

**HISTORIC BUILDING RECORDING OF BARN & OUTBUILDINGS
AT
WALNUT TREE FARM, FANNER'S GREEN
GREAT WALTHAM
ESSEX**



Essex County Council

Field Archaeology Unit

September 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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**HISTORIC BUILDING RECORDING OF BARN & OUTBUILDINGS
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GREAT WALTHAM
ESSEX**

Client: Mr. J. Mitson

FAU Project No.: 1787

NGR: TL 6815 1195

OASIS No.: essexcou1-30235

Planning Application: CHL/02154/05

Date of Fieldwork: 4th May 2007

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 timber-framed probable 18th-century barn and 19th-century cowshed, part of Victorian planned farm. Neither is statutory listed. The work was commissioned by the owner and developer, Mr. M. Mitson, 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 the client, ECC HEM and the Essex Historic Environment Record (EHER) at County Hall, Chelmsford. The archive will be stored at Chelmsford Museum/ HEM /NMR. An online OASIS record has been created.

2.0 BACKGROUND

2.1 Site location and description

Walnut Tree Farm stands at the intersection of two minor roads to the south of Fanner's Green, a small hamlet approximately 2km south-west of Great Waltham. The farm has undergone many changes during the past two centuries and currently only the barn and cowshed remain. Together they form an L-shaped block facing the road (fig.1), with a dirt

track leading around the back of the barn, linking to the road on the other side. The 19th-century farmhouse and a second barn (also 18th-century) to the east are in separate ownership and outside the development area. Modern concrete and rolled iron fencing divides a grassed-over cobbled yard and provides a boundary wall to the road (plate 1). A low concrete wall separates the structures and hardstanding on the west side.

The surrounding landscape is arable, with good views across the fields to the west. Farms are dotted around the place, many rebuilt during the 19th-century, the age of agricultural improvement. Generally the buildings are in good repair and vegetation has not been allowed to get out of control.

2.2 Planning background

Chelmsford Borough Council received a planning application (CHL/02154/05) for change of use and conversion of farm buildings to residential use in November 2005. Mindful of the possible effects on the historic integrity of the farm complex, 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, references are included within the text. Map extracts have been copied as figures at the back of the report and enlarged in many cases to provide more detail. It appears from the study that the 17th-century farmstead was replaced by a planned Victorian farm that remained in existence up to and beyond 1950.

The name Waltham comes from the Saxon 'Wealt-ham', or village in the wood (Reaney 1969). Fanners Green most likely derives from the makers of fans to winnow the grain (Proctor 1985) after the corn was threshed.

The barn is described as a 17th-century Essex barn in the brief (HEM 2007), although no reference is given to this interpretation. The barn may equally belong to the 18th-century. The cowshed belongs to a late 19th-century phase of improvement.

Fenners and Walnut Tree Farms are indicated on Chapman and Andre's map of 1777 (fig.2). Buildings are shown within a square plot on the road junction, but the detail is insufficient to identify coherent structures.

Great Waltham tithe map of 1840 (D/CT 379B) shows little agricultural improvement in the first part of the 19th-century. It basically shows the post-medieval farmstead from 1777 in greater detail. Curiously, the tithe map is drawn to the south-east, so it has been re-orientated to rough north in this report (fig.3). The map depicts two structures within the same roadside plot. One is clearly the barn, while the other is likely to be the original farmhouse. Another structure stands to the east, a small barn that stands outside the development area and is owned by the farmhouse. Two ponds are situated either side of the road.

The tithe award of 1840 (D/CT 379A) shows Walnut Trees as part of the Langleys estate. 'Langleys' is a grand Queen Anne style house in Great Waltham whose owners, the Tufnells, owned much of the surrounding area. The owner of estate at the time was John Joliffe Tufnell esq., who also owned the farm. His coat of arms is found on the front of the lodge house (Scarfe 1968). On the map, plot 1194 is described as 'the homestead', but no guide is given to specific structures. The occupant of Walnut Trees is given as Mary Stock. She was living apart from her husband under "the protection and care" of her brother Thomas Boltwood, manager of the farm. The Farm stock was sold in 1813 to Boltwood so that he and Mary could carry on the farming business. Her husband, William, was charged by the court not to "molest or interrupt her" and was banned from the premises. In return, Boltwood paid him £5 weekly (D/DGe/107).

Between 1840 and 1875, the publication date of the first edition OS map (fig.4), the farm has undergone improvement from the scattered farmstead into a planned courtyard layout. The barn has been retained, forming the southern end of the yard, with pens added to the east end, probably sties for the pigs, close to the house. Either a cow or cart shed is added on the west side of the yard, as it is shown open-sided on the succeeding map (fig.5). A thin linear range lies on the north side of the yard, whose function is not known. The farmhouse has been rebuilt on the east side of the yard within its own garden and orchard (fig.4). A second, southern yard is partly defined by walls extending from the front of the barn and structure set askew to the rest.

The second edition OS map published in 1895 shows the southern yard bordered by ranges to the west (existing cow shed) and east and by the road to the south (fig.5). The yard is divided into two, to divide the livestock, perhaps young cattle from the rest of the herd. The eastern structure is partly open to the rear.

The farm remained on the same layout up to the 1950s at least. At some stage after, the buildings around the north yard were demolished to expand the garden. A circuitous trackway was laid across the middle of the old yard (fig.1). Cattle were kept in the barn in the 1970s. In recent years the building to the east of the southern yard was pulled down (J. Mitson pers. comm.).

2.4 Farming in the post-medieval period

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 (or the farmhouse) 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 on the threshing floor of the barn. Arable and livestock farming were mutually dependent on each other. Cereals were produced as a cash crop and as animal feed and in return, the animals provided work power, manure for the crops and wool, meat and dairy products.

In the late 17th century, improvements in crop rotation, with the introduction of improved grasses and winter feed crops, heralded the end of the medieval three field system. Improvements in animal husbandry meant larger animals could be bred and increased winter feed meant that more could be kept for fattening.

Agricultural improvements led to the establishment of larger, more efficient farms. 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, usually 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.

Such improvement accelerated between 1840 and 1870, the period known as the 'golden age of farming,' based on an increased demand for milk, meat and bread by the urban centres, aided by the growing railway network for distribution purposes. New planned farms

were established on the courtyard principle and others were adapted to incorporate philosophies on efficiency based on the Victorian factory system. Great debate was had in influential circles on the merits of different husbandry techniques and efficiency/labour saving devices to increase productivity.

The expense of the planned model farm in its purest form was a barrier to smaller landowners. So, rather than demolish and build afresh, many farmers remodelled their farms utilising the courtyard system. 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 did not end until after the First World War.

