HISTORIC BUILDING RECORDING AT GRAYS FARM, GRAYS LANE WETHERSFIELD ESSEX





Field Archaeology Unit

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HISTORIC BUILDING RECORDING AT

GRAYS FARM, GRAYS LANE,

WETHERSFIELD

ESSEX

Client: Mr. D. Butler

FAU Project No.: 1742

Site Code: WFGF 07

NGR: TL 7206 3213

OASIS No.: essexcou1-31423

Planning Application: BTE06/00737/FUL

Dates of Fieldwork: 27th-28th June 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 an 18th century barn and byre within the curtilage of a Grade II listed 16th-century farmhouse. The work was commissioned by the owner, Mr Butler, 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 online entry has been created. The

archive will be stored with Braintree Museum.

2.0 BACKGROUND

2.1 Site location and description (fig.1)

Grays Farm is situated on the eastern side of Wethersfield parish, at the end of Grays Lane,

entered from Hedingham Road (fig.1). The timber-framed farmhouse is dated to the late

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16th-century and is Grade II listed (LBS 115668). It stands opposite the farmyard, across the former chase that formerly led to Broads Green, but now terminates at this point.

Topographically, the farmyard occupies an area of fairly level ground that slopes gently towards the village to the west. The surrounding landscape is essentially arable in character.

Grays Farm has not been a working farm for some time. The existing farm buildings, on the west side of the lane, have been used most recently for storing straw bales. Their condition is poor. The rest of the farm is redundant and as a consequence the farmyard is overgrown and contains the ruins of a 19th-century planned complex.

2.2 Planning background

Braintree District Council received a planning application (BTE06/00737/FUL) in April 2006 conversion of farm buildings to residential use. Mindful of the possible effects on the historic integrity of the 18th-century 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).

As part of the application, the barn and byre are to be refurbished as one residential unit, with a garage range built opposite, in similar character, screening the barn from the former farmhouse. The two 1940s structures either side of the barn porch are to be demolished.

2.3 Historical background & development

Cartographic and documentary research at the Essex Records Office (ERO), Chelmsford, has provided information regarding the development of the farm. Where appropriate, their references are included within the text. Map extracts are reproduced as figures at the back of the report and enlarged in many cases to enhance detail. It appears from this study that an 18th-century farmstead was incorporated into a planned Victorian farm that remained in existence up to and beyond 1950.

Wethersfield is mentioned in the Domesday Book as *Witheresfelda*, the main part being a personal name (Reaney 1969). The provenance of Grays Farm would appear to belong to William Grey, who is mentioned in Subsidy Rolls from 1327 (Reaney 1969). However, there are no contemporary references to the site specifically.

In the brief (HEM 2007), the barn is described as a transitional building of the earlier 18th-century, although the evidence for this view is unclear. Extensive remains of early infill and boarding is also commented upon.

'Grays' is first depicted on Chapman and Andre's map of 1777 (fig.2) which shows the house and little more than a representative indication of the farmstead complex straddling the lane.

An interesting fragment from a sales catalogue dated between 1766 and 1806 (D/DPg/T8) mentions "a messuage called Grays" (lot III) with:

"Convenient barns, stables & other outhouses in good repair and diverse closes (enclosures) of arable land, pasture & wood-ground, all freehold, containing about 80 acres in Wethersfield in the occupancy of Mrs Ann Anderson"

From this description, the byre is probably included as one of the barns. The stables may be the structure on the north-east side of the track that passes through the yard (fig.2), or may be around the house, which is included in the sale, along with outhouses.

Wethersfield tithe map of 1840/41 (fig.3) depicts the farm from soon afterwards the sale. It clearly shows the barn and byre on the west side of a square yard. Two other structures stand around the north-east corner of the yard, one of which may be the stables mentioned in the sale catalogue. With the enclosure of the surrounding fields, the trackway terminates either side of the farm (fig.3). Unfortunately the transcript for the Award no longer survives so details on ownership/occupier and holding are unknown.

Between 1840 and 1881 when the first edition OS map was produced, the farm, like many others across Essex, undergoes a period of expansion, or 'improvement'. The OS map of 1881 (fig.4) clearly shows outbuildings built onto the rear of the barn and the north and south ranges, enclosing the yard on three sides. The south range has been built onto the existing byre, but it is not clear whether the byre has been extended to the barn at this stage. Other structures have appeared to the north of the main yard, the principal one of which has its own yard. Two other outlying buildings are shown.

Superior detail is provided by the second edition 1897 OS map which is drawn to a larger scale (fig.5). It shows the main yard divided into two and partly-closed by further buildings on the eastern end that stand either side of the entrance and aligned with the trackway. Curiously enough, the byre and attached structure from the southern range are indicated as

open-sided stock sheds (dashed lines), which was clearly not the case with the byre. The buildings to the north-west of the main complex are also shown. This layout remained unchanged up until the 1940s.

In the early part of the 20th-century, the farm was operated by Messrs Ben, H. E. and M. M. Smith who rented from Sir Fortescue Flannery (D/F 35/8/417). The partnership was dissolved in 1932 and livestock and equipment auctioned off. A copy of the catalogue as reproduced in Appendix 1, with the prices achieved shown in pounds, shillings and pence. Exclusive of land and buildings, the sale comprised all farming equipment and livestock; including scales, ladders, a new tractor (1930), pigs, cattle and horses. The grand total of the sale amounted to over £383. Following the sale, the farm was leased to Mr. S.K. Daines (D/F 35/8/417).

After the war, the roof to the barn was rebuilt and the more traditional thatched roof replaced by modern corrugated asbestos. The same material was used to cover the outbuilding and new sheds either side of the porch that replaced those built in the Victorian era. It would appear the buildings of the south range were not cared for in the same way, and it is possible their neglect had already begun. In 1977 the farm was sold by "two old boys" to the present owner. With an acreage of 130 acres, an increase of 60% since the 18th-century, the land yielded 30 tons of harvest per annum (D. Butler pers. comm.). In recent years the barn has been used to store grain and straw bales. It seems likely that bales were also kept in the byre. In the meantime, the rest of the farm became redundant. The farmhouse is owned separately.

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 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 for animal feed. In return the animals provided transport, power, manure for the crops, 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 Agriculture,' 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, like the owner of Grays Farm, remodelled their farms utilising the courtyard system. Larger buildings, inevitably barns, were retained, with new housing for livestock attached around the existing farmyard. 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. With protectionism a thing of the past, farmers had to survive by cutting costs and improving efficiency still further. The worst of the depression was over by the end of Victoria's reign, but continued 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 in a booming economy, alternative uses are sought through 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 outbuilding 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, function and internal layout, survival of early fixtures and fittings and any change of use. The record also aimed to understand the context of the farm within its immediate contemporary landscape.

Another requirement was to complete the timber frame survey carried out by the architects, which was undertaken whilst the barn was still in use.

4.0 DESCRIPTION OF WORKS

The standing buildings were recorded using architects drawings (frame surveys, floor plans and sections) supplied by the client. These drawings were checked, supplemented and annotated during the survey and are reproduced in the report as figs. 6-10. External and internal architectural descriptions were made and building function assessed, as well as any evidence for change in function. A block plan of the site is included to show the location of the recorded structures (fig.1).

To enable the completion of the frame survey, the bales and grain boarding around the inside of both structures were removed.

A series of digital and 35mm black & white print photographs 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 1-24. The remainder may 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). From this, useful maps were uncovered of the farm showing its development from the late 18th-century to its Victorian heyday (figs. 2-5) and a sales catalogue from 1915 (Appendix 1).

5.0 HISTORIC BUILDING DESCRIPTIONS

5.1 General description (fig.1)

Surviving components of the farm complex preserve the original L-shaped plan form, with the barn/yard facing the former farmhouse to the east (fig.1). The yard is overgrown and appears to have been disused for some time. Some trees have been felled and brambles and young trees have grown in and amongst the remains of the south range- now a collection of empty, rotting and collapsing timber frames. Piles of roofing tiles are scattered about the site. The outlines of buildings on the north range are partly visible. Like the barn and outbuilding, the ranges were built in timber-framing and weatherboarding. Through long-term disuse, the two ranges have been allowed to fall apart.

The barn and byre share common built elements in their clapboard-clad primary braced timber construction and modern replaced concrete asbestos roofs. Their style and fixtures and fittings are suggestive of contemporary farmstead components.

5.2 Barn 1

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 and stored at either end, perhaps with hay and root crops for animal feed. Even on small arable farmsteads, cows were kept for fattening, dairy produce and to create manure. Often cowsheds or stables would be sited next to the barn so the animals could be readily supplied with feed and straw (Peters 2003).

