations (or slightly smaller- 2cm) in the lower section. Mr Stockley was told by the previous tenant, Mr Beard, for whom he worked several years, that this was a ship's timber, taken from one of the Spanish Armada fleet. The round marks are reputedly made by grapeshot, presumably fired from one of the Royal Navy ships during Sir Francis Drake's encounter in 1588 that caused the Spanish fleet's demise. This is an appealing story and, given the proximity of the Mardyke, known as a route for bringing up building materials from Tilbury, perhaps plausible. However, as the Armada was sunk off Plymouth Hoe, it is more likely that such timbers were being reused in the Plymouth rather than Tilbury area, unless it were the product of a skirmish after the fleet were forced eastwards during their defeat, by the weather. If this were a ship's timber, it might be the cut-down scarf-jointed end of a deck joist. Presumably the embedded grapeshot was removed when the timber was being prepared for the barn.

The eastern walls of the two northern bays (B1 and B2, fig.6) contain daub render attached to laths nailed onto the exterior. Inside, the laths are partly hidden by a layer of daub between the studwork, which is failing (plate 9). More survives on the north wall of the porch. This mode of coverage is likely to be contemporary with the primary-braced rebuilding phase, which probably dates to the 18th-century.

The porch is integral to the barn and contemporary with its creation. Wall-framing timbers are more consistent in size here and so are the rafters. Machine-sawn timbers now occupy where the upper sections of wagon doors once stood, previous to the covered yard being built (plate 13). The lower register is largely covered in modern boarding, again suggesting

this was used by animals (cattle), as a route into the covered yard. Two curved horizontal braces hold the wall plates together in the corners at the front of the porch (plate 13). They are lapped over the plates and each secured by a peg. This is an unusual feature that is, perhaps, a bracing method more common on ships.

There is no evidence for cart doors on the opposite west side, but it is possible that the doorway into utility room 2a represents an original doorway, now hidden beneath modern finishes. It would be unusual to not have a door this side, especially facing the porch, where some form of opening was preferred to create a through-draft when the grain was being winnowed.

5.2.3 Dairy

The dairy occupies the two southern bays that are divided from the rest of the barn by a timber partition that extends to the apex of the roof. The partition appears to be an earlier demarcation that pre-dates the dairy. This is because inside the partition, the walls and framing are whitewashed to tie beam level (plate 20). This must have been carried out before the modern dairy ceiling was inserted and first floor void created above. It is therefore likely that the ceiling replaced an earlier floor, perhaps a granary or hay loft, the evidence for which is now hidden by the ceiling joists. At the same time, the partitioned ground floor below may have functioned as a dairy or had a different use altogether.

The partition is made from 5" softwood vertical boarding held on a machine-sawn light timber frame (plate 7), built no earlier than the mid-19th-century. The dairy pre-dates the stables and it is clear that stables 2 and 4 have no functional relationship. Some of the former cow doors are now blocked (fig.6). The main entrance was to the west, now covered, where stables 2 now stand, and to the south, where the sliding door is still present (fig.6). Cattle entered straight from the meadow (Barn Meadow on the tithe map, fig. 2). Another access on the north wall, into utility room 2a, suggests that the twelve cattle, at this stage at least, were kept in the barn (over winter). There are two other exit points to the yard, at least one of which is an insertion contemporary with the stables (fig.6). Both doorways are on the level of the raised floor above the milking area.

The wall fabric of the dairy is the same as the rest at ground floor level, but large areas are hidden by white-painted hardboard (fig.6), especially those that would have been in contact with the animals. Similarly, the ceiling is hardboarded too and fluorescent lighting fitted (plates 16 & 17). It is worth noting that the first floor is not a functional space in its own right

and contains joists rather than a floor. However, it does provide the opportunity to view the upper timbers in closer detail.

Much of the upper register is in smaller scantling compared to the rest of the barn, almost as if this area was generally out of view. Most are thin c.7 x 9cm replacements. Some of the bracing is recycled collar rafter. Clapboarding was removed from the framing on the west side when stables 2 were built. Two pitching hatches/window frames can clearly be observed on this side (fig.7, plate 17). Again, these support the idea that there was once a granary or hay loft over the end two bays.

5.2.4 Roof framing

The roof framing of the barn utilises a simple pegged collar purlin form (fig.8) with later pairs of struts tenoned to the tie beams and nailed to rafters either side (plates 16 & 17). Additional birdsmouth collars occur at half bay intervals. The purlins are splay-scarfed together and nailed. Extra ones appear to have been strapped in weak points in the 19th-century, probably during a refitting phase. The rafters have a comparable thickness to the original studwork and appear contemporary. Regular nail holes many may indicate turning, whereby the batten holes are exposed on the inside rafter, or that the roof was boarded in the same manner as the partition. The former explanation is perhaps more likely. High up in the rafters are pairs of rebates that held the collars to a crown post roof (plate 17, top right). Similarly, the tie beams below have empty mortices on their tops for the crown post roof itself. Dashed lines in fig.8 show how the truss may have originally looked. It is difficult to ascertain whether the barn had a crown post roof originally, or whether elements from one were reused from an earlier building, but the former interpretation is favoured.

5.3 Stables 2

Attached to the west of the barn (plates 1, 4 & 6), stables 2 is a 1950s structure divided into three areas: two for stables and the third as a utility room, latterly used for storage purposes by the owners of the farmhouse. The middle area, stable 2b, was still in use during the survey and was not entered.

The framing is primary braced in modern machine-sawn timbers and clad in clapboard on a low rendered brick plinth. The southern wall has a Fletton brick skin added (plate 18). The roof is single pitch and covered in corrugated asbestos covering, a ubiquitous practical material often found on post-war farming buildings. Stable doors are located on the west and south elevations and each stall is lit by Perspex-covered windows.

The utility room (plate 19) has undergone some internal modernisation (false ceiling, skimmed plaster walls), but original features remain, such as the concertina cow doorway and pull-down window on the north elevation (plates 6 & 19) that belie a farming connection. Possibly, this was originally a separate building incorporated into the stables, though map evidence (fig.5) indicates a post-1938 build. The concertina doorway suggests this was a cattle route through to the dairy from the outside.

Other parts of the building have remained unchanged. Timber partitions divide the two stalls and the former cattle entrance to the dairy is boarded-off with hardboard (plate 19). All surfaces are concreted. The gable wall to a possible earlier brick-built structure lies on the internal south wall of stall 2c (plate 18). It is not shown on any of the maps. Vertical boarded partitioning and sarking cover most of the exposed timbers.

5.4 Stables 3

A set of double stalls is attached to the north side of the barn porch. Porch infilling with lean-tos was common on farms to utilise unused space. It is probably contemporary with the laying out of the yard in the 1950s, although it appears from the maps that this replaced an early 19th-century structure (fig.4).