Many Essex farmsteads today are composites of post-medieval buildings (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 2007), to investigate and record the timber-framed barn and cow shed 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.

4.0 DESCRIPTION OF WORKS

The buildings were recorded using base drawings (existing floor plans, elevations and barn section) supplied by the architect. These were checked and annotated during the survey and are reproduced in the report as figs.6 & 7. External and internal architectural descriptions were made. Original building function was assessed as well as later uses and adaptations.

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. A representative selection of all photographs is reproduced at the back of the report as plates 1-16, 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 the owner.

5.0 HISTORIC BUILDING DESCRIPTIONS

5.1 Barn 1

The barn is clearly the oldest and most architecturally interesting of the group and is the main subject of the survey. Its origins may go back as far back as the 17th or 18th-century. It is timber-framed in elm, with a porch on the southern side and 6" clapboard exterior, now faded. Small outbuildings either side seem to be a likely original loose box and shed.

The barn is raised on a plinth wall comprising soft red bricks sized approximately 22 x 11 x 6.5cm (approx. 8½ x 4¼ x 2½") laid in English bond within a lime mortar. Daubed wall panels exist beneath the later clapboard exterior. The roof was re-built probably in the 19th-century, to support a heavier, slated roof rather than the original thatch, the most likely covering. The existing 35° pitch is too shallow to take thatch. Apart from the roof, there are few replacement timbers in the construction and apart from some spreading of the roof and replacement in the lower register most of the main framing is sound and dry. Extensive areas of daub remain on the internal walls of the barn and the two side buildings. However, large sections of walling have been replaced with concrete block in the modern period.

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 cart doors positioned centrally on the long ends. During the winter the corn was threshed on the threshing floor in the midstrey and winnowed before storage. In recent years, the barn was used to keep cattle and at the time of the survey was extensively used for storage (household and building items/equipment). Some of these items were removed by the owner during the survey to enable a satisfactory survey to be made.

5.1.1 External description

South elevation

The main frontage (plate 2) faces onto the southern yard and the road, raised on a 1m-high tarred brick plinth and rendered in concrete on the western side of the porch. The main focus is the catslide roof over the side structures and the central porch that is set into it. The original high cartdoors have been replaced by lower corrugated iron ones, although their scar is evident in plate 3. The threshold leap (that contained the grain during threshing) remains below the porch doors. A slatted wooden vent provided ventilation at the apex of the porch roof, like those in the two short elevations, but is contemporary with the rebuild, as are those on the two short ends of the barn. Both exposed sides of the porch retain daub render (plate 3).

The buildings either side of the porch are contemporary. Their more recent functions comprise a loose box on the left side (1a), probably an original function, and straw bale store on the right (1b, fig.1). They are entered from the yard by half-heck doors. The entrance to 1a is set centrally while that to 1b is left of centre (plate 2). In the case of the latter, additional access was available into the porch, but is now blocked (fig.6).

East elevation

The full profile of the catslide roof may be seen in this and the west elevation. Unfortunately, the framing below midrail level has been cut out and replaced by concrete blockwork, which continues around the corner into the north elevation, to counteract the bowing wall frame caused by the spreading of the roof. A modern corrugated iron sliding door stands centrally (plate 4), accessed by a low concrete ramp from the encircling trackway. No such intrusions have been made into the wall fabric of building 1b. Here there is a small hatch set 1.5m off the ground (fig.6) and some scars in the external boarding above and to the left that would argue 1b has been extended at a later date by some 0.9m toward the farmyard (fig.6, plate 5). The scar above the top left corner of the hatch suggests the original roof was pitched at a

steeper angle of 42°, which is closer to the roof pitch of the contemporary east barn (Appendix 1).

North elevation

The rear elevation has suffered from damp from lack of sun on this side and green algae is growing at the base. Areas of boarding have been patched-in, particularly on the west side where the mid-19th-century north yard cowshed once stood (figs.4 & 5). A few are missing on the other end. A central mass of blockwork infill indicates the location of the rear cartdoors (plate 4) which were lower than those at the front - for the empty carts returning to the fields. A frieze of daubed plaster has survived high up on the wall, protected by the eaves but unceremoniously tarred (plate 4).

The plinth is better exposed here, although still overgrown. It has been repaired several times, perhaps due to damp, in mixed and odd sizes of bricks and different bonds patched-in.

West elevation

The second short elevation contains features also common to the east elevation, namely the slatted vent in the gable and hinged hatch into the side building (1a). In addition, there is a pitching hatch on the right side and further infilling below the midrail to the left (plate 6). The latter was probably added to support the structure this end or strengthen a weak end against cattle damage, rather than blocking of an existing doorway.

5.1.2 Internal description

Barn 1

Inside, the barn is laid out over five bays with the south-facing wagon porch extending from the midstrey onto the former yard. Except for the midstrey, the bays are uniform in size at c.3m wide. It is usual for the middle bay to be wider, to allow the carts to be unloaded with ease. Here it is 4m-wide. No partitions, historic or otherwise, were recorded and the floor is concrete either side of the asphalt-covered midstrey floor.

The walls are framed in elm with attractive, good quality primary bracing (plates 7 & 8). There are five studs per bay, apart from the midstrey. All the main timbers are pegged, and so are some of the studs. Bays are defined by tall 20 x 15cm posts that support tie beams spanning the floor below. None of the main timbers are braced, although an iron bracket has been added between the timbers on the north-west corner of the porch (plate 7). Long wall plates hold the barn in place longitudinally, joined by face-halved and bladed scarf joints, whose

positions are shown in fig.6. They are placed at roughly 1½ bay intervals on the north wall but are absent on the south wall. No such joints were seen in the base plate, which was rendered over when the concrete floor was added. Midrails are pegged to the posts, but parts of the studwork in the lower register, primarily on the gable ends, has been replaced with concrete blockwork. Clear plastic sheeting has been placed over the western bays, but less so to the east, part of which was removed during the survey. An inserted pitching hatch over the eastern door has been blocked (plate 7), probably when the modern door was fitted.

Slender pieces of timber are used for the studwork and primary bracing, commonly measuring approximately 10 x 8cm and spaced quite widely between 0.35 and 0.45cm. The braces have been especially chosen for their natural curves that, along the north wall in particular, have been arranged to resemble medieval-style arch bracing (plate 8). Extensive lath and daub panels remain between the studwork in the south wall, and in the top section of the north wall (plates 7 & 8). There is also some present on the porch walls (figs.7 & 9), as well as the laths that carry daub render to the external walls inside buildings 1a and 1b either side of the porch. A blocked doorway for farm workers exists on the west side of the porch (fig.6, plate 7) but there is none on the other side (plate 9). There is, however, a well-preserved leap, with three of the four boards *in situ*. They lock together in a particular way inside the grooved slots attached to the jambs, shown by diagonally cut planks on the inner face, with clearly-chiselled numerals (originally 1-4) indicating their order (plate 10).