Oblong in shape and set on a north-west to south-east alignment, the barn is five bays long with a porch on the west side, facing the fields. Its dimensions are 9.5 x 20m, which include modern sheds either side of the porch to store large farm machinery. The barn is built half-boarded, originally with daub covering the upper section of the walls, but replaced largely in cement render in the 1940s; apart from some hidden areas on the long elevations. The daub render was laid on wattles attached to laths.

The roof is pitched at 45° and would originally have been thatched, before the emergence of low-maintenance, cheap and effective roofing materials in the modern period. The stepped brick plinth onto which the barn is raised comprises lime-mortared soft red bricks in Flemish bond with dimensions of $9 \times 4 \times 2\frac{1}{2}$ inches, of probable 19th-century origin.

The barn is in a poor state, with doors hanging off, faded boards and invasive ivy growth. The inside has been kept dry by a rebuilt roof and wall cladding, the wooden rails to which remain attached to the timber frame, but damp has entered through the cart doors areas where boarding is missing.

5.2.1 External description

The most prominent elevation from Grays Lane is the southern gable end. Some alterations have been carried out in the modern period to accommodate grain storage. A wide doorway has been inserted into the lower register for vehicle access and the former pitching hatch has been blocked with boarding and a grain chute inserted to convey grain (plate 1). A large section of boarding is missing from the centre part of the gable, which may show removal of something or simple deterioration.

The main long elevation faces the yard to the east and is viewed on approach to the house. Contemporary byre 2 leads from the southern end. At least half the façade is coated in cement render above ancient 9 inch weatherboarding (plate 2). The high central wagon doors that lead onto the threshing floor inside are in poor condition. What remains is hanging off the pintels either side (plate 3). Below is a single low door threshold leap (plate 4), probably the precursor to the slotted plank leaps seen in Victorian barns and 19th-century upgrades, and quite rare. This controlled the grain when threshing was taking place and kept animals from wandering in from the yard. Then, when the grain was winnowed, they were opened to create a through draft across the threshing floor. All three doors are attached by large round-ended strap hinges, also present on the west elevation, on the opposite side of the threshing floor.

Either side of the cart doors are two ledge and batten side doors carried on plain strap hinges (plate 5). The wall/roof scar to the removed north range can clearly be seen from this side against the more durable cement walling of the barn. It appears to belong to a timber-built open-sided cattle shed (plate 6). Closer examination of the exposed area of barn walling reveals important information on its construction. The wattles are packed tightly together and tied to horizontal laths nailed to the timber frame. Further remains of original daub render exist on an area of half boarding on the south side of the elevation, hidden and protected by the byre (plate 24, section 5.3.2).

Changes carried out in the 1940s (D. Butler pers. comm.) have spoilt the more traditional aspect of the west elevation (plate 7), but have also been important in preserving vital historic remains. A low, lean-to central porch provides the main focus on this side, whose

gabled roof appears to have been rebuilt to a more manageable pitch with the rest of the roof in the 1940's. However, it is incongruous that the roof pitch does not match the roofs of the sheds either side. The wagon doors and leap, as seen on the opposite side, were kept, though the wagon doors were cut down to fit the new lower doorway.

The machine sheds either side of the porch were built in the 1940s to replace existing structures probably built with the construction of the barn. Shed 1a (fig.6) is built from timber, concrete blocks and corrugated iron roofing and open to the north. It currently houses an old bulldozer. Its counterpart, 1b, is post-built and partly-clad with a corrugated asbestos sheeting roof. It stores a Lister conveyor machine. Seen from the inside, there is an important historical feature carved into the daubed and plaster wall of the barn, beside a 1940s steel-framed window and protected by the later structure. It is a four-petal daisy wheel symbol, a magic mark used to ward off evil spirits (plate 8). These and other versions, with extra petals, may be found in buildings of the 16th- to 18th- century. Although not an overt religious symbol, their intention was to protect the contents from evil spirits. In houses they are often carved onto beams or the fireplace lintel. After all, the doors and windows could be closed against supernatural penetration, but not the chimney (H. Walker pers. comm.). The mark would be created quite easily in plaster with a pair of dividers, perhaps when the barn was first built.

The north elevation (plate 9) retains its pitching hatch, although since the frame survey was produced, in March 2006, its door has fallen away (fig.7c). Above, the gable, which is partly rebuilt with the roof, is cement rendered. Much of the wall is engulfed by ivy, which extends into the building through gaps in the boarding.

5.2.2 Internal description

Inside (plates 10 & 11), the barn is laid out over five bays with a central porch extending from the midstrey on the west side. The barn is well-proportioned, with uniform bays 4m wide, except for the midstrey, which is 0.5m wider. It is usual for the middle bay to be wider, to allow the carts to be unloaded with ease at harvest time.

The wooden threshing floor inside the midstrey (fig.6, plate 12) remains intact, which is rare as many were replaced with concrete flooring in the latter part of the 20th-century. It is constructed from 7 x 2½" nailed planks and extends into the porch (fig.6), though the ends of both sides have rotted from damp through the open cart doors. Inside the porch, a 1.4m-high 8" plank lining kept the timber frame clear of grain, whilst planks could be slotted inside grooved posts to a height of 1m in the main part of the barn (fig.7b, plate 16). The floor on

the north side of the threshing floor has been removed and the other side replaced with a concrete floor, laid in the post-war period. At the same time, the plinth and lower areas of timber framing at this end were lined-out in cement to a height of 1m (figs.7a-c), probably for damp prevention. The remainder was lined-out in angular corrugated asbestos sheeting, which may be seen in some of the plates after removal.

The main framing is elm and consistent below and above the midrail. Some timbers still have traces of bark. Square posts (c.20cm²) divide the bays and carry tie beams of similar scantling supported on knee braces, bolted and notched into the timbers on each side (fig.8). The knee braces are fairly crude and in the main appear to be sections of branch and trunk. Some have chiselled carpenter's marks (fig. 6) whose order is difficult to extrapolate, but increase from south to north, suggesting the barn was built in this direction. The posts are plainly carved, without jowls, a mid 17th-century or later feature. Wall plates are approximately one bay in length and are joined together by edge-halved and bladed scarf joints (fig.7a & b) which were introduced in the mid 16th-century but became common in the next two. The only exception to this is on the opposing sill plates on the northern bay (figs.8a & 8b) where a short bridle scarf joint with squinted abutments was discovered each side (plate 13). This is a typical ground sill joint with origins dating back to the medieval period (Hewett 1980). The face is over-lipped, to prevent water penetration.

Wall framing is primary braced with midrails double pegged to the posts, dividing the upper and lower registers. Some of the studs are quite waney, but the majority are sawn fairly straight. Primary bracing is a construction technique adopted during the 16th century (Walker 1994) but more prevalent during the succeeding centuries, as good building timber was in short supply. The same method is still used today for timber prefabricated buildings (e.g. garden sheds). In the early form, the studs are nailed to pegged diagonal braces that divide the studs into two parts. Often only the main components, the braces and central studs, are pegged to the frame. In the case of Grays Farm barn, on the upper register, it seems that the studs are morticed into the rail and wall plate. However, on the lower register, where some of the rails have a more rounded profile (due to a reliance on younger trees), the studs are tenoned and overlap the outward face of the rail to present a flush surface for attaching the laths to. Those close to the byre appear to be simply lapped to the outside and nailed and are not tenoned at all. However, in many places where the cladding is intact, precise studwork joinery detail is difficult to establish. Even in those exposed areas, it is difficult to photograph these changes.

A good idea of how the lower part of the barn was assembled is provided in the north-east corner, where the plinth has rolled, pulling the sill away from its housing and exposing the joint. As can be seen (plate 14), the two sill plates are joined by mortice and tenon the same width as the plate itself. This is pegged through from the top and then the corner post tenoned into the top and double-pegged vertically.

A good deal of original daub infilling remains between the studwork panels. Like the exterior, the wattles are attached to laths. The interior daub is now confined to the upper register, but presumably once carried all the way down. It is clear from remaining laths that externally it continued slightly below midrail level (plate 13), as it does today.

Much of the original framing is intact. The few replacement studs are confined to the gable ends. Those at the southern end have largely been inserted to block the pitching hatch (fig.7c), while the north gable was largely rebuilt when the roof was replaced (fig.7d).

Original studwork has dimensions of c.9 x 10cm and is placed between 30 and 35cm apart. There are no reused timbers. The existing opening between the barn and byre, where studs have been removed between midrail and cement lining (plate 15), does not represent an earlier opening between the two.

The porch (plate 16) is integral to the barn and contemporary with its creation. However, it was altered significantly when the roof was rebuilt. The original roof would have been double-pitched like the existing roof on the main part of the barn (although it too has been replaced and this may not have been its original pitch), with the framing extending to the existing wall plate and original higher doors. Apart from the external evidence discussed earlier, there are also internal factors to suggest the porch has been altered. For instance, the end posts have been cut down and the wall plate is not pegged to the posts either side. The studs have been cut down and lapped internally over the new machine sawn diagonal plates, then nailed (plate 17). The western ends of the primary braces have been cut back substantially, along with the full frame, to make them practically useless as bracing.

