

**Historic building recording
at Mudwall Farm,
High Easter Road,
Barnston, Essex
April 2013**



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**commissioned by
Alun Design Consultancy Ltd**

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1 Summary

A programme of building recording was carried out by the Colchester Archaeological Trust on a complex of farm buildings at Mudwall Farm, High Easter Road, Barnston, Essex in April 2013. The work was commissioned by Alun Design Consultancy Ltd on behalf of Mr E Butler. The farm buildings are arranged in a regular courtyard U-plan with the farmhouse detached to the south. The complex includes a large threshing barn, stable block, chaise house and cattle sheds. The structures date from throughout the 19th century. Mudwall Farm is good example of the evolution of a planned farmstead in the 19th century and retains many of the original features.

2 Introduction (Fig 5)

This is the archive report on the historic building recording of farm buildings (in response to an application for their conversion) at Mudwall Farm, High Easter Road, Barnston, Essex. The work was carried out on behalf of Alun Design Consultancy Ltd by Colchester Archaeological Trust (CAT) in April 2013. The site consists of a complex of structures arranged around three sides of the farmyard, located at NGR TL 6282 1749. The farm buildings date from the 19th century, although the associated farmhouse dates from the 14th to 15th century and is Grade II listed.

A planning application for the conversion of the farm complex to residential accommodation was submitted to Uttlesford District Council under planning references UTT/0161/12/FUL and UTT/0162/12/LB in February 2012. Given the impact of the proposed works on the historic integrity and working character of the farm complex, a full archaeological condition was attached to the planning consent. The condition was based on the advice given in the National Planning Policy Framework.

A brief detailing the required work (historic building recording) was written by the Historic Environment Officer (Richard Havis HE 2013). All work was carried out in accordance with a WSI (Written Scheme of Investigation) produced by CAT in response to the HE Officer's brief and agreed with the HE Officer (CAT 2013).

All work was carried out according to standards and practices contained in the Institute for Archaeologists *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (2008) and *Standard and guidance for archaeological investigation and recording of standing buildings or structures* (2008a), *Management of research projects in the historic environment* (MoRPHE), and *Standards for field archaeology in the East of England* (EAA 14).

3 Aims

The aim of the building recording was to provide a detailed record and assessment of the farm buildings prior to conversion. The building recording was carried out to Level 3 (English Heritage, 2006).

In particular the record considered:

- Documentary and cartographic background
- Plan form of the site
- Materials and method of construction
- Date(s) of each structure
- Function and internal layout of each component
- Fixtures and fittings (contemporary and later additions/adaptations)
- Phasing
- The context of the farm within its immediate contemporary landscape

4 Building recording methodology

The following are included in this report:

- A brief documentary and cartographic survey of the evidence pertaining to the history and evolution of the site

- A large-scale block plan of the site based on pre-existing architect's drawings. The position of each structure has been given a name noting date and function
- A fully phased floor plan using the English Heritage (2006) Level 3 conventions at scale 1:100 of all buildings affected by the development. Doors, windows, partitions, truss positions and any surviving fixtures/fittings are shown, together with evidence of phasing. The plans show all major structural additions to the building/yards and any internal divisions, particularly where the alterations are associated with a change of function
- A cross-section using the English Heritage (2006) Level 3 conventions of the barn, stable and 'four-bayed' cattle shed. This includes a truss, that least impacted by modern alterations, with the location of this noted on the plan
- A detailed description of each structure. The description addresses features such as materials, dimensions, method of construction, joinery, spatial configuration, phasing, reused timbers, carpentry marks/graffiti and any evidence of original fixtures and fittings
- A discussion of the history and development of the buildings, including their design, date, form and function and any significant modifications/reuse
- A brief overview of farming and how changes during the 18th and 19th century influenced the plan form
- A full photographic record, comprising digital photographs of both general shots and details of individual buildings/features (external and internal). Selected examples of the photographic record are clearly tied into the drawn record and reproduced as fully annotated photographic plates supporting the text (Appendix 1). The photographic record is accompanied by a photographic register detailing location and direction of shot (Appendix 2).

5 Historical background (Figs 1-4, 5)

A documentary and cartographic search was undertaken at the Essex Records Office (ERO) to assess the evidence pertaining to the history and the evolution of the farm buildings.



Fig 1 Chapman and André map of Essex, 1777 (Plate XII).

The 1777 Chapman and André map of Essex (Fig 1) shows a property called Gladen on the site of Mudwall Farm (circled red on Fig 1), but is too indistinct to make out individual buildings. However, the orientation, size and shape of the property illustrated on the 1777 map is identical to the homestead and adjoining field shown on the 1840 tithe map (Fig 2). As the farmhouse associated with Mudwall farm dates from the 14th to 15th century it is

logical to assume that Gladen is an earlier name for the farm. This name survives as the cottage to the immediate north of Mudwall Farm.