Nothing survives of the original barn roof. All was removed when it was totally rebuilt using machine-sawn timber, probably in the late 19th-century (fig.7, plate 8). The roof is carried on a secondary wall plate laid over the plate and tied into the existing structure on each bay by iron straps through the old plate and onto the post (plate 8). All elements to the collar purlin roof (fig.7) were fitted as new and none of the original rafters were reused. At the same time the cart doors were removed (or cut down) by approximately one third and the upper part of the opening blocked. Slatted wooden vents were built into the new gables. The roof pitch of the eastern barn (Appendix 1) is probably more typical of this barn before the roof was replaced.

Loose box 1a

Located on the west side of the porch and probably contemporary with it, this structure exhibits many similar characteristics but is of lesser constructional quality. The interior is divided into two bays by an irregular-shaped tie beam. The timber frame is built on a brick plinth contemporary with the barn plinth. The plinth here is more *ad hoc*, like that in the rear

wall, with edged headers over stretchers and headers in no particular bond, though parts are obscured by vegetation.

The dirty, worn stone floor appears to contain asphalt in its make-up. The outer walls of the barn/porch are half-boarded, with a daub-rendered upper section (corresponding to the midrail inside) indicating how the barn was originally built. Constructed with primary bracing of lower quality to the barn, but with appropriate-sized timbers, studwork is only exposed on the west and south wall (plate 11). The build is cruder than the barn and the studwork is joggled, which is not the case in the main building. Perhaps the scrap timber from the construction of the barn was used. Studwork above the plate forms the framing to the lean-to loose box roof, which appears to be a different building phase, containing, in general, better-cut timbers arranged more neatly. The studwork here is separated by a later diagonal midrail, parallel to the primary rafter/wall plate. Rather than an original roof line, it seems that the studs of the wall were cut down when the barn roof was rebuilt to the new pitch, the plate added and then built up with largely machine-sawn studs (plate 11). A hatch, shorter than that seen on the east elevation, can be clearly seen within the framing (plate 11).

The south wall is neater and partly boarded to 1m-high, fixed to close-studding. An opening has been made between this and the cow shed (fig.6). The roof is rebuilt and is contemporary with the re-roofing of the barn. A timber strut runs between the tie beam and roof purlin, linking old and new (plate 11).

Shed/Loose box 1b

A much clearer sequence appears here in the transformation of a shed, function unknown, to a loose box or store. It was last used to store straw bales for the cattle.

The plan form is the same as 1a; rectangular with two bays. There is a floor of 8¾x4" brick setts. None of the walls have infilling except for those shared with the barn, though there is some evidence of limewash on some of the older studs, which is usually associated with livestock occupation.

There are clearer signs on this side of the porch that the porch lean-tos were adapted during the re-roofing phase to match the new roof of the barn. Bearing in mind that an open-sided shed would be shown as such on the 1896 OS map, it is speculated the re-roofing was carried out in the late 19th-century, perhaps between 1875 and 1896.

The east wall (plate 13) has fairly sturdy studs and slender machine-sawn ones above that compare well with the wall scar on the east elevation discussed in section 5.1.1. Also, the midrail has been extended (by only 0.7m, fig.6) and fresh boarding added (plate 13). The south wall contains only machine-sawn and the odd reused timber but is set within a reused, probably original, wall and sill plates. This could mean that 1b was originally built as an open-sided shed to shelter animals around the yard and became a loose box when the new cowshed was built between 1875 and 1896, which is probably when the roof was rebuilt and slated.

The roof structure is the same as 1a, but with a straighter beam.

5.2 Cowshed 2

Reliable evidence from cartographic sources date this structure to the late 19th-century (1875 to 1896) when the southern yard was laid out. Very little has happened to the structure since this time. Original features include a stall partition, a feeding trough attached to the rear wall and remains of a flint and mortar floor.

The shed is rectangular in plan, timber-framed and open-sided to the east, with a clapboard exterior and a gabled pantile roof set on a shallow c.35° pitch (plate 14). A 50cm-high stepped plinth, comprised of c.9 x 4½ x 2½ red bricks, skirts the three sides. These are slightly larger than those in the barn plinth but like parts of the barn are arranged in various bonds. Some, but not all, are frogged.

There are five bays, the end two of which, towards the north, are divided by a boarded partition built from vertical timbers (plate 15) either side of a middle rail. It is lower on the south side and is raised toward the trough end, like a stall partition. The partition conforms to the boundary of the south upper yard that came into being when the shed was built and is still represented by concrete and iron bar fencing today (plate 14). This part of the yard housed different animals – perhaps bullocks or calves. Because of wear to the floor, concrete blocks have been added to support the partition, on top of the original flint and crushed mortar floor (plate 15) that has been worn away in other parts of the shed.

Wall framing is primary-braced entirely in machine-sawn softwood held together by basic lapped scarf joints. There are six studs per bay, each of 10x5cm scantling; a standard size. The end wall to the south was completely rebuilt after modern storm damage (John Mitson pers. comm.) but its primary bracing conforms to the prevailing style (plate 16).

Attached to the rear (west) wall of the shed is a feeding trough that runs from end to end (fig.6, plate 16). Like the area below the partition, the floor has worn down and concrete blocks have been inserted beneath. Originally, the height to the lip was approximately 80cm-high which would be tall enough for a standing cow. The crushed mortar and flint floor remains below the trough, away from the feet of the animals (fig.6).

The walls are capped by a queen post strut roof supported on 15cm² posts set within concrete rendered brick plinths (plate 15). Curved Victorian iron brackets support the tie beams at intervals. Each truss has a bolted iron rod passing through and assembled as prefabricated units.

6.0 DISCUSSION & PHASING

Walnut Tree Farm developed from a loosely-organised post-medieval farmstead into a Victorian planned farmstead, laid out to become a double courtyard. After the middle part of the 20th-century many of the 19th-century farm structures were removed to expand the current farmhouse garden. It is therefore difficult to discuss the process flow of the pre-modern farm other than in general terms.