Roof framing dates to the 1940s and is completely rebuilt in machine-sawn timbers of regular size. Collars and ridge plate are nailed to widely-spaced rafters (fig.7a) supporting purlins either side (plates 10 & 11). The ends are wind-braced to prevent racking of the lightweight frame.

Later usage for grain storage and processing is shown by a makeshift metal hopper attached to the framing on the east side (plate 18) that links to the grain chute outside (plate 7). The hopper was fed from above, probably by a vacuum hose lifted into place by means of a small hoist above. Other associated apparatus such as drying/processing machinery or grain silos may have formerly been located here too, either during or before bales were being stored here.

5.3 Byre 2

The function of this building is unknown but its plan form and close association with the barn suggest it was built as a byre, either for cattle or oxen. A byre was used to hold loose animals, perhaps the young, those in calf, or diseased.

Although they are now physically connected, the byre was built separately to the barn, though it is probably contemporary with it. The two were divided by a gap of 0.9m which enabled easy access by farm workers into the yard from the outside, but would not be large enough for herds of livestock. It was only later on, in the 19th century, that the byre was extended to close the gap. Despite this, there is no evidence for traditional access between the barn and byre, which may be expected.

In terms of condition, the byre has suffered more than the barn, but not irreparably so. In particular, the north side, facing onto the yard is in poor condition, with the frame exposed and brick plinth either missing or replaced by concrete blockwork (fig. 9a, plate 19). The latter is also true of the east elevation. Its weatherboarding, which is the same as that on the barn, has faded on all sides. Decrepit wall plates and posts from the southern range adhere to the east end (plate 20).

The byre is a two-bay oblong structure extending eastwards from the barn (fig.1). It is timber-framed and primary-braced. Openings away from and onto the yard are both likely to be original. There is no evidence for other external coverings such as daub. Like the barn, the roof was re-clad in corrugated asbestos sheeting, probably in the 1940s. Happily though, the original roof framing has been retained, and its steep 55° pitch would be appropriate for thatch.

5.3.1 External description

Of the three elevations, the best preserved side is the south elevation (plate 1). The main feature of this is the upper part of a half-heck door (fig.9c) with plain original strap hinges

carried on iron pintels hammered into the frame. The plinth is constructed of bricks similar to those recorded in the barn, but at times slightly wider. Some are frogged.

As the byre is set slightly further to the south than the barn, the byre extension on this side is set at an angle (fig.6). A vertical wall scar is clearly seen toward the left (plate 1) where short 7 inch cladding has been nailed to the in-filled machine-sawn frame. On the opposite end of the byre, the wall plate to the removed south range is suspended in the air (plate 1). On the east gable of the byre, the wall scar to the same structure, with its lower roof pitch (plate 20) indicates the range was roofed in more durable materials than thatch. Indeed, a pile of pantiles lying within the confines of the building proves this. An owl hole exists in the apex of the roof.

The north elevation faces onto the yard. As has already been stated, it is in a poor state. At least half of the cladding has fallen away from the frame and parts of the plinth have rolled and been replaced or else left void. The central ledge and batten doorway is hanging off its hinges (plate 20).

5.3.2 Internal description

Inside (plates 21 & 22), the layout is divided into two c.3m-wide bays, with a further 1m extension on the west side, created in the 19th-century when the byre was extended to the barn. To enable this, the end stud wall was removed, short sections of wall plate lap-scarfed onto the ends of the longitudinal plates (figs.9a & 9c) and a new end plate fitted on the west side. The extension was made from machine-sawn timbers in the walls and roof. Wide brackets were nailed onto the trusses, made from 2 inch planking (fig.10). The bay posts are original and the southern one retains a primary brace mortice (plate 23).

The studwork is similar in scantling to the barn, at c.10cm². Average spacing between the studs is 40-50cm, though slightly narrower on the north side. Each is tenoned to the wall plates and rests on a narrow 10cm-wide sill that only survives on the south side. The studs are tenoned into the plates, rather than lapped and nailed to the outside of the wall plate like many in the barn. On the north and east sides the ends of the studs have rotted with the sill plate (plate 23). Wall plates and posts are c.18cm² and the former roughly chamfered. The wall plate and post on the east gable wall are the only reused timbers (fig.9a & 9b). No carpenter's marks were observed.

The roof (plate 24) is original and has suffered from little or no alteration. It is a pegged collar purlin type (fig.10), with the purlins splay-scarfed and nailed together. Flooring is in concrete.

5.4 Former south range

The south range comprised two Victorian structures extending toward the former lane (fig.1). From what remains, the structures were timber-framed with tiled roofs. The best preserved was built onto the byre and features on several photographs in the report (plates 19 & 20), but is little more than bare posts and wall plates, devoid of cladding and studwork. 19th-century mapping (fig.5) indicates the south side, facing away from the yard, was open-sided, which was not verified during the survey. Nothing of the north range survives apart from the scar against the barn wall, a few posts and a pile of timbers at the east end (cover plate).

6.0 DISCUSSION AND PHASING

There is no physical evidence for a medieval scattered farmstead at Grays. However, the fact that the farm house is earlier in date (16th-century), with associations to medieval gentry, makes this a possibility. Rather, the historic standing buildings record the development of, and changes to, the surviving elements of a farming complex that spans the 18th to 20th-centuries.

18th-Century

The earliest surviving farm buildings at Grays Farm were set either side of Grays Lane, a presumed public thoroughfare, and belong to the 18th-century planned farm. Grays adopted a basic L-shaped plan form partly enclosing the yard. A local parallel is Little Winceys in Finchingfield, built in 1780, and comprising barn and granary on the same plan form. Like Little Winceys, the barn at Grays Farm was built half-boarded on a primary-braced frame, with similar joinery, and quality/scantling of the timber. In the barn, daub was used as a wall covering internally and externally under plaster. Much of the external cover was replaced, but enough survives, mainly in sheltered areas, to give an impression of how the barn originally appeared. The barn roof was most likely thatched when first constructed and high cart doors were positioned both sides of the midstrey. In contrast, the byre was built fully-boarded. Despite the post-medieval farm having a reliance on arable agriculture, horses or oxen and cattle were a necessity on all farms to draw the plough and provide manure and dairy products. It was therefore common for animals to be kept in byres close to the barn where there was a ready supply of straw and with no internal fixtures or fittings remaining, this seems to be the most likely function.

19th-Century

Like many others in the region, the farm expanded into cattle farming in the mid 19th-century, resulting in the creation of an enclosed plan form around the yard, with new timber-built stock sheds and other structures. These have left little trace. The enclosed development closed-off the lane. The west end of the byre was extended to the barn in new materials. Most notably, the boarding used in the byre extension is shorter than that in the 18th-century structures, suggesting the survival of early, if not original, boarding in the barn and byre.

20th-Century

In the 1940s the barn was re-roofed and both byre and barn re-clad in cement asbestos sheeting. The two machine sheds were built. It seems likely the porch was reduced in height at the same time. It is unusual not to have a gabled porch to a barn. Grain containers and transferral apparatus was installed in the barn and both buildings lined-out for storage. By this time, livestock farming had ceased and the associated 19th-century buildings became redundant and were left to gradually disintegrate. The trackway was re-routed around the back of the barn.

Many original or 19th-century fixtures and fittings remain to the barn. The cart doors and heavy leap doors survive, the latter of which is perhaps the forerunner of the more common slotted threshold leap seen in Victorian and modified earlier barns. Smaller doors either side are probably contemporary. Inside is a wooden threshing floor and posts for temporary planked partitions during the threshing process. Both are rare survivals. An unusual element to the knee braces, common features in later timber construction, is that they are not only bolted but also notched into the main framing which has not been recorded by the FAU anywhere else. The incised daisy wheel on the west side of the barn, a protective symbol against evil, is a significant find indicative of the superstitious nature of the 18th-century rural population.

7.0 CONCLUSION

The barn and byre at Grays Farm represent significant remains of a planned 18th-century farmstead, products of a time when enclosure and improvement created an environment for agricultural expansion. In turn, this was to develop during the 19th-century into the Golden Age of Agriculture, when increasing home demand and a booming economy led to further expansion, influenced by Victorian attitudes to industry and efficiency.

The 18th-century barn is a significant structure of local, perhaps even regional, importance. Daubed and lime plaster walling would have been a feature of many contemporary local barns before weatherboarding became more available in the 19th-century. Although far from common today, 18th-century half boarded and primary braced farm buildings have been recorded locally at Little Winceys Farm (Letch 2007a) and Walnut Tree Farm, Great Waltham (Letch 2007b). Grays Farm is therefore a welcome addition to this group.