The earliest reference to Mudwall Farm comes from an 1835 valuation notebook belonging to Franklin and Son, Auctioneers and Estate Agents of Thaxted, Bishop's Stortford and Saffron Walden (ERO D/F 35/2/74). This mentions Mudwall Farm in High Easter. It would appear that at some point between 1777 and 1835 the farm was renamed, probably as the result of a sale. It is also likely that the name change coincided with a scheme of improvements, replacing earlier farm buildings with newer versions.

The 1840 tithe map for Great Dunmow (ERO D/CT119b, Fig 2) makes no mention of Mudwall Farm by name and the award merely lists the constituent parts of the farm. It does make clear that the farm was owned by Sir Augustus Bridges Henniker, 3rd Baronet of Newton Hall, Essex and was rented to Thomas Smith. The tithe map shows a structure aligned south-west to north-east with an adjoining range to the east orientated south-east to north-west. These are the barn and the stable block, although the midstrey of the barn has been omitted. A freestanding structure is shown opposite the stable block on the west side of the farmyard. At the time of the survey this structure had already been converted to a small linear dwelling called 'The Cart Lodge.' Logic would indicate that this name reflects the original usage of the structure. The tithe award lists twelve parcels of land associated with the homestead at Mudwall Farm, comprising ten arable fields of 47 acres and two pasture fields of less than 1 acre in total.

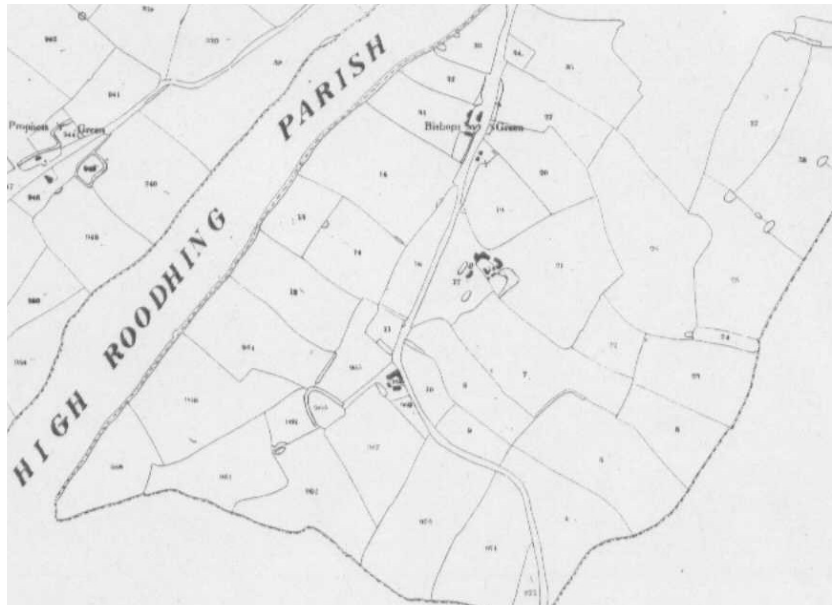


Fig 2 1840 tithe map (ERO D/CT 119b).

The first time the name Mudwall Farm appears on a map is on the 1st edition 6" Ordnance Survey of 1875 (Fig 3). The barn and the stable block are depicted as they are shown on the 1840 tithe map (with the midstrey of the barn now included) and there are additional structures adjoining the south-west end of the barn. A catalogue for the freehold sale of Mudwall Farm (ERO SALE/B624) produced by Augustus Portway in 1880, provides evidence for the functions of these structures. The catalogue offered for sale *'The Valuable Estate Known as Mudwall Farm in the Parishes of Great Dunmow and High Easter, with Timber and Plaster Built and Tiled Dwelling House and Convenient Homestead, Consisting of a Range of Timber and Thatched Piggeries and Hen House, Large Barn with Chaise House at End, Cow House, Stable, Wagon Shed, Two Tiled Lean-to Sheds and Two Hovel Sheds.'* The structures at the end of the barn are, most likely, the cow house and the chaise house (a chaise being a light two- or four-wheeled carriage for one or two people and a chaise-cart a light carriage fitted with suspension for the transportation of lightweight goods).



Fig 3 1st edition 6" OS map, 1875 (sheet 33).

The sales catalogue goes on to mention that the farm was occupied by Thomas Smith for a rent of £100 per annum. This must either be the same Thomas Smith mentioned in the 1840 tithe award or a descendant of the same name. A plan accompanying the catalogue shows the layout of the farm buildings and indicates open space between the chaise house and the freestanding cart lodge on the west side.

Between the time of the 1st edition map and the 2nd edition 6" Ordnance Survey in 1895 the open space between the chaise house on the south-west end of the barn and the freestanding cart lodge has been filled in with a linear structure and a rectangular building has been added to the south-east side of the barn (Fig 4).