Of the two remaining structures, the oldest is clearly the barn. A second barn outside the development area to the east (fig.1, Appendix 1) is believed to be contemporary with it and close inspection of this would give more insight into the farm as a whole. The barn is believed to date from the 17th-century (ECC HEM 2006), but the style and carpentry and quality of the timber suggests a later, perhaps 18th-century, date. Primary bracing is common in Essex barns from these dates but the timber is elm rather than oak and winnowy, not like the more substantial framing one would expect in a 17th-century structure, suggesting the barn was built when good timber was in short supply. On the other hand, the neatness of the build and echoes of the medieval arch-bracing could argue for the earlier date. Good lengths of wood have been used with scarf joint technology common to both centuries.

When first constructed, the exterior was half-boarded, with the upper register covered in a daub render, attached by laths to the frame. Judging from the steep angle of the wall scar to the original 1b roof, the barn roof was pitched at 45° like the east barn, rather than 30° as it is now. Inside, the external laths between the studwork were hidden by lime plaster panels on

both levels. Relatively large areas of lime plaster and daub remain from the early period, particularly inside the barn and within the two associated structures, 1a and 1b. This was replaced externally by the ubiquitous weatherboarding during a late 19th-century improvement phase, probably at the same time as the roof was rebuilt. This resulted in alterations to the two side buildings to the porch, interpreted as a loose box and shed. The roof was adapted to carry slate and consequently was built to a lower pitch. Slate became common in the 1850s with the coming of the railways, but continued to be used throughout the century.

In terms of fixtures and fittings, the threshold leap below the porch doors with its slanted uprights is unusual and different to the prevalent Victorian leaps. Other fittings such as the pitching hatches and windows on the side buildings are original too. The gable vents probably belong to presumed late 19th-century changes that included the roof rebuild.

The cowshed belongs to the second of two 'improvement' phases at Walnut Tree Farm. The first, in the mid 19th-century established the yard north of the yard, while the second, in the latter part of the century, established the southern yard. The first phase was probably a response to the increase in demand for milk and meat and the infra-structure to deal with its transportation (i.e. the railway network) and the second perhaps as security against fluctuations in the price of grain brought on by a succession of bad harvests and cheap grain imports from America. Architecturally and structurally, the cowshed is typical of many improved farms: a practical building made from pre-fabricated sections. However, it is unusual in containing feeding trough and remains of a stone/crushed mortar floor as original fixtures. A partition within is reflected in the division of the yard for animals from the sheds/loose boxes attached to the barn.

As with many farms, the pace of change in the 20th-century resulted in great upheaval, in particular to the barn. The roof began to spread under the weight of the slate and the light framing began to buckle. Large areas of framing were replaced in concrete blockwork. A large door was added on one side to herd the cattle into the barn. The threshing floor was probably still in the midstreys when the concrete floors were laid either side and the plinth rendered, which is common on nearly all farms.

7.0 CONCLUSION

The barn and cowshed at Walnut Tree Farm represent the remains of farming during the 18th and 19th-centuries when improvements in farming and increasing demand led to a boom in the industry known as the Golden Age of Agriculture.

The 18th-century barn is a significant structure of local if not regional importance. Its timber-framing is particularly attractive and neatly put-together for a functional structure. Its association with the east barn is worthy of investigation, should the barn be converted at a later date. Areas of daubed and lime plaster walling are important survivors from the post-medieval period of farming and are a feature of structures of this age. Although far from common, 18th-century half boarded and primary braced farm buildings have been recorded locally at Little Winceys Farm (Letch 2007) (dated 1780) and Grays Farm, Wethersfield (Letch, in prep.).

The style of cowshed, clapboarded on a light timber frame and brick plinth, is typical of sheds and stables for livestock from Essex and East Anglian farms from the 19th-century. Many other examples exist on farms in the vicinity. Like many other farms in the 19th-century, the earlier most useful buildings (barn and east barn) were retained in the new courtyard layout that continued to expand into the latter stages of the century. 20th-century alterations, replacing areas of timber-framing with concrete blockwork, have detracted from the appearance of the barn, and their timber replacement will be welcomed.

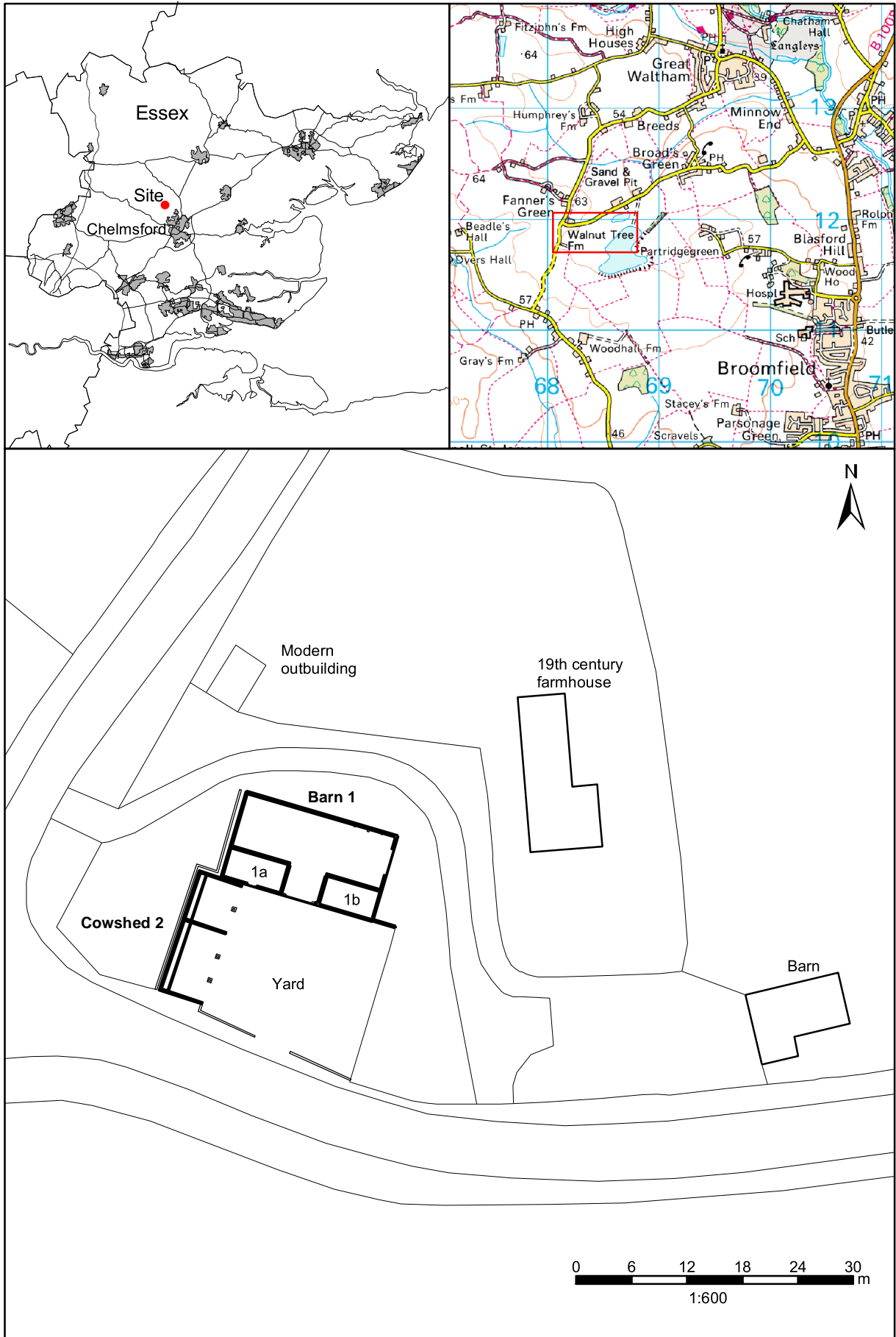
Although only a remnant of the pre-modern farming complex, the barn, cowshed and south yard at Walnut Trees Farm constitute a good surviving example of Essex farm development over the past three hundred years. The demands of modern day agriculture are for large conglomerate farms with prefabricated units for storing high tech. machinery. This has prompted a shift away from the traditional farmstead whose vernacular character offer an interesting opportunity to repair, reuse and convert often neglected buildings that suit their rural setting.