Like many other farms in the 19th-century, the barn was retained and incorporated in the enclosed courtyard layout. However, small early structures such as the byre rarely survive on modern farms, many being demolished during improvement. The byre at Grays Farm survived because its location suited the new Victorian layout.

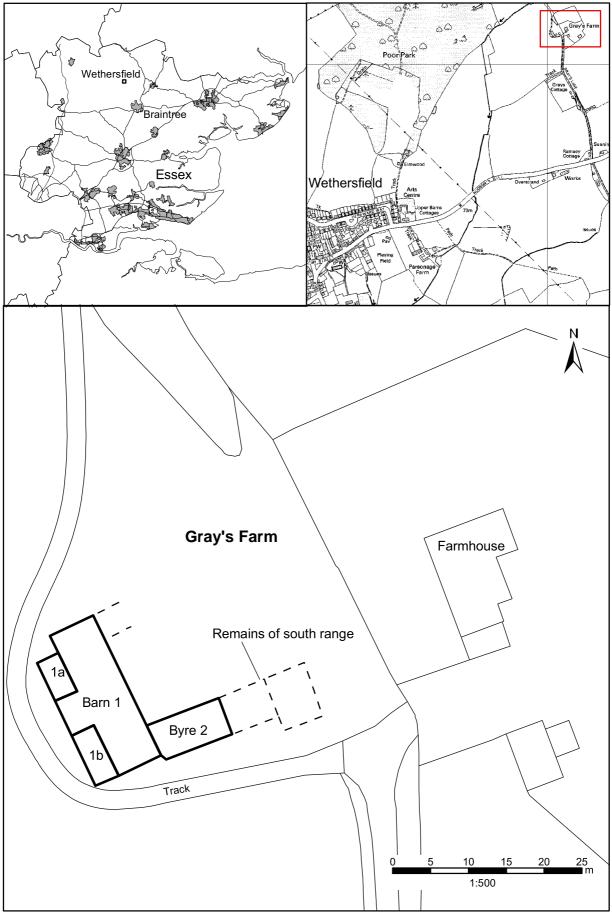
Many farms in the area contain built elements from the post-medieval period (generally 18th-century) when enclosure and developments in agriculture began the first wave of improvement. When the second wave hit, during the Victorian period of industrialisation, with improved communications and mass consumption, the farm, like many others, expanded into cattle farming. The timber-framed Victorian buildings from this era that are now lost (i.e. the north and south ranges) were of a less vernacular form common to improved farms across the county.

ACKNOWLEDGEMENTS

Thanks are due to the owner, Mr David Butler, for commissioning the works and providing background information and site drawings. The help of staff at the Essex Records Office is acknowledged. Fieldwork, recording and photography were undertaken by the author. Thanks also to Helen Walker for her comments on witch marks. Illustrations were prepared by the author and produced by Andrew Lewsey. The work was monitored by Vanessa Clarke of ECC HEM on behalf of the LPA.

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Fig.1. Location plan

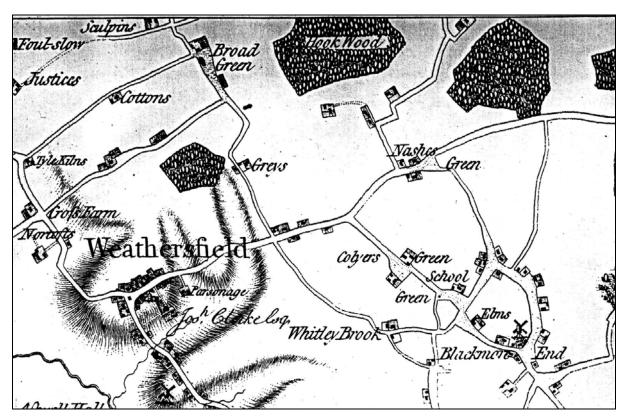


Fig. 2 Chapman & Andre map, 1777 (plate 8)

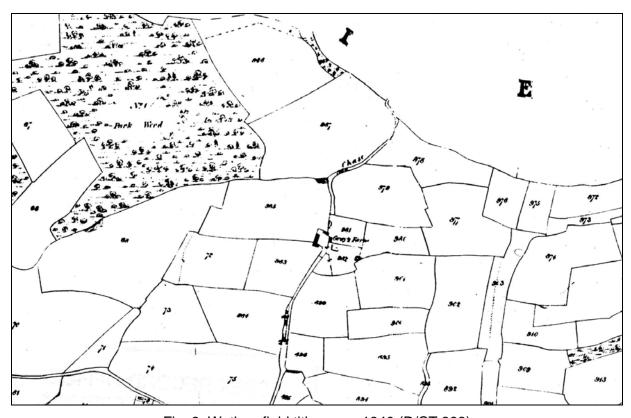


Fig. 3 Wethersfield tithe map, 1840 (D/CT 393)

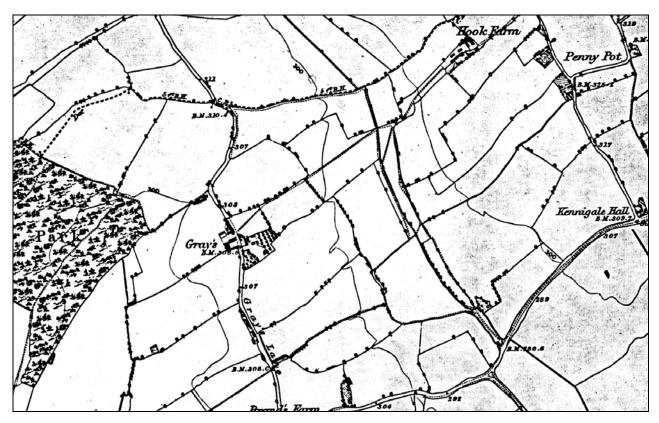


Fig. 4 First edition 6" OS map, 1881 (sheet 16)

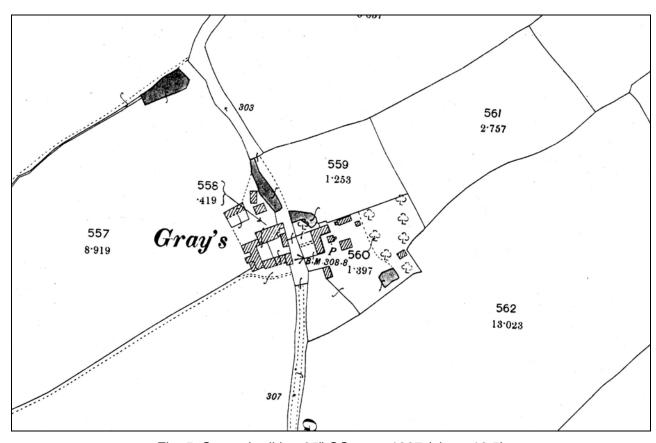


Fig. 5 Second edition 25" OS map, 1897 (sheet 16.5)