Fig 4 Second edition 6" OS map, 1895 (sheet 33 SW).

Both the linear structure and the rectangular building are cattle sheds, evidence for which can be found in another sales catalogue, this one from 1903 (ERO SALE/B937). This advertises the sale of 'The Valuable Freehold Farm Known as Mudwall' and describes the farm buildings in great detail. It states that the farm buildings 'are of modern erection and slate-roofed, and comprise a range of timber, weatherboard and slated buildings; forming Chaise house, Two-Bayed Horse Shed fitted with Manger; Cart Horse Stable adapted for 4 Horses; Chaff Place; Large Barn with clinker floor; Lean-to Three-Bayed Cattle Shed on

Barn, fitted with manger, Cow house for 4 Cows, fitted with Manger and Calves' Pounds; Four-Bayed Cattle Shed, Two of which are enclosed for Piggeries; Hen House; Cartlodes; Three Cattle Yards. The catalogue also states that the farm was occupied by Mr Charles Smith (presumably a relative of the 1880 tenant, Thomas Smith) at a rent of £53 per annum with a further £37 10s 0d to be paid by the buyer for rights to the timber, pollards and saplings on the property. An accompanying plan to the catalogue shows the layout of the farm at the time of the sale. This is essentially the plan form that was observed in 2013, although the walls dividing the cattle yards were no longer present.

6 Descriptive record (Figs 5-9)

Mudwall Farm is located on the west side of a sharp bend in the High Easter Road, roughly half way between the villages of Barnston and High Easter (Fig 5). The farm consists of a complex of structures arranged around three sides of the farmyard, with the farmhouse immediately to the south. The farm buildings are separated from the road by a narrow grass verge. The landscape around the farm is characterised by open arable fields.

The farm buildings comprise six distinct structures constructed in five phases. These structures have been given names in the following text based on those identified in the 1903 sales catalogue, which correspond to those on the floor plan (Fig 6).

Phase 1 – barn (Figs 5-7)

External description

This structure is a rectangular timber-framed and gabled barn, 6.7m wide x 19.5m long, aligned north-east to south-west and clad in a combination of black-painted horizontal weatherboarding and render (Plate 1). There is a midstrey projecting from the north-west elevation and the entire structure sits on a plinth constructed from red brick with dimensions of 223 x 100 x 60mm laid in English bond with an offset. An exposed section of the plinth on the south-east side of the barn shows that at least part of the foundation is formed from mortared flints.

Where there are single storey extensions at both ends of the barn the exposed gables are rendered. The roof is of slate with a ceramic ridge and there is a weather vane in the shape of a running fox at the north-east end of the ridge. The south-east elevation has a lean-to and next to this is an inserted sliding door with a range of six lights above (Plate 2). This sliding door can be opened as one complete unit or as two separate halves. The iron door pull is stamped 'Henderson Romford' and the latch is stamped 'Henderson Barking' and indicate the entire sliding door arrangement is from the world-famous manufacturers of agricultural sliding doors and garage doors, P C Henderson Ltd, originally located at Barking, Essex. The Romford stamp on the door pull dates the door to post 1955 as this is when manufacturing was moved from Barking. The sliding door replaced earlier barn doors and the render on the exterior of this part of the barn must be contemporary with the installation of the Henderson door.

The north-west elevation is completely weatherboarded with what appear to be the original doors and threshold leap to the midstrey (Plate 3). The doors have six ornate strap hinges held on pintels (Plate 4) and a range of four metal-framed windows, each of eight lights, has been inserted above the doors.

Internal description

The barn was empty apart from two vintage ambulances belonging to the Maldon branch of St John's Ambulance. The interior of the barn is divided into six unequal bays, increasing in width from 2.2m for bay 1 at the south-west end to 3.3m for bay 6 at the north-east end (Plate 5). The exception to this is bay 4 which is the largest bay at 4.2m wide. This reflects the fact that bay 4 has the midstrey to the north and the sliding door to the south. The floor of bay 4 is a threshing floor formed from yellow frogged bricks with dimensions of 230 x 110 x 66mm, laid on edge. The floors of the other bays are of concrete.

The timber frame is of oak and comprises a sill beam measuring 150mm x 100mm with straight cut principal posts of 150mm x 150mm and intermediate studs of 100mm x 50mm. The wall frames are divided into upper and lower registers by girthing beams of 150mm x 150mm. The girthing beams and sill beam are single-pegged to the posts, whilst the studs appear to be secured solely by the mortice and tenon joints. In the lower register straight