ACKNOWLEDGEMENTS

Thanks are due to the owner, Mr John Mitson, who is undertaking the conversion, for commissioning the works and supplying the site drawings. The help of staff at the Essex Records Office is also acknowledged. Fieldwork, recording and photography were undertaken by the author. Illustrations were prepared by the author and produced by Andrew Lewsey. The site was monitored by Vanessa Clarke of ECC HEM on behalf of the LPA.

BIBLIOGRAPHY

- | | | |
|--------------------|----------|---|
| Alcock, N.W. et al | 1996 | <i>Recording Timber-framed Buildings: An Illustrated Glossary</i> , CBA, York |
| Curl, J.S. | 1999 | <i>Oxford Dictionary of Architecture</i> , Oxford University Press, Reading |
| DOE | 1990 | <i>Planning Policy Guidance Note 16: Archaeology and Planning</i> HMSO, London |
| ECC HEM | 2007 | <i>Brief for Historic Building Recording at Walnut Tree Farm, Fanners Green, Great Waltham, Essex</i> (ECC HEM April. 2007) |
| Letch, A.R. | 2007 | <i>Historic Building Recording of Barn at Little Winceys, Finchingfield, Essex</i> ECC FAU rep.1684. |
| Letch, A.R. | in prep. | <i>Historic Building Recording at Grays Farm, Wethersfield, Essex</i> ECC FAU (rep.1742). |
| Peters, J.E.C. | 2003 | <i>Discovering Traditional Farm Buildings</i> Shire Publications, Haversfordwest (updated) |
| Proctor, P., ed. | 1985 | <i>Longman Concise English Dictionary</i> , Longman, Harlow |
| Reaney, P.H. | 1969 | <i>The Place Names of Essex</i> Cambridge University Press |
| Scarfe, N. | 1968 | <i>Essex: A Shell Guide</i> , Faber & Faber, London |



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Fig.1. Location and block plan