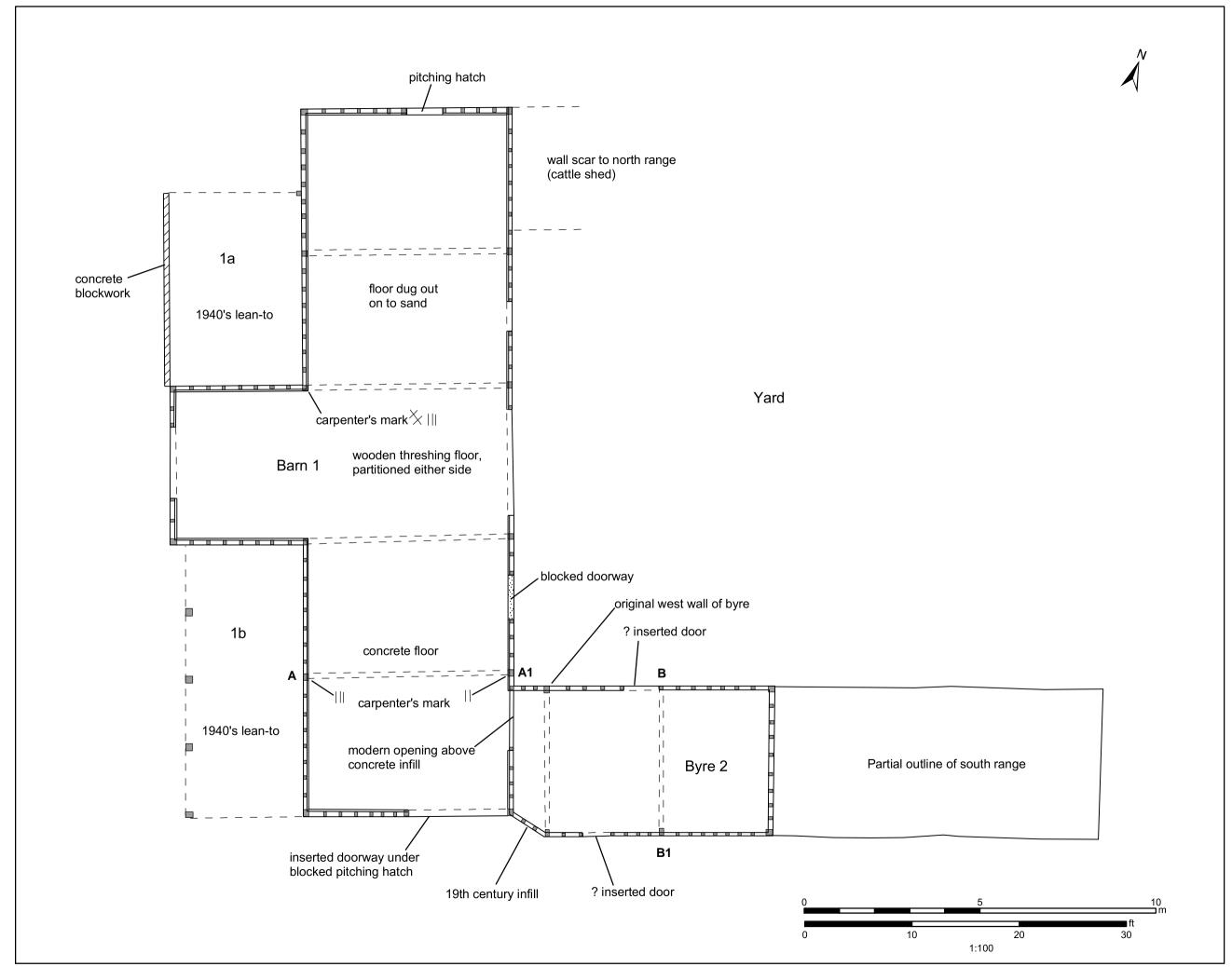


Fig.6. Ground floor plan

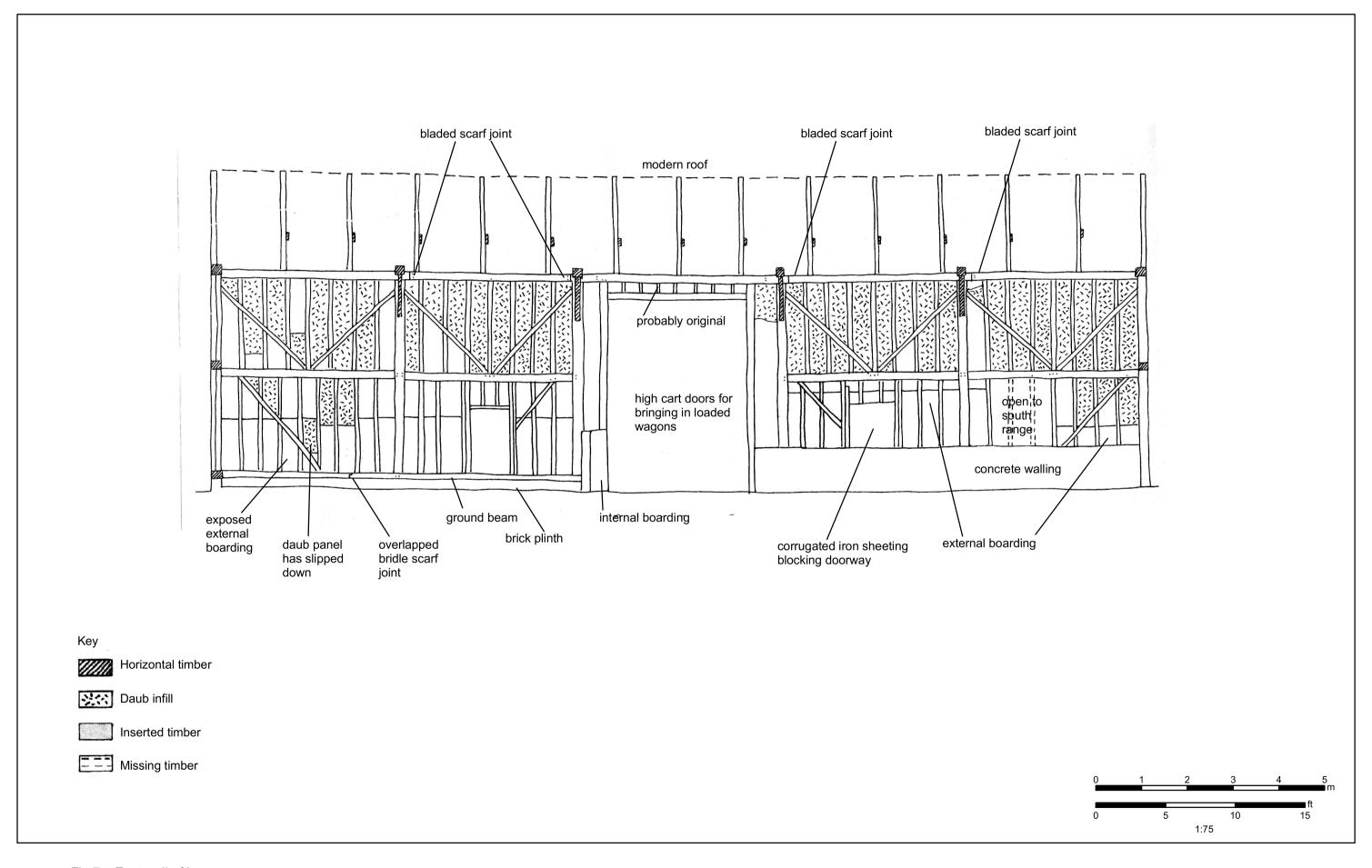


Fig.7a. East wall of barn

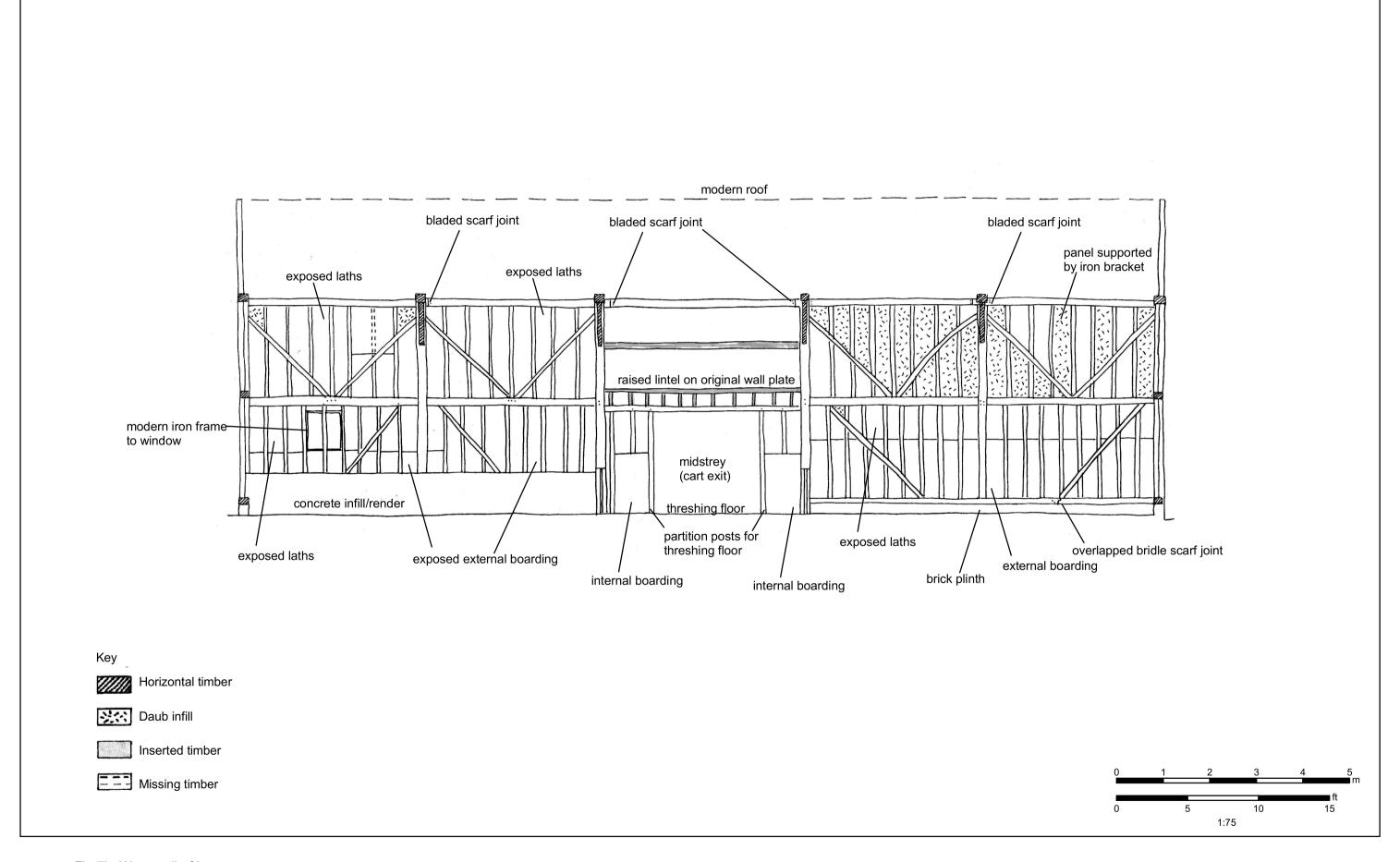


Fig.7b. West wall of barn

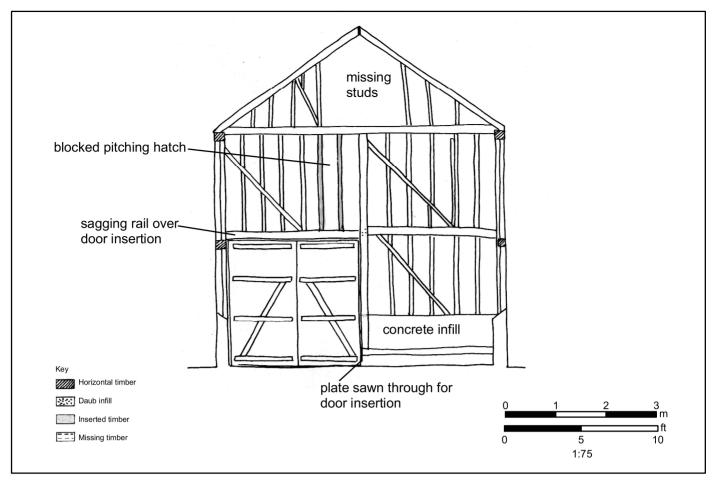


Fig.7c. Barn south gable

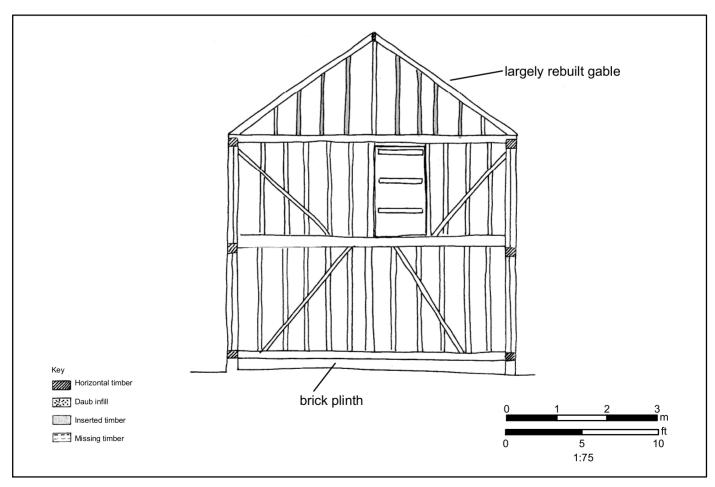


Fig.7d. Barn north gable

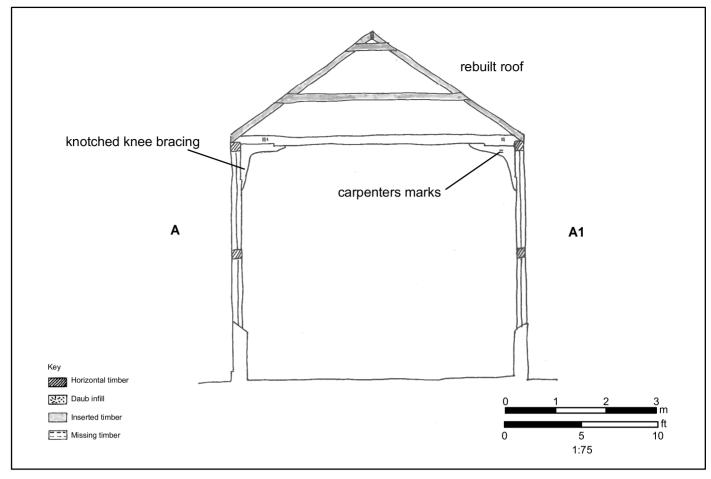


Fig.8. Section A-A1 through barn

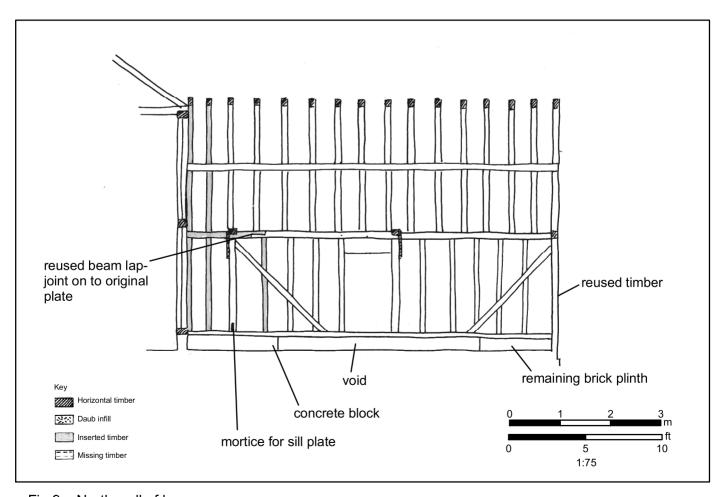


Fig.9a. North wall of byre

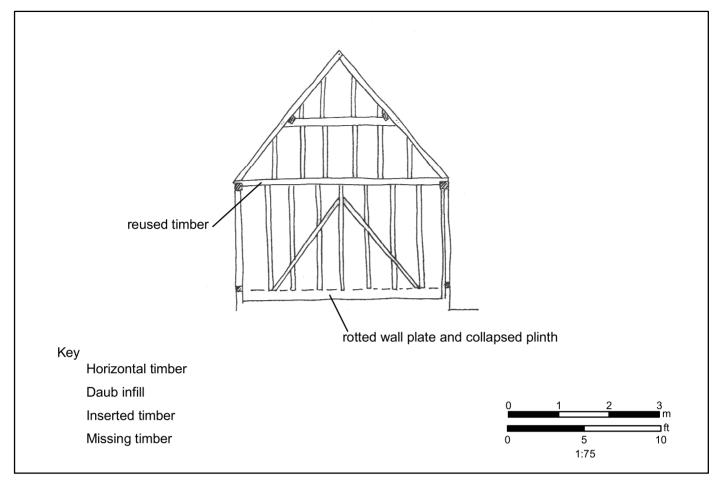


Fig.9b. East wall of byre

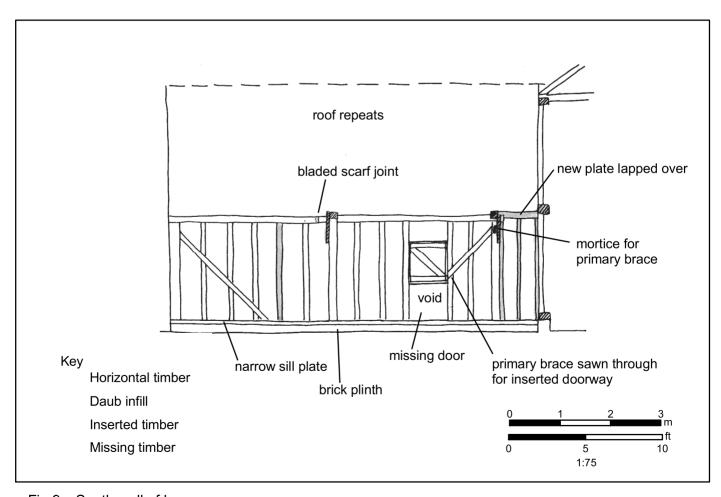


Fig.9c. South wall of byre

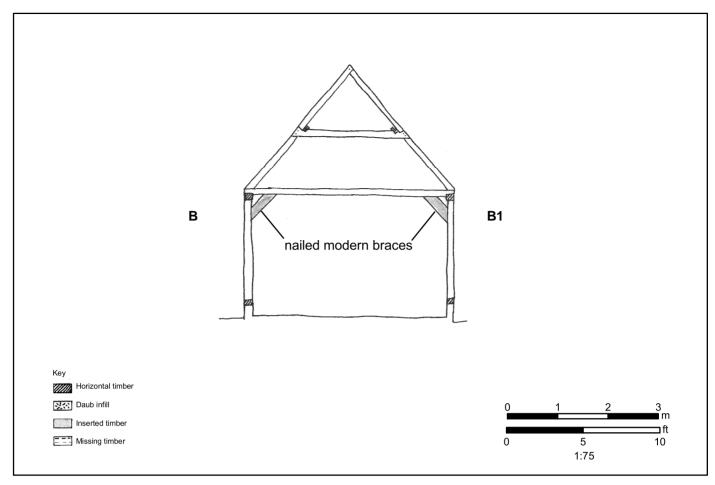


Fig.10. Section B-B1 through byre



Plate 1 South elevation of barn and byre



Plate 2 East elevation of barn and north elevation of byre

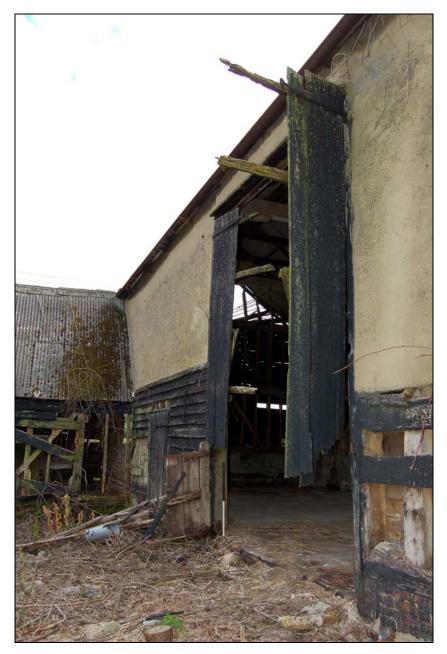




Plate 3 Barn doors on east side

Plate 4 Detail of leap door on east side

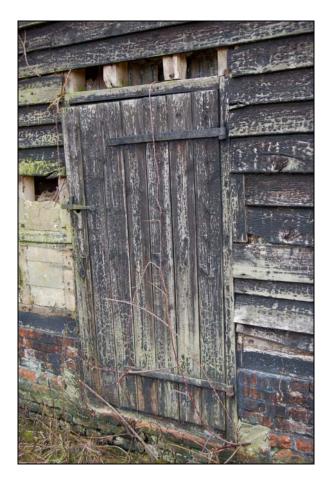


Plate 5 Detail of side door to barn

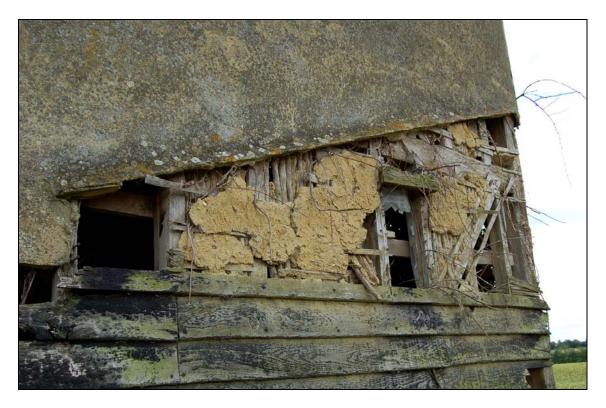


Plate 6 Exposed daub render to barn within wall scar to former north range



Plate 7 West elevation of barn