The north stall is built of 20th-century brickwork and the one to the south from machine-cut parallel bracing (plate 21), stood upon a brick plinth. Both are roofed in corrugated asbestos and there are Perspex windows. A partial dividing wall is timber-framed too, and it seems that only the area around the doorway has perhaps been rebuilt in brick, possibly to hold bulls when it was a cattle farm. From the inside of the stalls the daubed barn exterior can be clearly see (plate 22). Each stall has sloping concrete floors to the yard and a simple single strutted lean-to roof.

5.5 Stables 4

The two stalls on the opposite side of the porch (plate 23) have similar dimensions but are wholly made from modern sawn boarding contemporary with the covered yard, i.e. dating to the post-war period. The north stall holds a 'Power Loader' feed mixing machine (plate 24) for horse and pony feed.

5.6 Covered yard 5

The main farmyard was built-over in the mid 20th-century to form a covered yard, comprising a wide, four bays long super-structure linking the barn/stables 3 and 4 to stables 6 (fig.6). It is thought the stables were built at the same time as the covered yard, to facilitate the horses.

The corrugated asbestos roof is supported on stout timber posts built onto and against a 1.5m-high Fletton brick walls at the two gated gable ended entrances (plates 2 & 4). The trusses have narrow king posts with bolted cross-bracing (plate 25). Animals (i.e. horses) could either be left to roam the yard or kept in the stalls.

5.7 Stables 6

These and the Fletton brick-built shed at the north end are contemporary with the mid-20th-century improvements, forming the east side of the covered yard. The main part consists of four bays/stalls with fletton brick gables and corrugated asbestos roofs (plate 2). The rear wall is shared with Stables 7. Inside, one of the partitions appears to be reused from a 19th- or early 20th-century structure (plate 26).

5.8 Stables 7

This 1950s structure is built on four bays with the middle two open to the paddock (plate 27), used to keep loose horses and feed (fig.6). A pair of loose boxes/stalls occupy each end. The primary-braced machine sawn frame is clad in black clapboard beneath a gabled corrugated asbestos-covered roof supported on king post strut trusses (plate 28). It stands on a mixed red and stock brick low plinth wall.

6.0 DISCUSSION & PHASING

Very little is known about the history and development of Little Warley Hall Farm. The main structure of the group, and by far the earliest, is the barn. A date of between the 16th- and 17th-century has been suggested and this seems reasonable as it does show characteristics from both these dates. The farm developed gradually in front of the hall and appears to have resisted the urge to 'improve' in the 19th-century period of high farming. The few unidentified structures dating to this period had gone by the middle of the 20th-century. As the information is so sparse, it would be difficult to meaningfully discuss or illustrate the process flow of the pre-modern farm within this report.

Any real period of 'improvement' at Little Warley occurred after the Second World War when the yard was covered over and stables built either side. The barn was retained within the plan, with stores built inside. It is not known whether horses were kept inside. However, the fact that the walls are lined in render and blockwork suggests livestock did use the barn.

It is important to date and phase the barn as closely as possible, but this is difficult as different built elements suggest different dates. Bearing this in mind, a construction date of c.1600 is suggested, in a transitional period between the medieval and post-medieval styles of carpentry. To explain this, the main construction features are broadly dated below. As part of the construction, the crown post roof (medieval) was employed, with wall plates having edge-halved and bladed scarf joints on the top plate (mid 16th-century onwards) and short squinted bridle joints in the sole plate (medieval). The posts did not have jowled heads (17th-century) and walls were braced. Most, but not all of the studs were pegged to the frame (16th and 17th-century). Daub was used as in-filling against the braced, close-studded timber-framing that was exposed as a form of display, built of a standard appropriate with the hall.

Studwork in the upper register was replaced in primary-bracing probably in the 18th-century. Many of the old studs were reused, sawn to fit. Primary-bracing was a good way to replace rotten or weathered studs without removing the roof and wall plates, although if this were the case here, it is surprising the lower register was not affected to the same degree. Here, the bracing was removed and some of the studs turned. Bracing on the upper register was removed, leaving empty sockets on the posts and the walls were covered in lath and (daub) plaster. Perhaps this and the introduction of primary-bracing was seen as a way of modernising the barn. Certainly it was fashionable to cover up timber-frames during the 18th-century. Following this line of thought therefore, the crown post roof could have been replaced with a more modern clasp purlin roof. At the same time some of the rafters were turned because they were bowing. Further improvements were carried out in the 19th/20th centuries, when struts were added to the collars and tie beams strapped with iron. The thatched roof was removed and replaced with pegtiles.

The later stables, built in the 1950s, are typically timber framed and clapboard-covered, stood on brick plinths, in the vernacular tradition (albeit with machine-sawn framing), a style that lasted from the 19th- into the mid 20th-century and beyond.

7.0 CONCLUSION

The barn is the only significant building recorded at Little Warley Hall Farm. Although seemingly a fairly modest structure on first impression, there are a number of surprises in store to anyone who wishes to study it closely. To begin with there is the astonishing amount of alteration to the stud walls, roof and exterior over the past four hundred years. The inclusion of a probable ship's timber makes an interesting feature. Generally when timbers have been reused they look as such: there are spare mortices and signs of wear, an increase/decrease in carpenter's marks, signs of general wear and tear and exposure, etc. However, these timbers, apart from those added to the primary bracing, seem to be contemporary.

Close analysis of the wall framing suggests it was built in a mixture of styles in a period of transition from the medieval to post-medieval forms of carpentry. A date of c.1600 is suggested, which surprisingly enough, also broadly matches the purported date of the reused ship's timber of 1588. Although it is perhaps unlikely to have come from the Spanish Armada, as suggested, it does fit in with the general dating style. If it were from a ship, it is likely to be the cut off scarf-jointed end to a deck beam. The curious markings conform to the size of one inch grape shot, 20-25mm in area (the size of a grape). Grape shot was an anti-personnel weapon fired from light, short range guns mounted on the upper decks known as 'colonnades'. It came pre-packed and scattered upon exit of the gun muzzle (<http://www.nmm.ac.uk/collections/nelson/nviewObject>.). The presence of such marks may therefore substantiate the provenance of this timber as being from a warship.

Apart from the barn, the other buildings belong to the 1950s when a horse livery was established at the farm. Some alterations to the barn are possibly pre-1950s, associated with the previous tenant farmer, who kept cows. The style of farm building, clapboarded on a light timber frame and brick plinth, shares a direct lineage with sheds and stables for livestock from Essex and East Anglian farms from the late 18th-century and beyond; the main difference being that these examples are all machine-sawn timbers. In fact, the construction is so similar that, were it not for the map evidence, it would have been easy to have dated the structures some 70 years or so earlier.