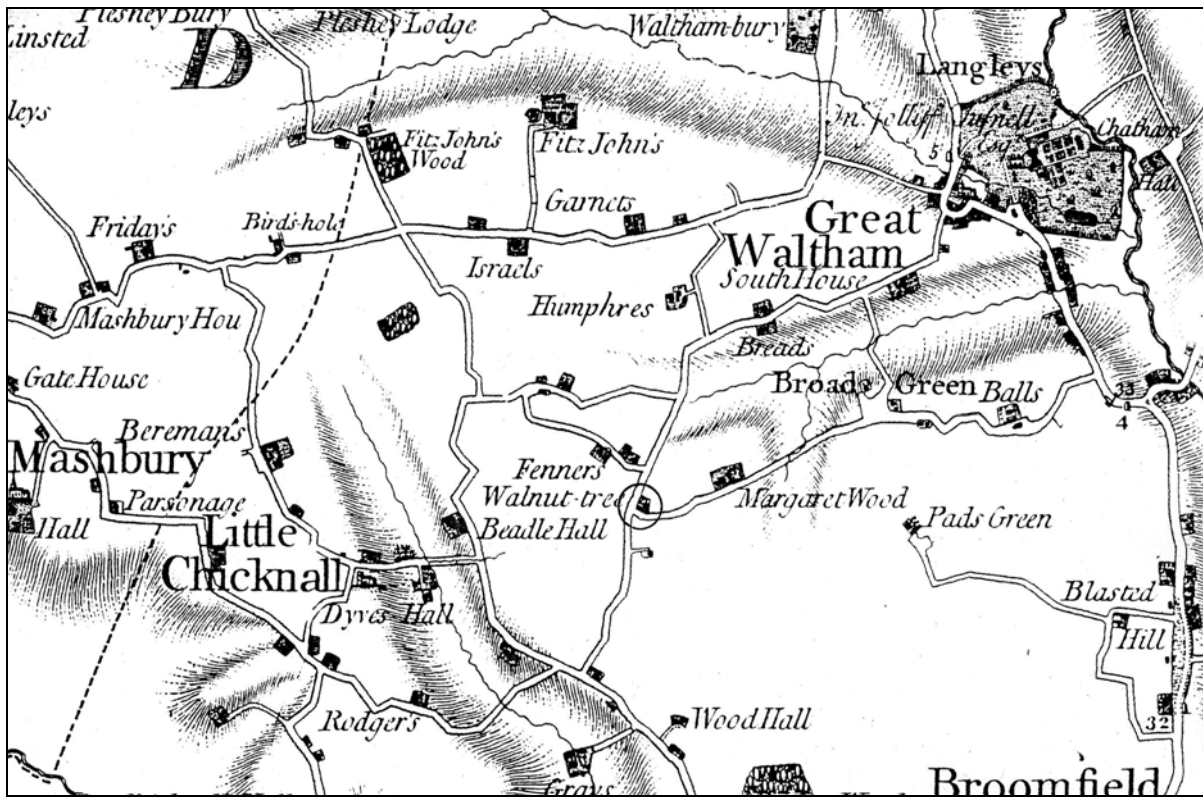


Fig. 2 Chapman & Andre map, 1777

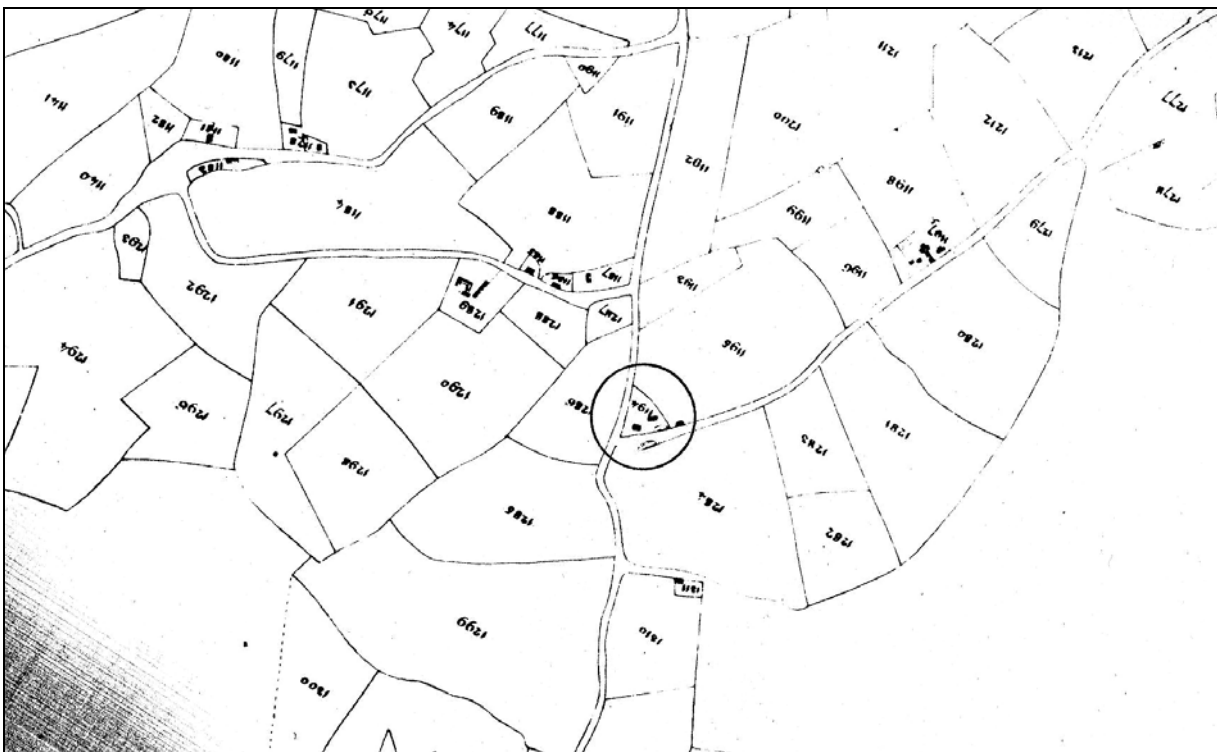


Fig. 3 Tithe map of Great Waltham, 1840 (re-oriented to north)