Plate 8 Daisy wheel mark on west elevation within building 1b



Plate 9 north elevation of barn



Plate 10 Interior of barn viewed to north



Plate 11 Interior of barn viewed to south



Plate 12 View across threshing floor to yard



Plate 13 Wall framing and ground sill scarf joint on northern bays, east wall



Plate 14 Detail of basic construction in north-east corner



Plate 15 Detail of wall framing south of threshing floor, on east side against byre



Plate 16 Detail of porch



Plate 17 Detail of porch construction



Plate 18 South gable of barn



Plate 19 North elevation of byre

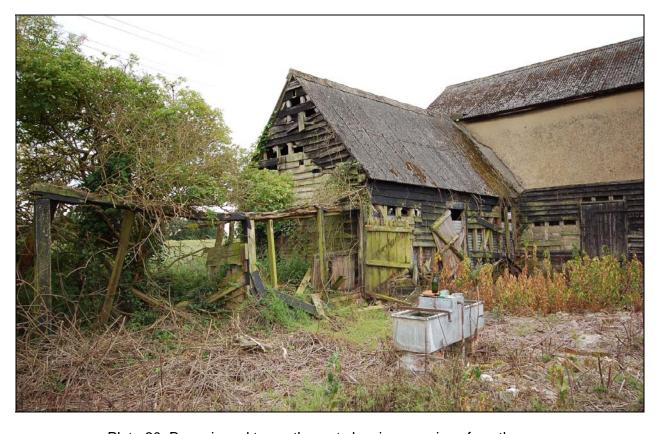


Plate 20 Byre viewed to south-west showing remains of south range



Plate 21 Interior of byre viewed to west (barn exterior)



Plate 22 Interior of byre viewed to north-east (yard)



Plate 23 Construction detail of byre extension

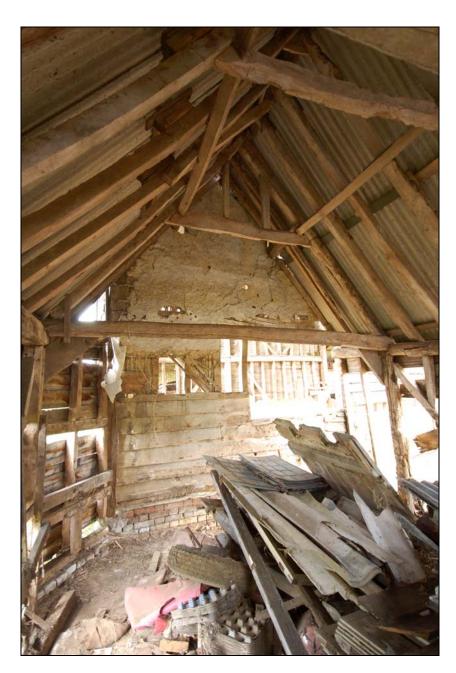
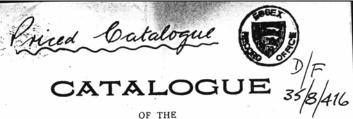


Plate 24 Roof construction and daubed barn walling from byre



LIVE AND DEAD

FARMING STOCK

WHICH

Mr. ERNEST JENNINGS

FRED TAYLOR & Co.

By direction of Messrs. SMITH,

Will Sell by Auction,

AT GRAYS FARM, WETHERSFIELD