Little Warley Hall Farm was established with the hall, with a yard at the front and barns and sheds roughly arranged around it in a more medieval farmstead style. Unlike many other farms that expanded heavily into dairy and beef farming during the period of agricultural 'improvement', Little Warley Hall Farm grew at a more leisurely, almost static, pace. Perhaps

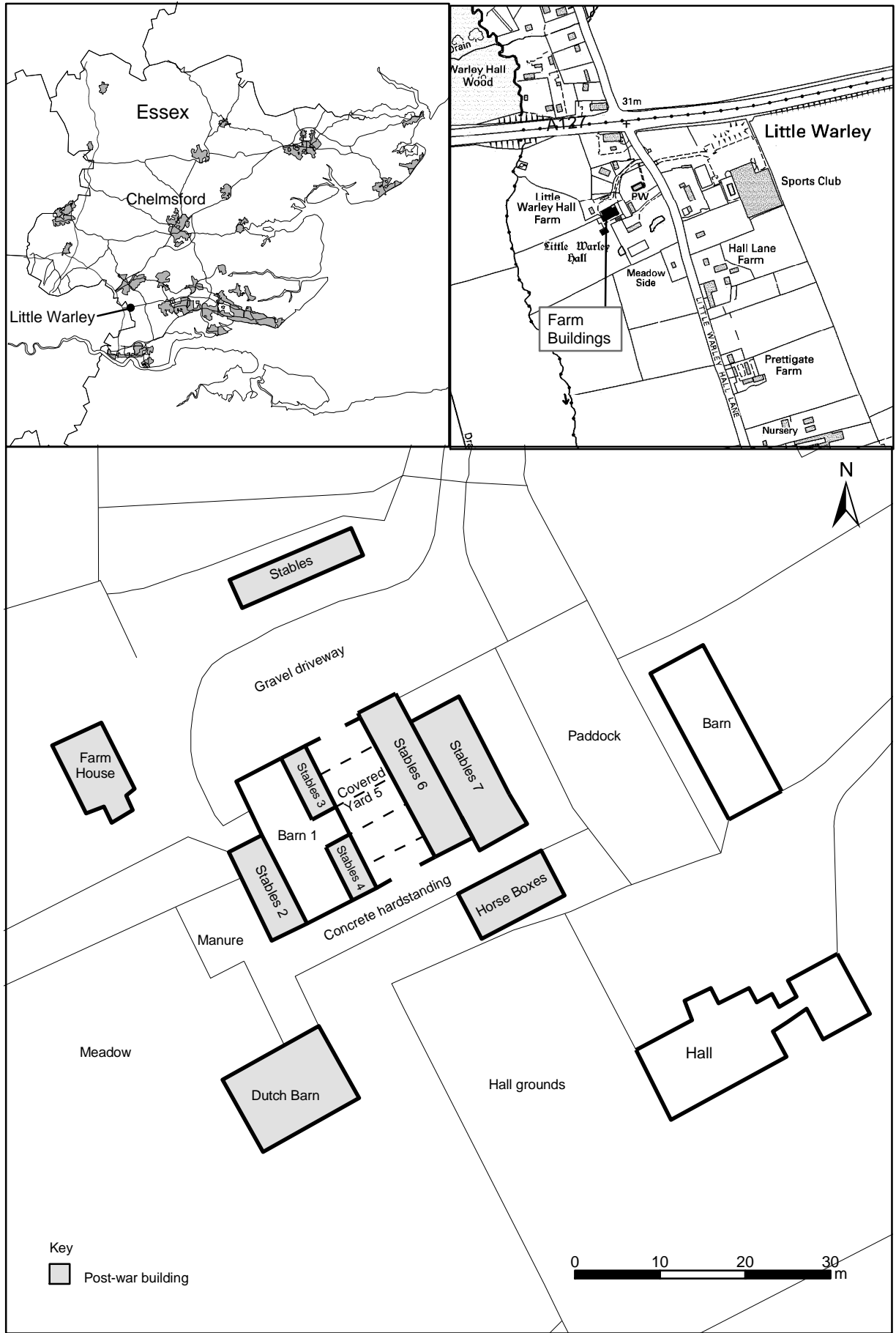
the owners preferred not to have intensive farming so close to the hall and carried out 'agricultural improvements' on other estate farms instead. With this farm, the real period of 'improvement' occurred after the Second World War with the livery expansion. Although the 1950's buildings are of low architectural merit, their presence and incorporation of the barn into one single functioning unit, has preserved an interesting example of Essex barn development.

ACKNOWLEDGEMENTS

Thanks are due to the owners, Mr & Mrs M. & Z. Sahirad, for commissioning the works and providing documentation and hospitality and to the architects, White & Mileson for supplying the site drawings. Thanks also to Mr and Mrs Stockley for their background knowledge and assistance. The help of staff at the Essex Records Office is acknowledged. Fieldwork, recording and photography were undertaken by the author. Illustrations were prepared by the author and produced by Andrew Lewsey. The site was monitored by Vanessa Clarke on behalf of ECC HEM and the LPA.

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Fig.1. Site location and block plan