braces fall from the girding beams at the posts, passing through the studs, whilst in the upper register straight braces rise from the girding beams at the posts. This has the pleasant effect of forming diamond-shaped braces in each wall frame (Plate 5). The wall frame at the north-east end has an inserted entrance to the stable block. This has caused the frame to fail and necessitated the replacement of the girding beam and five of the studs from the upper register. Above this there is a pitching door in the apex of the gable, concealed from external view by the render. There is a similar door in the apex of the south-west gable, also concealed by the external render. The south-west wall frame has an inserted doorway in the lower register providing access to the attached cow shed. The lower registers of the midstrey, the north-west wall of bays 1-3 and the south-west wall frame are clad in horizontal tongue and groove planking. The other walls of the barn show no indication of similar cladding and it must be assumed that this part of the barn served a specific function, separate to the rest of the structure. The south-east wall of bay 3 has an inserted hatch in the lower register, opening into the lean-to cattle shed. Directly above this and cutting the girding beam is an inserted doorway providing access to the chaff loft above the cattle shed (Plate 6). The south-east wall of bay 5 has an inserted plank door in the lower register (Plate 7). This would have provided access to the yard but was blocked in when the render was applied to the exterior.

The roof is carried on closed trusses of simple design (Plate 8). Instead of sitting on the wall plate or heads of the principal posts, the tie beams are joined to the sides of the posts with the principal rafters rising from the outer ends of the tie beam (Fig 7). There is no bracing between the posts and tie beams. The truss is held under tension by an iron king bolt passing through the tie beam, the heads of the rafters and then through the ridge board. The tie beams and principal rafters are large-section timbers, approximately 170mm x 70mm. Inclined struts and a straining sill provide additional strength for the truss. The trusses support two purlins to each pitch (held in position by wooden cleats) which, in combination with the ridge board and wall plate, support sarking boards.

Phase 2 stable block (Figs 5-6, 8)

External description

The stable block is a single storey structure 4.8m wide x 16.9m long, orientated north-west to south-east and located perpendicular to the barn (Plate 9). The short elevations and the north-east elevation (parallel to High Easter Road) are clad in horizontal weatherboarding. There are no adornments to these elevations apart from a single tethering ring on the north-east wall. The south-west elevation presents two distinctly different parts. The first extends from the barn and is characterised by black-painted horizontal weatherboarding (identical to that on the north-west and north-east elevations) that terminates in a traditional stable door. The remainder of the structure is clad in unpainted horizontal weatherboarding and has two inserted metal garage doors, the handles of which are stamped 'Henderson'. Apart from where it has been removed by the inserted garage doors, the entire structure sits on a red brick plinth laid in irregular bond. An exception to this is the south-east end where the plinth has been rebuilt in modern brick which has dimensions of 220 x 105 x 61mm.

The gabled roof is of corrugated asbestos sheeting with translucent light panels in the south-west pitch and an asbestos ridgeline.

Internal description

The internal survey revealed that the structure comprises three bays of unequal width, with the bays to the north and centre being 5.8m wide and the bay to the south 5m wide. Brick cross plinths carrying timber-framed walls divide the stable block into four areas: a small rectangular room at the north-west end; a stable with three stalls, which must be the carthorse stable mentioned in the 1903 sales catalogue; another stable (converted to a double garage) which must be the two-bayed horse shed mentioned in the 1903 sales catalogue; a second small rectangular room at the south-east end of the block. The small room to the north-west has straight corner posts with dimensions of 140mm x 100mm and studs with dimensions of 100mm x 60mm. Straight braces fall from a central post in the north-west wall passing through the studs and the floor is of concrete (Plate 10). The dividing wall to the carthorse stable has the same configuration. In the north-east wall there is an unglazed window with shutters that has been blocked by the application of the external weatherboarding. This room adjoins bay 6 of the barn and a doorway has been

cut into the barn from the stable. This was originally a traditional stable door but is no longer attached to the barn framing – instead a large opening provides access to the barn interior. An opening in the dividing wall provides access to the carthorse stable, indicating that the small room probably functioned as either a tack room or feed store.

The carthorse stable (Plate 11) is divided into three stalls, each fitted with a manger for oats and a hay rack above (Plate 12). The ribs of the hay rack are made of diamond-section timbers. The manger in stall 3 has two tethering rings attached to it – these have been removed from stalls 1 and 2. The interior walls are clad in horizontal planking with the exception of the south-west wall, which displays the timber frame. There is also a blocked window in this wall, concealed on the exterior by the weatherboarding. The floor is of blue pavior bricks with an inset drainage gully. External access to the carthorse stable would have been through the stable door opening onto stall 3.

The timbers of the carthorse stable are all machine-cut and are nailed rather than pegged. There is a closed truss, central to stall 2, composed of large-section timbers measuring 170mm x 70mm (Plate 13). An iron king bolt passes through the tie beam and principal rafters. The truss supports a ridge board and a single purlin to each pitch which carry sarking boards. The truss is strengthened by inclined struts and a straining sill.