Monday, October 10th, 1932,

At 12 o'clock sharp.

Copies of this Catalogue may be obtained from Messrs. FRED TAYLOR & Co., Braintree ('Phone 102), and Chelmsford ('Phone 199); or from Mr. ERNEST JENNINGS, Thaxted ('Phone 8), and at Saffron Walden ('Phone 29).

ROBUS BROS., PRINTERS, DUNMOW.

CATALOGUE.

Miscellaneous.

	1	I	
	1	LOT	
	63775	' 1	Heap of old iron
	3	. 2	Two barrels
	2	. 3	Fattening coop
	H	· 4	Galvanised corn hutch
	5	5	Galvanised tank
	2	. [6	Greasing jack
		. {7	Four 2-tine forks
	7	6 8	Ditto and pitch fork
	0	(9)	Iron sledges
	9	(10	Lot of iron hurdle wheels
	1	· 11	Two pails
	H	. 12	Bean barrow
	15	. 13	
	2	J 14	Bushel measure and skip
	0	15	Meal tub and tool box
	H	· 16	Circular iron pig trough
	7	. 17	Ditto
/	15	د18] .	Six ash hurdles
′	, !	(197	Ten iron ditto
	6	20	3ft. 6in. iron pig trough
	6	6 21	Circular ditto
	4	, 22	Two waggon ropes
	0	23 /	Ditto
	2	6 24	Pig net
	6	6 25	Pair of shafts
	2	. 26	3-horse iron weytree
	7	21	Lot of hauling chains
	5	20 6 21 6 22 6 23 6 24 6 25 6 26 6 28 6 28	Galvanised water tank
	2	. 120	Loading ladder
	1	ر ³⁰	Heap of firewood
	-		Two hay knives
	H	. 32	Howard ladder 2 Sieves
		/	loanied Awd.