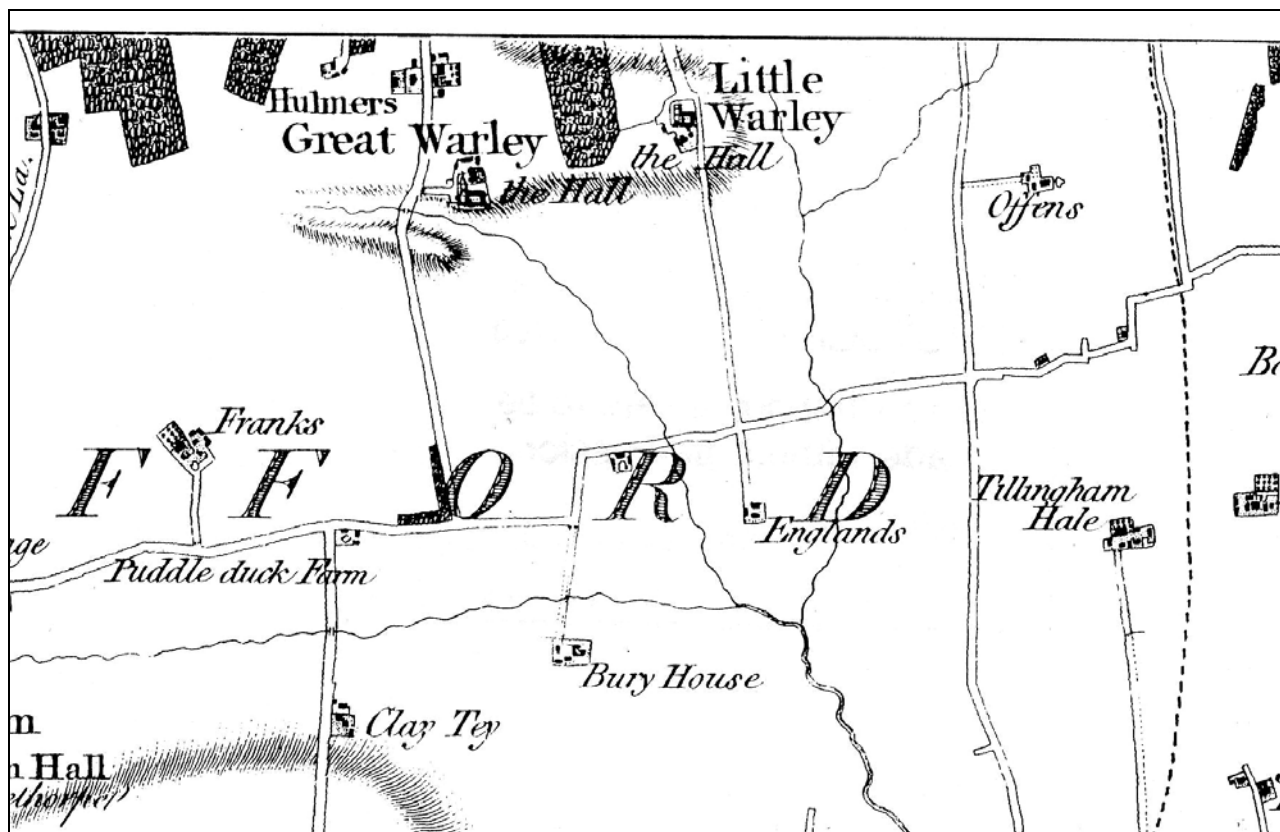


Fig. 2 Chapman & Andre map, 1777 (plate 22)



Fig. 3 Tithe map of Little Warley, 1838 (D/CT 38B)

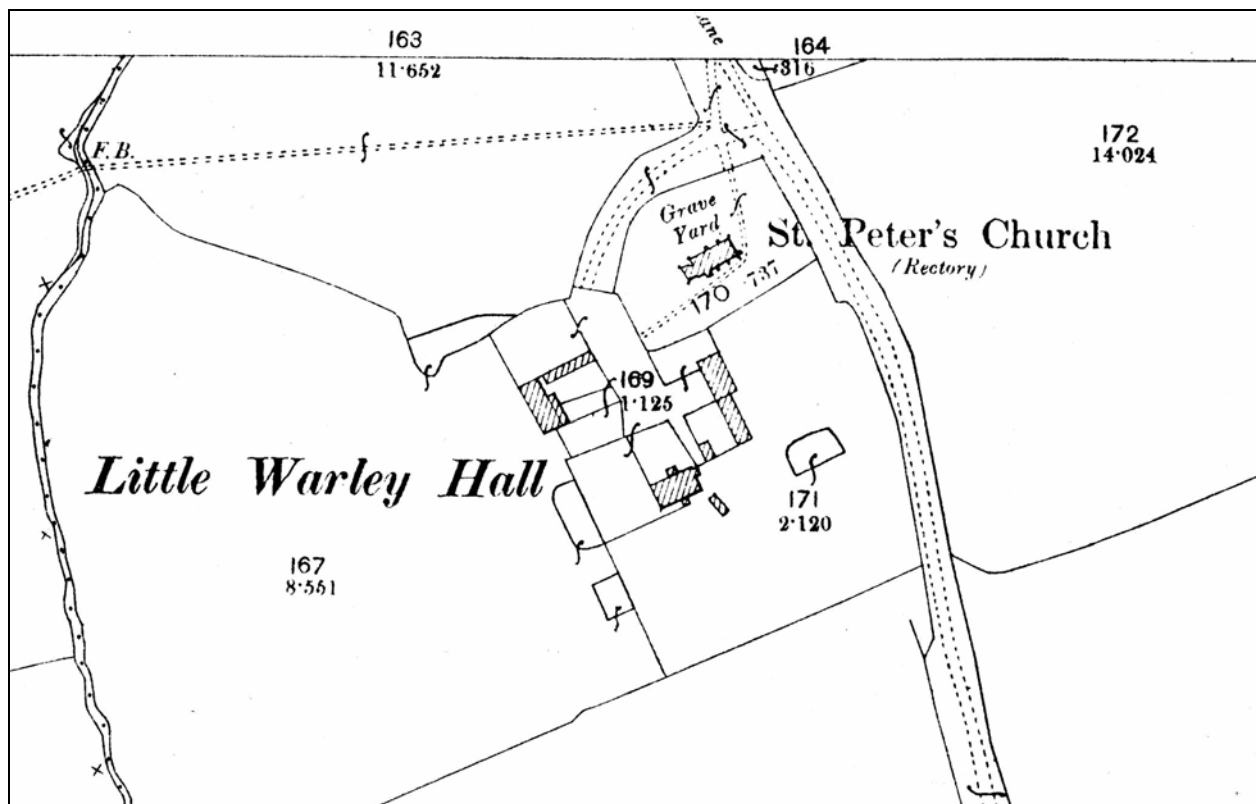


Fig. 4 Second Edition 25" OS map, 1896, (sheet 75.3)