The carthorse stable is separated from the two-bayed horse shed by a full height wall on a brick plinth. Access to the two-bayed horse shed would have been through a stable door in the south-west elevation. All trace of this has been removed by the insertion of the two garage doors. The interior is clad in horizontal planking and although there are no stall dividers there is a surviving manger with tethering ring and a hay rack (Plate 14). A second manger has been removed and it may well be that stall dividers were also part of the original fixtures. The floor is of concrete and is level with the yard, but this must have been laid when the horse shed was converted to a garage and it is likely that the horse shed had the same brick pavior floor as the carthorse stable. The roof is carried on a truss identical to that of the carthorse stable.

A doorway inserted in the south-east wall provides access to a small rectangular room that sits upon the rebuilt brick plinth. The interior of this is covered in tar paper over rock wool insulation and the frame is constructed from modern timbers. The floor is of raised concrete. This room is obviously modern but it is likely to be a rebuild of another tack room or feed store serving the horse shed. Its proximity to the entrance of the farmyard may indicate vehicular inflicted damage necessitating a rebuild. This could explain why the northern and central bays are of equal width whilst the south bay is narrower.

Phase 3 cow house (Figs 5-6)

External description

The cow house is a single storey timber-framed structure 6.9m wide x 5m long attached to the south-west end of the barn (Plate 15). It sits on a red brick plinth with dimensions of 223 x 100 x 60mm laid in English bond. The south east elevation (facing the farmyard) is clad in black-painted horizontal weatherboarding and has a traditional stable door and a hit-and-miss window. The north-west elevation (facing the fields) is clad in black-painted horizontal weatherboarding. The roof originally had a simple gable end but the pitch on the field side has been raised and the resulting roof covered in corrugated asbestos sheeting.

Internal description

The interior of the cow house shows the exposed frame of the structure, square-cut principal posts with dimensions of 150mm x 150mm and studs of 100mm x 50mm, with straight braces falling from the centre posts to the sill beam, passing through the studs. There are the remains of a manger along the south-west wall but no suggestion of a hay rack which indicates this was for cattle and not horses (Plate 16). The sales catalogue of 1903 mentions the cow house being fitted with manger and calves' pounds and evidence for this can be seen in slots cut into the south-west wall of the barn, which indicate rails once partitioned off the north-west end (Plate 17). Attached to the wall of the barn is a fixed ladder that originally provided access to a chaff loft over the calves' pounds. The only remaining evidence of this loft is a beam spanning the cow house (Plate 17). A doorway has been inserted into the south-west wall to provide access to the chaise house, removing three of the original studs.

The floor is of concrete, although this is probably a later addition. The original roof is carried on a closed truss with an iron king bolt similar to the trusses of the stable block,

which supports two purlins to either pitch. On the farmyard side the purlins carry sarking boards but these have been removed on the field side and the roof is open to the asbestos sheets of the raised pitch.

Phase 4 chaise house (Figs 5-6)

External description

The chaise house is a single storey timber-framed structure 6.9m wide by 6.3m long attached to the south-west end of the cow house, originally with an open front facing the fields to the north-west. The 1880 sales catalogue states that the chaise house was at the end of the barn. It sits upon a red brick plinth on two sides with dimensions of 225 x 106 x 60mm laid in English bond. The south-west and south-east elevations are clad in black-painted horizontal weatherboarding, whilst the once open north-west elevation has been infilled with a combination of corrugated asbestos, iron and plastic sheeting. The south-east wall has a traditional stable door. The roof is hipped, with the side pitches covered with corrugated asbestos and the hip covered with slates.

Internal description

The south-west and south-east walls are of machine-cut timbers, with principal posts having dimensions of 150mm x 150mm and studs with dimensions of 100mm x 50mm. Straight braces fall from the corner and centre posts, passing through the studs to the sill beam. The open front has a centrally located post with a concrete buffer (Plate 18). A doorway has been inserted into the south-east wall providing access to the later cattle shed, although this has subsequently been blocked (Plate 19).

The floor is of bare earth, although there are patches of a pale friable material that may indicate a covering of some sort. The roof is carried on a closed truss with an iron king bolt, identical to that in the cow house. The roof structure of the chaise house incorporates the purlins of the cow house, which continue through the dividing wall and support the sarking boards of the chaise house. As the cow house and the chaise house are of different date this means that the roofs of the structures are not original.

Phase 5 'four-bayed' cattle shed (Figs 5-6, 9)

External description

The four-bayed cattle shed described in the 1903 catalogue must be the single storey timber-framed structure inserted between the chaise house and the earlier cart lodge shown on the 1840 tithe map. The name is slightly misleading as this structure, 4.6m wide x 6m long, has only two bays but this discrepancy can be explained by the conversion of the cart lodge. It is not possible to ascertain the original dimensions of the cart lodge, but it may be that the conversion also included half of the cattle shed as the end of the structure has an inserted block wall.