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1 3	LOT		19	18	6	ght ford Harness.
1 12	33	36-round ladder 40-round ladder		1		v Harness.
12		Bean riddle and a sieves	,	١.	· ROT 80	Set of plated nag harness
		Lot of mustard seed	:	12		Set of plated hag namess
56	. 37		,	10	82	Ditto
3	. 38	Barn shovel and skip		5	83	Ditto
	39			9	84	Ditto
1	. 40	Targard bags		,	. 85	Set of plough trace
5	. 41	Foster mother		2	. 86	Ditto
8	. 42	Three rolls of wire netting		2		Ditto
1		Three hen coops		1	. 88	Ditto
7	. 44	Boarded and corrugated iron poultry house		3	6 89	Set of cart trace
9	. 45	40-gallon oil barrel		2	6 90	Ditto
i	. 46	Quantity of oil drums			91	Process mounted builde
2	. 47	Foster mother			192	Two odd collars and 2 bridles
17	. 48	Copper copper			/93	Ditto
2	6 49	Ferret locker & Jenet		1	. 94	Sundry harness
H	. 50	Pair of cart wheels, axle and buck		1	. 951	Three plough lines
	6 51	Pair of iron wheels and box of bolts		2	6 96	Four leather headstalls, chains and blocks
1	52	Set of 6 iron spanners		1		Pair of pole straps
1	6 53	Scythe		2		Pair of carriage lamps, bowl & brush
8	. 54	Quantity of horsehoe blades		3		Sundry harness
6	. 55	Carpenter's bench and iron vice	10	1	· 100	Morris Orford Journ Car
3	6 56	Knife sharpener			101	
2	. 57	Quantity of hand tools	X	1	102	
1	58	Lot of horse and cattle drinks	•		103	
3	. 59	Two pulley wheels	11		104	
2	. 60	Drum of white paint	(a)		1	
1	61	Butcher's block and 2 stools				Carts and Implements.
	: 62	aPicle and shovel				Cares and implements.
1	6 63	Quantity of chains				LORRY
	64	Dicycle-	H		· 105	
25	65	Two pulleys and chains		15	106	Single wooden beam plough with iron slings
8	. 66	Boarded and corrugated iron poultry house on wheels	3	5	107	Tractor rib roll, by "Hunt"
14	67	20-round ladder	8		108	Tumbril cart with copse and ladders
2	6 68	Barrel churn, by "Waide& Son" Large kitchen table with 2 drawers	Ĭ	5	109	Iron horserake, by "Hunt"
	69	Large kitchen table with 2 drawers	. ,	10		"Hornsby" 6ft. binder
2	. 70	Separator, by "Llewelyn & Son"	,		. 111	Set of 4-horse handle harrows
5	71	"Shell" double-burner oil cooker		10		Set of 2-horse harrows, by "Whitlock"
1 .	72	Galvanised corn hutch		11		Iron sack barrow
	6 73	Pulley	,	10		Set of "Avery" scales and weights
2	74	Pot of pickuses	8			Iron water cart, by "Cornish & Lloyd"
3	75	Be of Bronze Ornamento		5		Dressing machine, by "Ward & Silver"
2,3	76	Couch Deal Table		1	· 117	Cake breaker
	1. 77	ange weat rable	۵	5		"Ward & Silver" weighing machine
	78	Bahel a Gender	<u>ئ</u> ئ		· 119	Double-shaft road waggon with ladders
	. 79	Marier, 2 lanterns & Weighing Machine		1,0	. 120	"Bentall's" root pulper
a	1. 79	Strainer, 2 lanterns & Weighing Machine Umbsella stand	W-101 - 100 - 100 -	-		
A STORY				1 .	1.	Carried food.
2 10	14 -	Carried food	73	H	6	
1 10	6		,			
S 30 V						

3 + 6	Bell ford.	257	7	1 of Bylit food.
LOT			10	LOT 10 159 Ten hens @ 1/1
	"Smythe's" 14-coulter corn and seed drill with		1	6 160 Six ducks and 1 drake 1 Fown
1199	steerage Drill cloth		13	
3 1 123				Pigs.
3 124	"Robert's" single iron plough			r igs.
5 . 125	"Martin's" 9-tine horse or tractor cultivator			
126	Tumbril cart with copse and ladders	. ,	1.3	· 162 Cross-bred boar, 2 years old
5 127	"McCormick" grass mower	ج	15	
6 128	Horse rake, by "David Ward"	9	10	
2 129	Sack barrow	9	100	165 0 Nine feeders @ 19)
9 . 131	Single shaft harvest waggon "Albion" grass mower			
132	Single wooden beam-plough, by "Bentall" & Seutree			Cattle.
	Rib Roll, by "Hunt"			
10 1 134	Set of 3-horse weytrees	8	5	167 White cross-bred cow, in calf, due to calve December
11 135	Horse-hoe, by "Blythe"		1	3rd
17 6 136	Set of light harrows, by "Wood"		1.	168 Red heifer, due to calf
10 137	Iron double-furrow plough, by "Ransome"		5	· 169 Sundries
5 138 139	"Cottis" extending horse hoe "Bentall" single iron plough			Horses.
140	Dentall single non plough			
	Flat roll, by "Wood"	35	14	· 170 Chestnut mare, "Brisk," 9 years
10 142	"Ransome" single iron plough	34	13	· 171 Bay mare, "DEPPER," 7 years
17 6 143	Set of 6 harrows a Waynee Tumbril cart with copse and ladders			N.B.—The above two mares have been stinted to " Bluford
15 145	Set of handle harrows	**		Seabroe," No. 5467, a Suffolk horse travelled by the Mid-Essex Suffolk Horse Society.
15 146	Iron balance plough, by "Ransome"		١.	
17 6 147	"Massey Harris" 5ft. self-binder	1,1	3	6 172 Black mare, "BLACKBIRD," aged 9 years - 173 Dark bay mare
148	FORDSON 1930 TRACTOR, in excellent order	6	6	
143	Saw bench by "Dening & Co., Ltd.," with trolley wheels and driving belt	V	"	175
2 150	Odd whiele			176
5 151	Wise Netting		6	177 Harrow & Weylsee
5 152	Ditto		2	182 From Placest
153	Willo		11	201 6 FOWLS @ 1/10
3 . 154	Ditto		9	
			12	6 . @ 21
	LIVE STOCK.		らって	h Pauses 8 311
			9	6 206 6 - @ 17
Section 1			12	6 207 6 " 6 39
	Poultry.		111	
	routery.		10	0 15
	Ten hens @ 1/8		114	7 FOULS @ 216
156	Ditto @ 24		17	5 P
	Ditto @ 1/7		1	5 213 1 HEN
1985	Ditto @ 1/4.		1	H SIH I FOWL
	Carried food.		1+	6 215 6 PULLETS @ 2/5
Y A	Carried Just.	1	1	12.0
/ /	· · · · · · · · · · · · · · · · · · ·	£ 383	6	

Appendix 2: Contents of Archive

Site name: Grays Farm, Grays Lane, Wethersfield

Project no. 1742

Index to the Archive

Document wallet containing:

1. Research Archive

- 1.1 ECC HEM design brief
- 1.2 ECC FAU written scheme of investigation
- 1.3 Client/archive report
- 1.4 CD rom containing digital images & copy of report pdf-formatted

2. Site Archive

- 2.1 Photographic register
- 2.2 Photographic record (digital images & prints & 35mm monochrome prints)
- 2.3 Site notes & annotated survey plans
- 2.4 Architect's drawings

Appendix 3: EHER Summary Sheet

Site Name/Address: Grays Farm, Grays Lane, Wethersfield, Essex				
C FAU				
e).				

Final Report: Summary in EAH

Periods Represented: Post-medieval (18th & 19th-century), modern

SUMMARY OF FIELDWORK RESULTS:

Recording works were undertaken at Grays Farm in advance of residential conversion of an 18th-century barn and probable animal byre. These were laid out on an L-shaped plan and retained in a 19th-century courtyard plan that is in an overgrown and ruinous state, no longer standing.

The barn contains many important original features and fixtures. It was built half boarded with the upper section daubed and plastered externally. Areas of daub survive on the exterior and also internally between the primary-braced framing. The boarding pre-dates the 19th-century and may be original. Like many Essex barns, the roof would have been thatched. A daisy wheel magic mark is scribed into the plaster on the west wall and a wooden threshing floor remains inside. Unfortunately, works to the barn carried out in the 1940s changed its original form by rebuilding the barn roof and lowering the porch.

The animal byre was built fully boarded. It is largely unaffected by later works, except for a short 19th-century extension towards the barn. Its construction suggests a contemporary date to the barn and it retains an original roof frame and probable external boarding. The Victorian north and south ranges that enclosed the yard have virtually disappeared and only a few vestiges of the south range remain.

The farm is typical of many improved mixed Essex farmsteads that expanded in the mid 19th-century during the golden age of agriculture. Existing agricultural structures were incorporated into new yard layouts. However, the real significance of the farm lies in high survival rate of early build fabric and other features of the 18th-century barn and byre.

Previous Summaries/Reports: None	
Author of Summary: A. R. Letch	Date of Summary: 21st September 2007