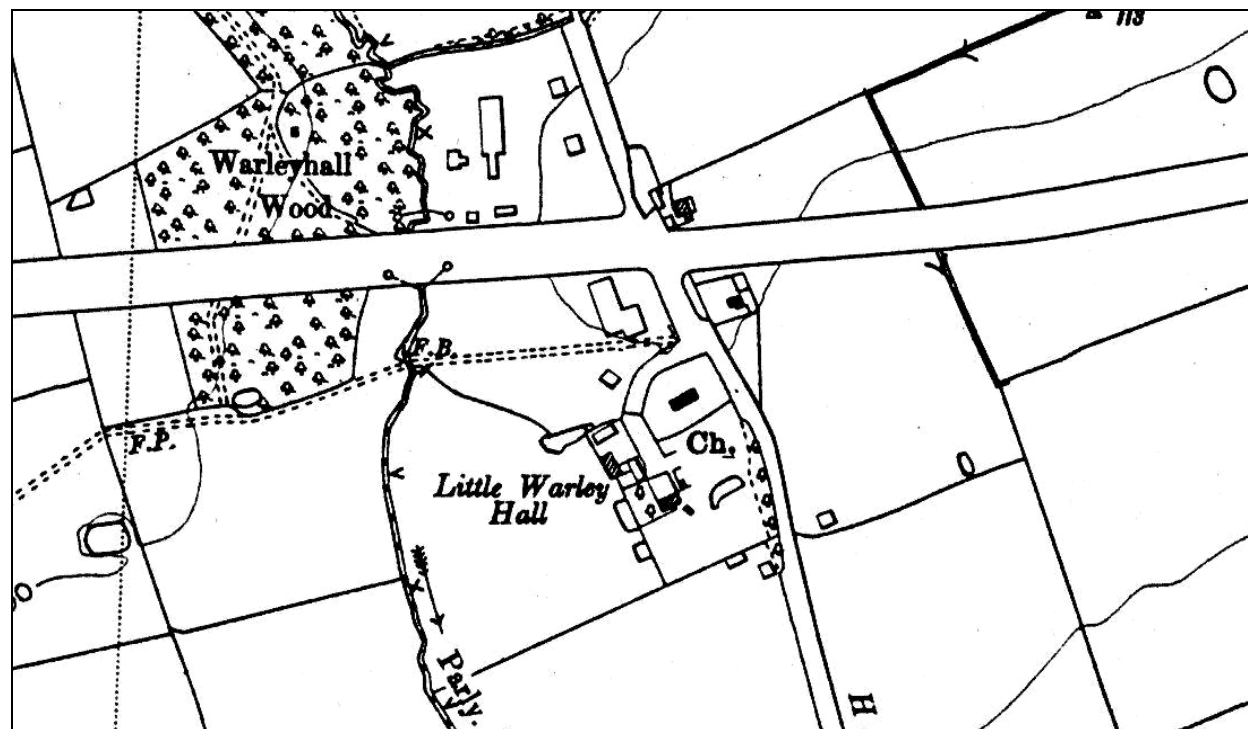


Fig. 5 New series OS map (third revision), 1938

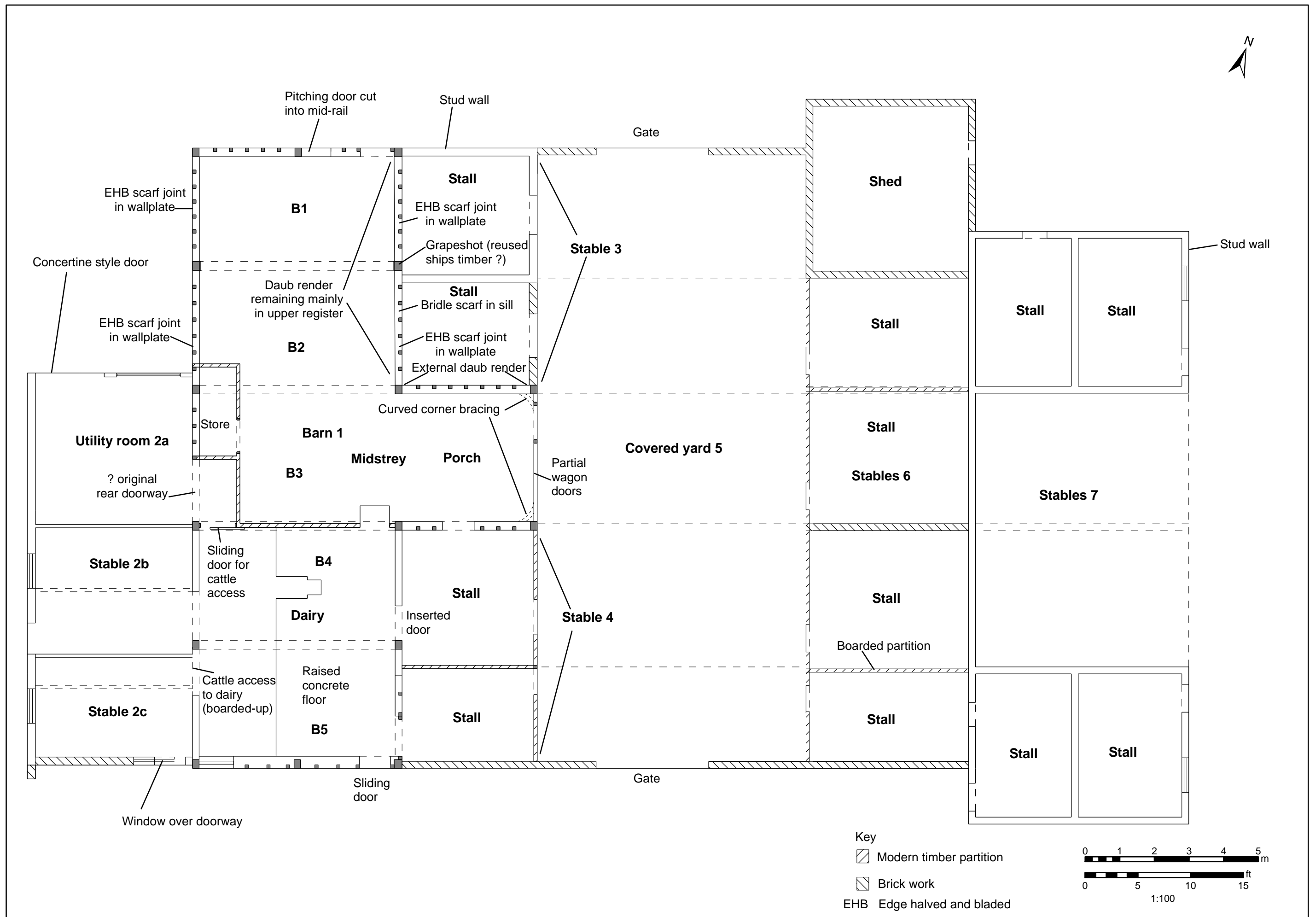


Fig.6. Ground floor plan of barn and stables

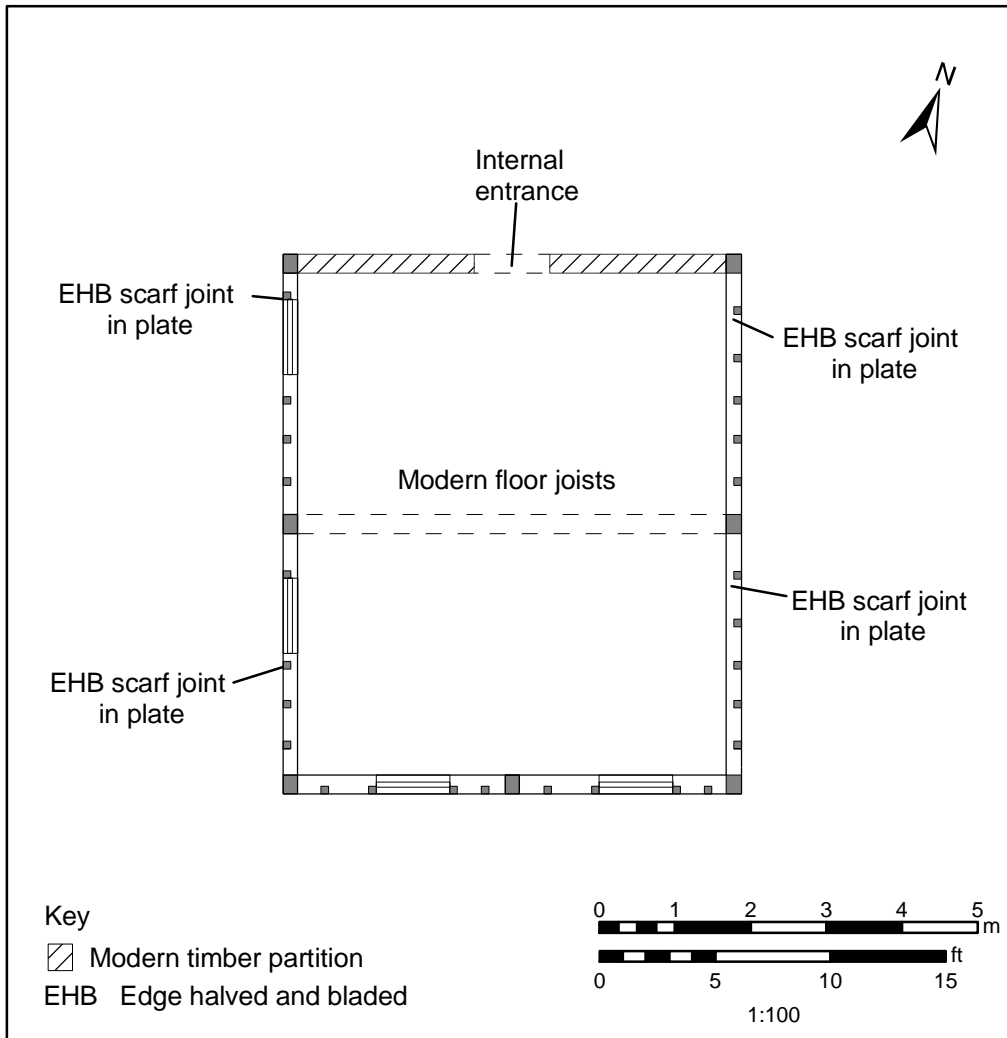


Fig.7. First floor above dairy

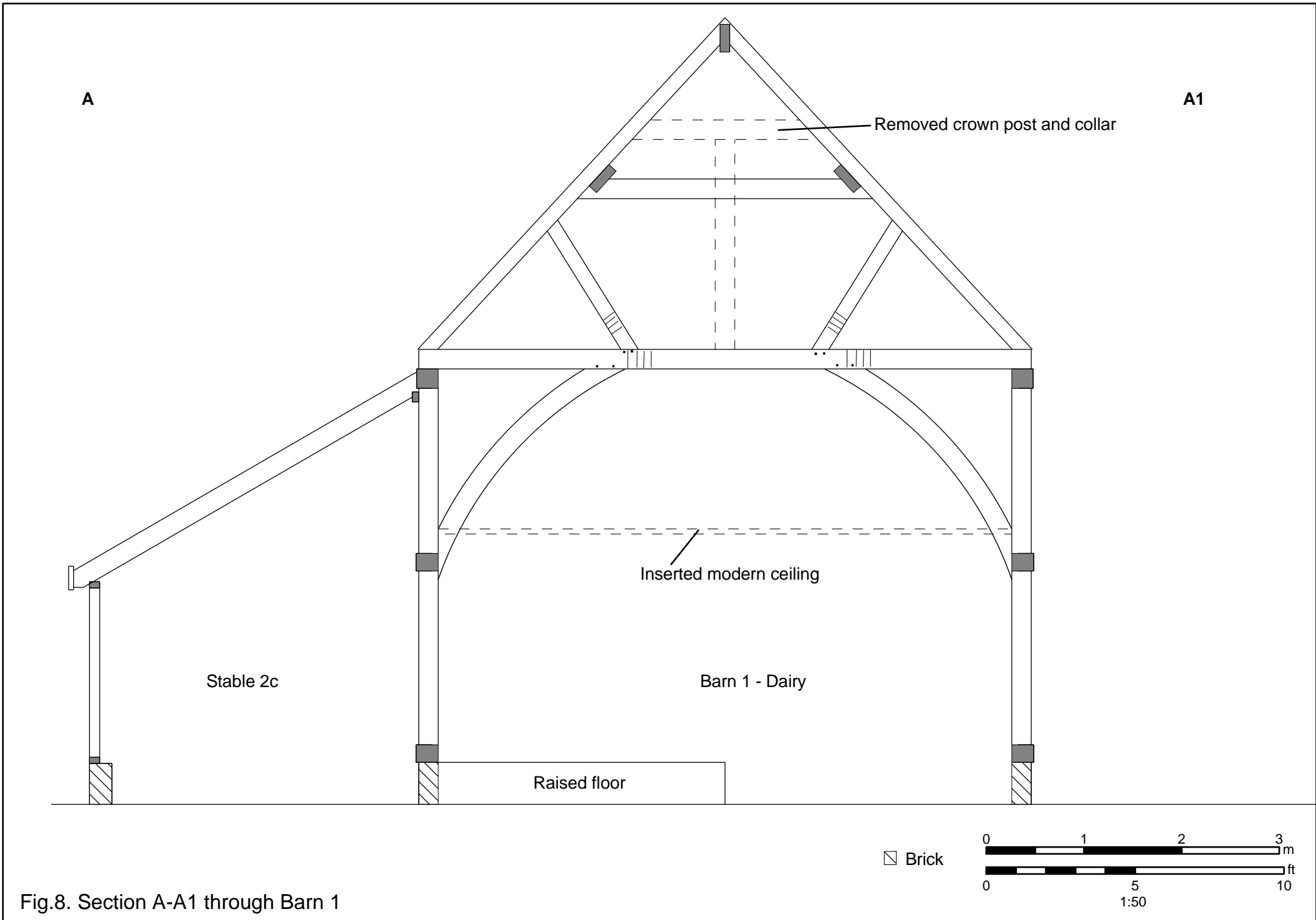


Fig.8. Section A-A1 through Barn 1



Plate 1 Barn & farm buildings viewed from south-west



Plate 2 Barn and Covered Yard viewed from south-east



Plate 3 Barn and Covered Yard viewed from north-west



Plate 4 Interior of Covered Yard & stables either side of Barn porch, viewed from south-east