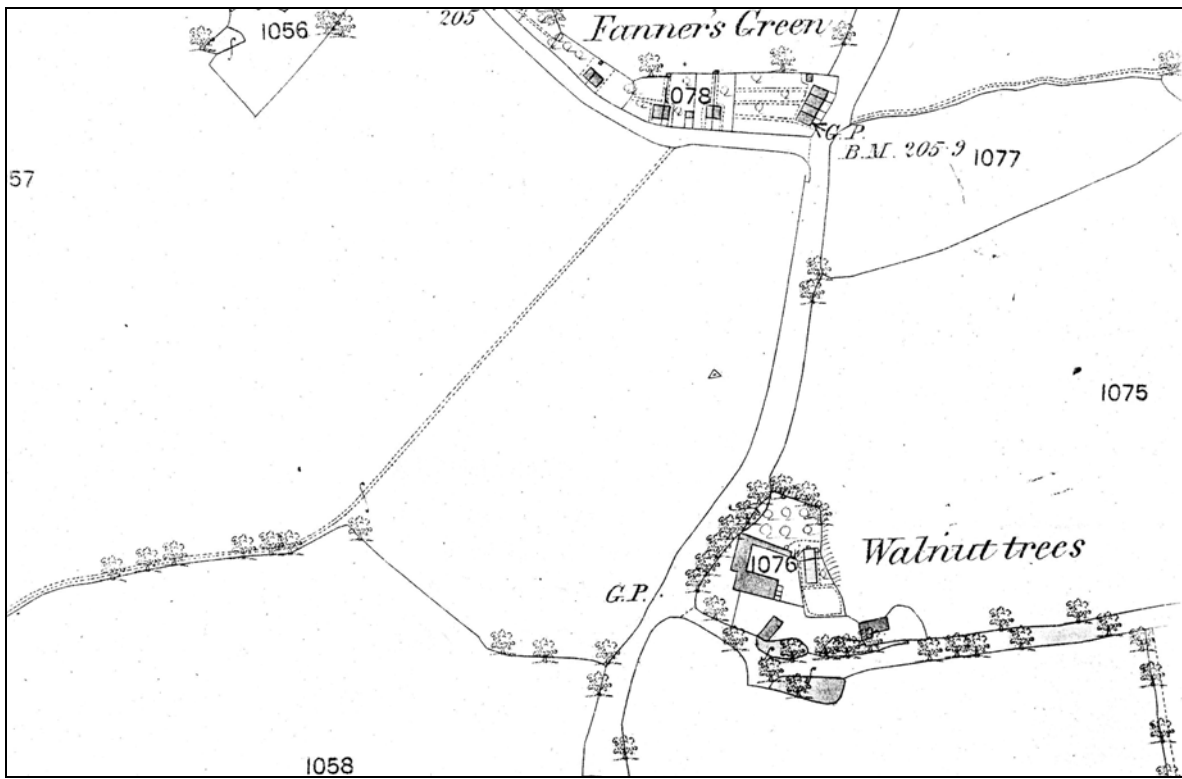


Fig. 4 First edition 25" OS map, 1875

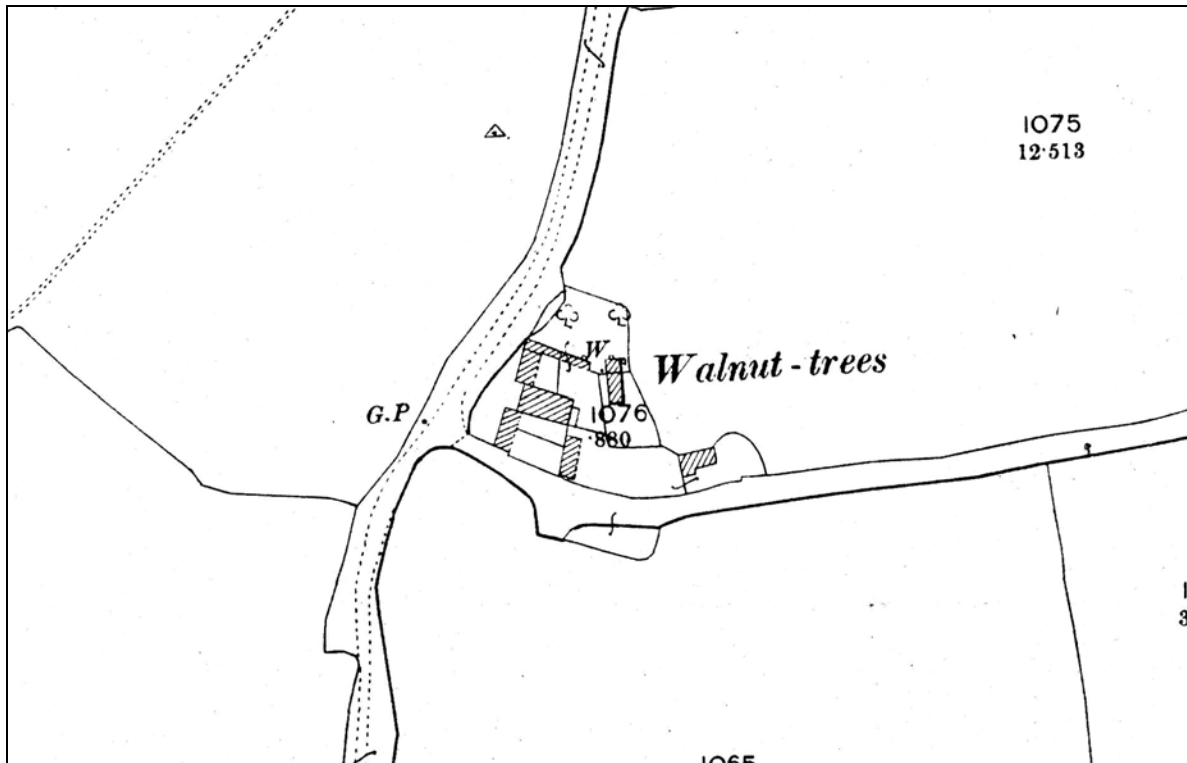


Fig. 5 Second edition 25" OS map, 1996

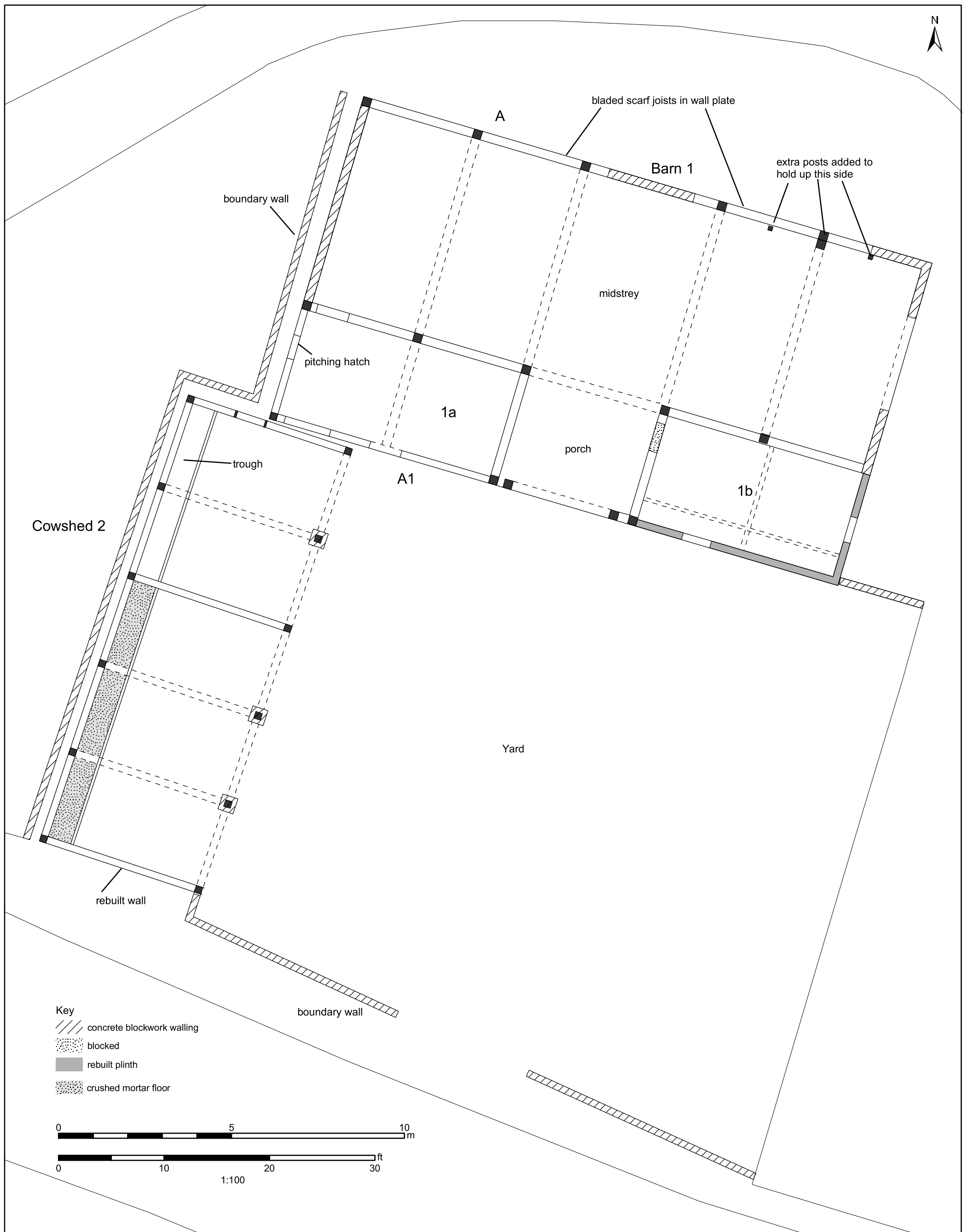


Fig.6. Ground plan of existing farm buildings

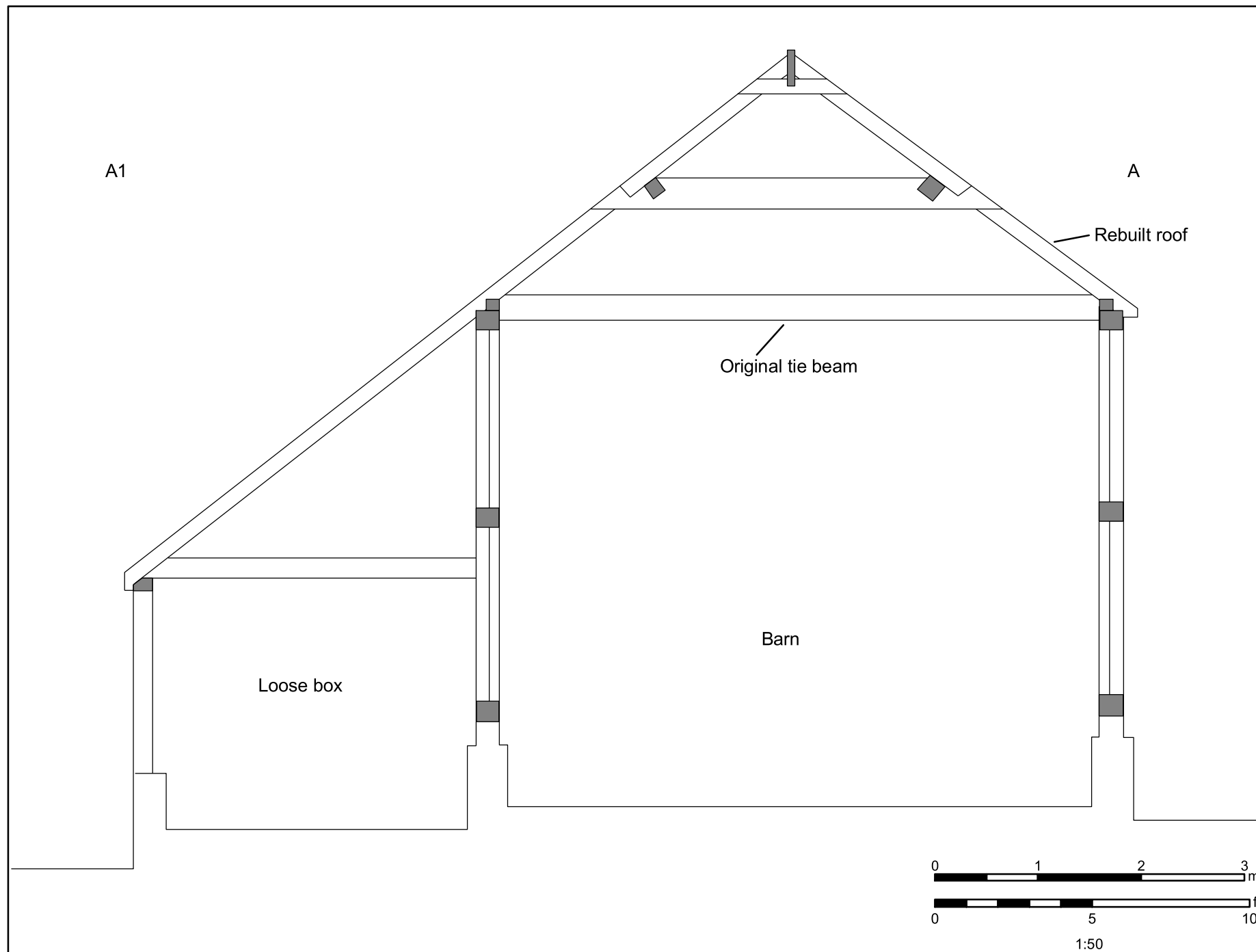


Fig.7. Section A - A1 through barn and loose box



Plate 1 Farm group viewed across yard to north-west



Plate 2 South elevation of barn



Plate 3 Barn porch



Plate 4 Barn viewed to south-west



Plate 5 Scar to former roof line on east elevation



Plate 6 Rear of barn & cowshed viewed to south-east



Plate 7 Interior of barn viewed to east, with porch to right



Plate 8 Interior of barn viewed to west



Plate 9 Interior of porch



Plate 10 Detail of construction and markings to threshold leap



Plate 11 Interior of loose box 1a viewed to south-west



Plate 12 External walls of barn & porch viewed from interior of loose box 1a



Plate 13 Extension & roof raise to shed 1b on eastern wall



Plate 14 Eastern elevation of cowshed viewed across yard



Plate 15 Cowshed partition



Plate 16 Feeding trough inside cowshed

Appendix 1: Photographic Survey of Contemporary East Barn



Barn viewed from north-west



Barn viewed from south-east

Appendix 2: Contents of Archive

1. Introduction

- 1.1 HEM Brief for works
- 1.2 FAU Written Scheme of Investigation

2. Research Archive

- 2.1 Copy of report
- 2.2 Copy of report pdf-formatted (on CD)

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 3: EHER Summary Sheet

Site Name/Address: Walnut Tree Farm, Fanners Green, Great Waltham, Essex	
Parish: Great Waltham	District: Chelmsford
NGR: TL 6815 1195	OASIS No.: essexcou1-30325
Type of Work: Building recording	Site Director/Group: Andrew Letch ECC FAU