The south-west elevation is clad in black-painted horizontal weatherboarding and sits upon a plinth of red brick with dimensions of 225 x 106 x 60mm laid in Flemish bond. The north-east elevation has black-painted horizontal weatherboarding to three quarters of the wall height, with the remaining quarter covered by chicken wire. This is carried on a concrete block wall, and there is a doorway at the north-west end (Plate 20). All of this is a later insertion to an open-fronted building. The roof is of slate with a ceramic ridge.

Internal description

The south-west wall is of machine-cut timbers with a central post having dimensions of 140mm x 100mm and studs with dimensions of 100mm x 60mm. Straight braces fall from the central post, passing through the studs to the sill beam. The remains of a manger can be seen on this wall, in the form of the plank back (Plate 21). The north-east wall comprises modern studs with dimensions of 100mm x 60mm flanking an original post with dimensions of 150mm x 150mm. The base of this is protected by a large concrete buffer, which is probably a later repair to an original buffer.

The floor is of bare earth with the same white friable material that was present in the chaise house. The roof is held on a closed truss identical to those in the other buildings. There are single purlins supporting sarking boards to each pitch and, as with the cow shed and chaise house, these extend from the chaise house into the 'four-bay' cow shed, indicating the roof must be of later construction. One exception to this is the truss over the

dividing wall to the chaise house. This has the original principal rafters rising to meet the head of a short king post. The later ridge board and purlins rest on this truss (Plate 22).

Phase 5 lean-to cattle shed with chaff loft (Figs 5-6)

External description

Built at or around the same time as the 'four-bayed' cattle shed, the lean-to cattle shed located on the south-east wall of the barn is a mono-pitched extension with a slate roof and a loft (Plate 23). The south-west elevation is clad in black-painted horizontal weatherboarding carried on a rebuilt plinth of concrete blocks. The south-east elevation shows how the structure has been converted into two unequal-sized sheds. The smaller is clad in black-painted horizontal weatherboarding carried on a red brick plinth laid in irregular bond and has a traditional stable door, whilst the larger has horizontal weatherboarding to four fifths of the wall height, with the remainder blocked with chicken wire. This is carried on a plinth of concrete blocks. The north-east elevation has vertical weatherboarding to the height of the eaves and then horizontal weatherboarding for the side of the chaff loft. There is a plank door with narrow strap hinges held on pintels in this elevation, and the remains of a fixed ladder leading to a small plank door providing access to the chaff loft. This elevation is carried on a red brick plinth laid in English bond.

Internal description

The interior of the smaller shed has eight evenly-spaced modern timbers rising from a shallow sill beam on the rebuilt plinth of the south-west wall and a dividing timber-framed wall with eleven studs, with dimensions of 100mm x 50mm, carried on a modern brick plinth to the north-east. This is clearly an insertion to the cattle shed. The floor is of concrete and there is a manger along the wall shared with the barn (Plate 24). From the interior it becomes clear that the structure was originally an open-fronted building as there is a post with dimensions of 150mm x 150mm with a concrete buffer which the brick plinth abuts (Plate 25).

The interior of the larger of the sheds also has a square post with a concrete buffer and the manger continues through the inserted dividing wall along the entire length of the shed. The plinth of the north-east wall is original but any studs have been obscured by vertical planking. The floor is of concrete and there is a small hatch in the barn wall above the manger (Plate 26).

Further evidence for the cattle shed originally having an open front can be seen in mortices on the corner post that supports the original door. This suggests there was a provision for rails to keep the cattle within the shed.

7 Discussion

Although the 14th/15th-century date of the farmhouse at Mudwall Farm implies a continuity of farming, this is not supported by the age of the farm buildings themselves. Map evidence and construction techniques suggest a date range for the earliest structure, the barn, of 1777-1840, with a second phase, the construction of the stable block, within the same date range. This suggests that earlier farm buildings were replaced at the end of the 18th century, a concept explained by the increase in agricultural productivity brought about by the huge population rise from 1750 onwards and the higher grain prices obtained during the Napoleonic Wars. It is by design, not coincidence, that the first phases of the redevelopment of Mudwall Farm included a threshing barn and housing for the animal that made possible the large-scale production of cereal crops.

A grain crop, whether wheat, oats, barley or rye, is called corn and requires processing to be of use. Firstly the ears of the corn have to be separated from the stalk, a process called threshing and then the grains separated from the chaff, winnowing. A barn is the building where this processing takes place. The most common method of threshing corn, prior to mechanization, was by hand flail, a practice in use from the medieval period to the middle of the 19th century (Brunskill, 38). This process, carried out in the winter months, required space, light, ventilation and a hard surface upon which to beat the corn. The high barn doors provided adequate light even in winter and the threshold leap kept flying grains in and prevented farm chickens from eating the harvest. When the corn was separated from the straw the remaining grains were winnowed by tossing them into the air. The cross-breeze generated by opening both sets of barn doors blew away the lighter chaff and

the grain was swept up from the threshing floor. The barn at Mudwall Farm (Phase 1) has all the features necessary for these processes, although it is unusual in having six bays and an off-centre threshing floor.