Plate 5 Barn and Stables 2 viewed from south-west



Plate 6 Rear of Barn & Stables 2a from west



Plate 7 Interior of Barn viewed from north



Plate 8 Interior of Barn viewed from south-east



Plate 9 Variations in wall framing between upper and lower registers in bays 1 & 2 east



Plate 10 Typical edge-halved and bladed scarf joint in wall plate



Plate 11 Bridle scarf joint with squinted abutments and over-lipped face in ground sill



Plate 12 Possible reused ship's timber



Plate 13 Barn porch viewed from south-west to Covered Yard



Plate 14 Interior of Dairy viewed from south



Plate 15 Interior of Dairy viewed from north-east



Plate 16 Roof-space above Dairy viewed from south



Plate 17 Openings on bays 4 & 5 south-west wall of Barn



Plate 18 Interior of Stable 2a viewed toward cow doors



Plate 19 Interior of Stables 2b



Plate 20 Gable to earlier brick structure preserved within south wall of Stable 2c



Plate 21 Barn porch and Stables 3



Plate 22 Interior of Stables 3 showing external daub render to Barn



Plate 23 Stables 4 inside Covered Yard viewed from north-east



Plate 24 Feed mixing machine inside Stables 4



Plate 25 Interior of Covered Yard viewed toward south-east (Stables 6)