Date of Fieldwork: 4th May 2007	Size of Area Investigated: N/A
Curating Museum: Chelmsford	Funding Source: Mr. J. Mitson
Further Work Anticipated? None	Related EHER Nos.: None
Final Report: Summary in EAH	
Periods Represented: Post-medieval (c.18th century), late 19th-century)	
<p>SUMMARY OF FIELDWORK RESULTS:</p> <p>A barn and cowshed were recorded prior to conversion of an improved post-medieval farmstead. The barn is likely to have been built in the 18th-century, half-boarded with daub render, thatched roof and primary braced frame. A contemporary barn stands to the east, outside the development area and was recorded photographically. An initial improvement phase established an enclosed yard on the north side of the barn in the mid 19th-century (1840-75). The cowshed was part of a second wave of 19th-century improvement (1875-96) when the courtyard plan form was repeated to create a southern yard. In the 20th-century the north yard was removed, but much of the south yard remains.</p> <p>The barn has been altered greatly by rebuilding the roof and replacing its thatch with slate during the late 19th-century, and replacing areas of timber-framing with concrete blockwork in the previous century. However, extensive areas of daub render and infill panelling survive, which is rare. In comparison the cowshed has undergone no significant change, retaining features of interest such as a feeding trough and crushed mortar/flint floor.</p> <p>Both buildings are typical of their type and date. However the barn is of the greatest significance because of the comparative scarcity of 18th-century barns in the county.</p>	
Previous Summaries/Reports: None	
Author of Summary: Andrew Letch	Date of Summary: 7th September 2007