The stable block (Phase 2) reflects the importance of the horse from the 17th-century onwards. Before this, oxen provided the power on farms but by the end of the 18th century they had been nearly universally replaced by the horse. The drawback was that horses require greater care and provision than oxen. The carthorse stable for the working horses and the two-bayed shed for riding or carriage horses represent these provisions.

The years between the 1840s-1870s are known as the 'High Farming' period and are characterised by increased output brought about by the availability of imported artificial fertilisers, manure and feeds. The improvement and expansion of infrastructure provided a wider market for crops. An Act of Parliament in 1849 provided loans for investment in new farm buildings and many farms embarked on programmes of renewal and investment. It was probably this that provided the impetus for the third and fourth phases of the farm's development. The cow house (Phase 3) dating to 1840-1875 is quite small and, with the calves' pounds, may only have housed a small number of cows. These probably served the farm with a small additional income from milk and dairy products, although the main business of Mudwall Farm during this period was derived from cereal crops. The fixed ladder leading to the loft above the calves' pounds is a latter addition and must date to when the roof pitch was raised.

The chaise house (Phase 4) was probably added only a few years after the cow house and probably reflects the affluence of the farm at the time. If the description of it as a chaise house rather than a cart lodge is accurate, rather than an estate agent's hyperbole, it indicates enough surplus wealth to purchase a pleasure carriage in addition to the working wagons of the farm.

The 'High Farming' years came to an end in the late 1870s after several seasons of poor weather and failed harvests and the collapse of grain prices in the face of cheap foreign imports. This brought about a depression in British farming. Luckily for Britain's farmers this was offset against a rising urban demand for milk and many of the eastern region's ailing arable farms diversified into small-scale dairy farming, turning their valueless wheat fields over to pasture and exploiting the cheap foreign grain as feed (Harvey 1984, 165). This may have been what happened at Mudwall Farm. The final phase of development, 1875-1895, saw the addition of two open-fronted two cattle sheds and the division of the farmyard into three cattle yards. The sheds acted as shelters for the cattle rather than permanent accommodation and their positioning is intentional. The lean-to cattle shed faces south and the 'four-bayed' cattle shed faces east: both would have benefited from the sun and were protected from the worst of the chill northern winds by the other buildings.

The similarity of the roof trusses, and the fact that all of the buildings have sarking boards, presents a problem for the dating of the structures. Map evidence and observation of the construction techniques illustrate the evolution of the structures. However, the roofs all appear to be of the same date, with purlins from structures of one phase continuing into the roof space of structures from a later phase. An explanation for this can be found in the sales catalogues. In 1880 the farm buildings were described as '*Timber and Thatched*': by 1903 they are referred to as '*slate-roofed*'. As the farm achieved its complete layout by 1895, it is logical to assume that when the two open-fronted cattle sheds were added, the entire complex was re-roofed in slate carried on modern trusses.

Apart from the farmhouse, no trace remains of any late medieval or early post-medieval structures associated with Mudwall Farm. This lends credence to the theory that any such remains were swept away at the end of the 18th century or start of the 19th century, in favour of new purpose built structures. Although Mudwall Farm is by no means an example of a model farm it does show the evolution of a planned farmstead, rather than the haphazard approach to the placement of farm buildings common to earlier centuries. The farm buildings form a regular courtyard U-plan, with the farmhouse detached. This reflects the Victorian obsession with order, neatness and efficiency, a desire to maximise the profit and potential from even a small farm. Mudwall Farm is a curiosity in that, despite having medieval/post-medieval antecedents, nothing remains of that history. Nor does it conform to a single phase of rebuilding as a model farm would. Instead, Mudwall Farm displays characteristics of farm evolution normally seen over hundreds of years but which have been compressed into less than a century. The fact that the evolution then apparently

stopped, and the majority of the original features were preserved for another century, makes Mudwall Farm worthy of note in the agricultural history of Essex.

8 Acknowledgements

Colchester Archaeological Trust would like to thank Tarry Moore of Alun Design Consultancy Ltd for commissioning the building recording. The building recording was carried out by Chris Lister. The project was monitored by Richard Havis on behalf of Essex County Council Historic Environment Branch.