Plate 26 Reused partition inside Stables 6

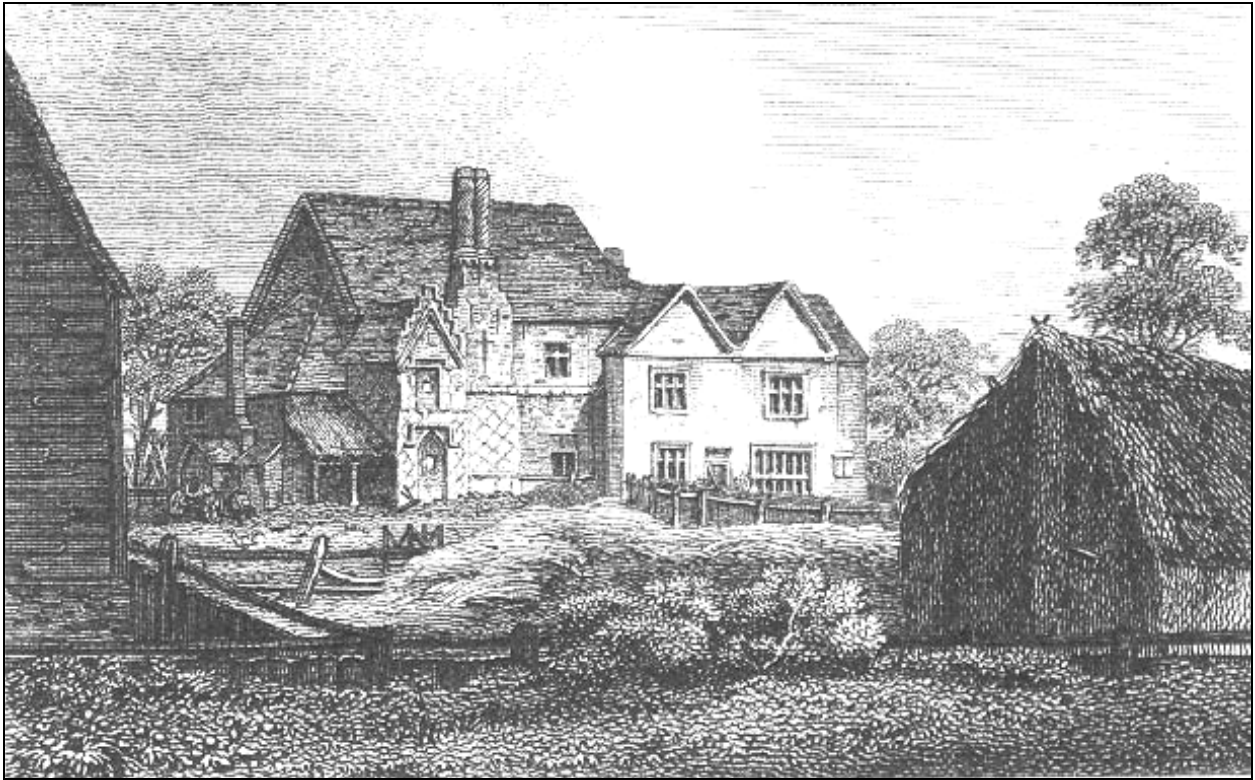


Plate 27 Stables 7 viewed from south-east

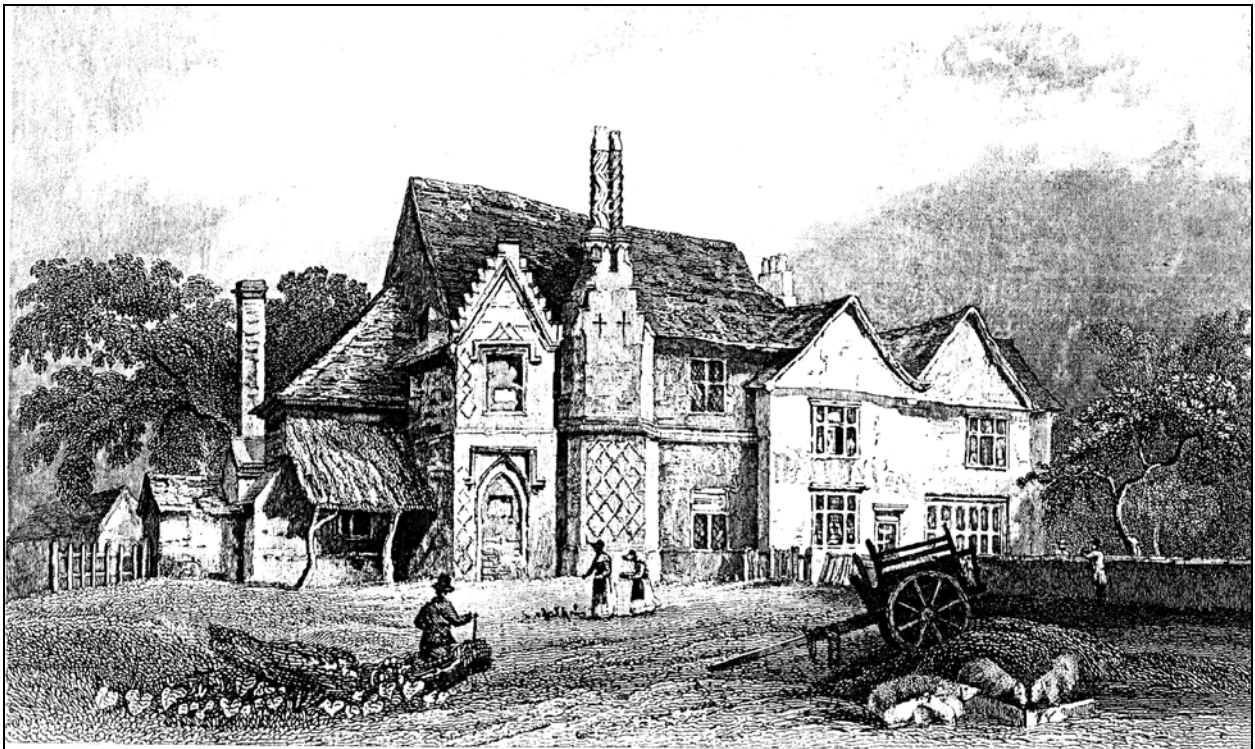


Plate 28 Interior of Stables 7

Appendix 1: Historic engravings of Little Warley Hall



Engraving by W. Wallis, 1817 for the *Antiquarian Itinerary*
(<http://www.londonancestor.com>)

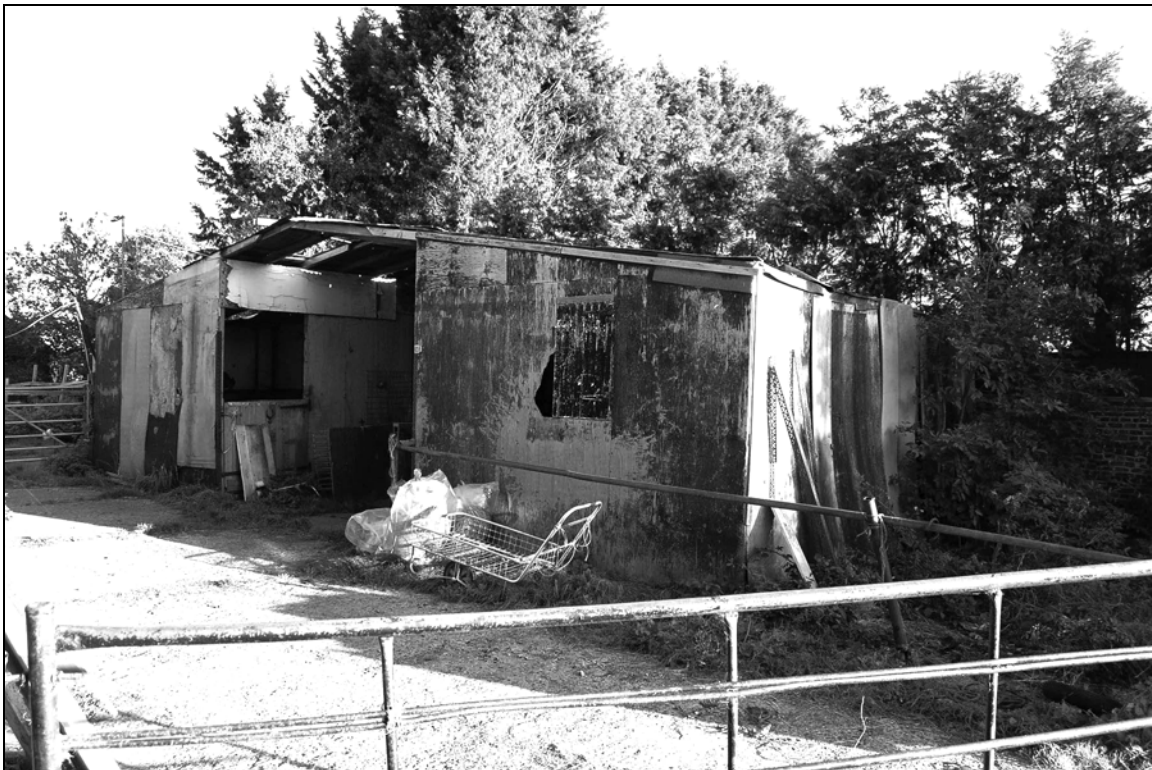


Engraving by W. Bartlett, 1833 (ERO IPc 380/1, Mint Binder no. 73)

Appendix 2: Miscellaneous modern structures



Dutch barn



Horse shed



North stables

Appendix 3: Contents of Archive

1. Introduction

- 1.1 HEM Brief for works
- 1.2 FAU 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 & 35mm monochrome prints)
- 3.2 Miscellaneous plans & drawings
- 3.3 Site notes
- 3.4 Architects drawings

Appendix 4: EHER Summary Sheet

Site Name/Address: Little Warley Hall Farm, Little Warley, Essex	
Parish: Little Warley	District: Brentwood
NGR: TQ 6038 8860	Site Code: WARW 06
Type of Work: Building recording	Site Director/Group: Andrew Letch ECC FAU
Dates of Work: 1st-2nd November 2006	Size of Area Investigated: N/A
Curating Museum:	Funding Source: Mr & Mrs M. Sahirad
Further Work Anticipated? None	Related EHCR Nos.: None.
Final Report: Summary in EAH	
Periods Represented: Post-medieval (c.1600), modern (1950s)	
<p>SUMMARY OF FIELDWORK RESULTS:</p> <p>Work at Little Warley Hall Farm recorded a post-medieval timber-framed barn and stables belonging to a horse livery, established in the 1950s. The barn has characteristics of medieval and post-medieval carpentry that, ignoring the possibility of major reuse of earlier timbers at a later date, may date it to c.1600, with later alterations. Originally the barn probably had a crown post roof and braced close-studding, with wattle and daub panelling. Sometime, perhaps in the 18th-century, the roof was changed to a clasp-purlin type and studwork in the upper register changed to primary-bracing in a major rebuild. One of the most interesting discoveries was a possible ship's timber, a reused deck beam. Local stories had linked it to the Spanish Armada of 1588, and although unlikely, grapeshot marks on one side showed it had been in battle, and had presumably come from a warship.</p> <p>Any farm structures contemporary with the barn or from the 19th-century phase have been removed. The buildings currently standing date to the 1950s and are of relatively low architectural merit. They comprise timber and brick-built stables and a covered yard.</p> <p>Unlike many Essex farmsteads, Hall Farm did not expand to any great degree during the Victorian age of agricultural improvement. Instead it appears to have kept much of its largely unplanned character beside the Tudor hall. The major period of expansion came in the 1950s when the livery was established, which closed down with the sale of the farm in 2006.</p>	
Previous Summaries/Reports: None	
Author of Summary: A. Letch	Date of Summary: 7th February 2007