9 References

Note: all CAT reports, except for DBAs, are available online in .pdf format at <http://cat.essex.ac.uk>

Brunskill, R W	1999	<i>Traditional Farm Buildings of Britain and their Conservation</i>
CAT	2013	<i>Written Scheme of Investigation for Historic Building Recording at the Mudwall Farm, High Easter Road, Barnston, Essex.</i>
DoE	2010	<i>Planning Policy Statement 5: Planning for the Historic Environment</i>
EAA 14	2003	<i>Standards for field archaeology in the East of England, East Anglian Archaeology, Occasional Papers, 14</i> , ed by D Gurney
Havis,	2013	<i>Historic Building Recording at Mudwall Farm, High Easter Road, Barnston</i> ECC brief
Harvey, N	1984	<i>A History of Farm Buildings in England and Wales</i>
IfA	2008	<i>Standard and guidance for the collection, documentation, conservation and research of archaeological materials</i>
IfA	2008a	<i>Standard and guidance for archaeological investigation and recording of standing buildings and structures</i>
Lake, J	1989	<i>Historic Farm Buildings</i>
MoRPHE	2006	<i>Management of research projects in the historic environment</i> (English Heritage)
University of Gloucestershire	2006	<i>Historic Farmsteads, Preliminary Character Statement: East of England Region</i>

10 Abbreviations and glossary

CAT	Colchester Archaeological Trust
context	specific location on an archaeological site, especially one where finds are made
EHER	Essex Historic Environment Record, held by the ECC
feature	an identifiable thing like a pit, a wall, a floor; can contain 'contexts'
HE	Historic Environment
IfA	Institute for Archaeologists
layer	distinct or distinguishable deposit of soil
medieval	period from AD 1066 to Henry VIII
modern	period from the 19th century onwards to the present
NGR	National Grid Reference
post	in wall frames vertical members which rise the full height of the frame, being either main posts at the bay divisions or intermediate posts within the bay
post-medieval	after Henry VIII to around the late 18th century
purlin	longitudinal roof timbers, intermediate between wall-plate and ridge, carried by roof trusses and giving support to rafters

11 Archive deposition

The paper and digital archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Circular Road North, Colchester, Essex CO2 7GZ, but it will be permanently deposited with Saffron Walden Museum under accession code 2013.10.

12 Contents of archive

One A4 document wallet containing:

1 Introduction

- 1.1 Copy of ECC brief
- 1.2 Copy of WSI produced by CAT
- 1.3 Risk assessment
- 1.4 Copies of existing plans and elevations (1 A4 sheet)

2 Site archive

- 2.1 Digital photographic record.
- 2.2 Digital photographic contact sheet.
- 2.3 Attendance register
- 2.4 Site photographic record on CD

3 Research archive

- 3.1 Client report

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Distribution list

Tarry Moore, Alun Design Ltd
Richard Havis, Essex County Council Historic Environment Officer
EHER
Saffron Walden Museum



Colchester Archaeological Trust

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tel.: 07436 273304

email: archaeologists@catuk.org

checked by: Howard Brooks
date: 13/05/13

Appendices
Appendix 1
Selected photographs



Plate 1 North-west elevation of barn - view south-east



Plate 2 South-east elevation showing inserted Henderson sliding door, with lean-to cattle shed to the left and stable block to the right – view north-west



Plate 3 Midstrey to barn with original doors, threshold leap and inserted metal-framed windows – view south-east



Plate 4 Detail of ornate strap hinge to midstrey door



Plate 5 Interior of the barn showing the midstreay threshold leap and brick threshing floor – view east



Plate 6 Barn, bay 3 showing inserted hatch to cattle shed and inserted doorway to chaff loft - view north-west



Plate 7 Barn, bay 5 inserted door - view south-east



Plate 8 Barn, detail of truss C – view south-west



Plate 9 Stable block with converted two-bayed horse shed to the right and carhorse stable to the left of the Henderson garage doors



Plate 10 Stable block showing north-west tack room - view north-east



Plate 11 Stable block showing interior of carthorse stable – view south-east



Plate 12 Carthorse stable, stall one showing manger and hay rack – view north-east



Plate 13 Carthorse stable, truss A - view south-east



Plate 14 Stable block, two-bayed horse shed showing surviving manger and hay rack – view north



Plate 15 Cow house with hit-and-miss window and traditional stable door - view north-west



Plate 16 Cow house interior showing remains of manger - view south-west



Plate 17 Cow house interior showing fixed ladder to chaff loft with slots for the rails of the calves' pounds to the left of the ladder - view north-west



Plate 18 Chaise house interior showing the blocked open front with the central post and concrete buffer - view north-west



Plate 19 Chaise house interior showing the inserted and subsequently blocked doorway to the 'four-bayed' cattle shed - view south-west



Plate 20 'Four-bayed' cattle shed showing the blocked open front with the chaise house to the right - view west



Plate 21 Interior of the 'four-bayed' cattle shed showing the remains of the manger - view west



Plate 22 Interior of the 'four-bayed' cattle shed showing the original short king post truss and remains of the manger – view north-west



Plate 23 Lean-to cattle shed showing blocked open front and door to chaff loft - view north-west



Plate 24 Lean-to cattle shed showing manger with chaff loft above – view north-west



Plate 25 Detail of post with concrete buffer indicating an open front to the lean-to cattle shed



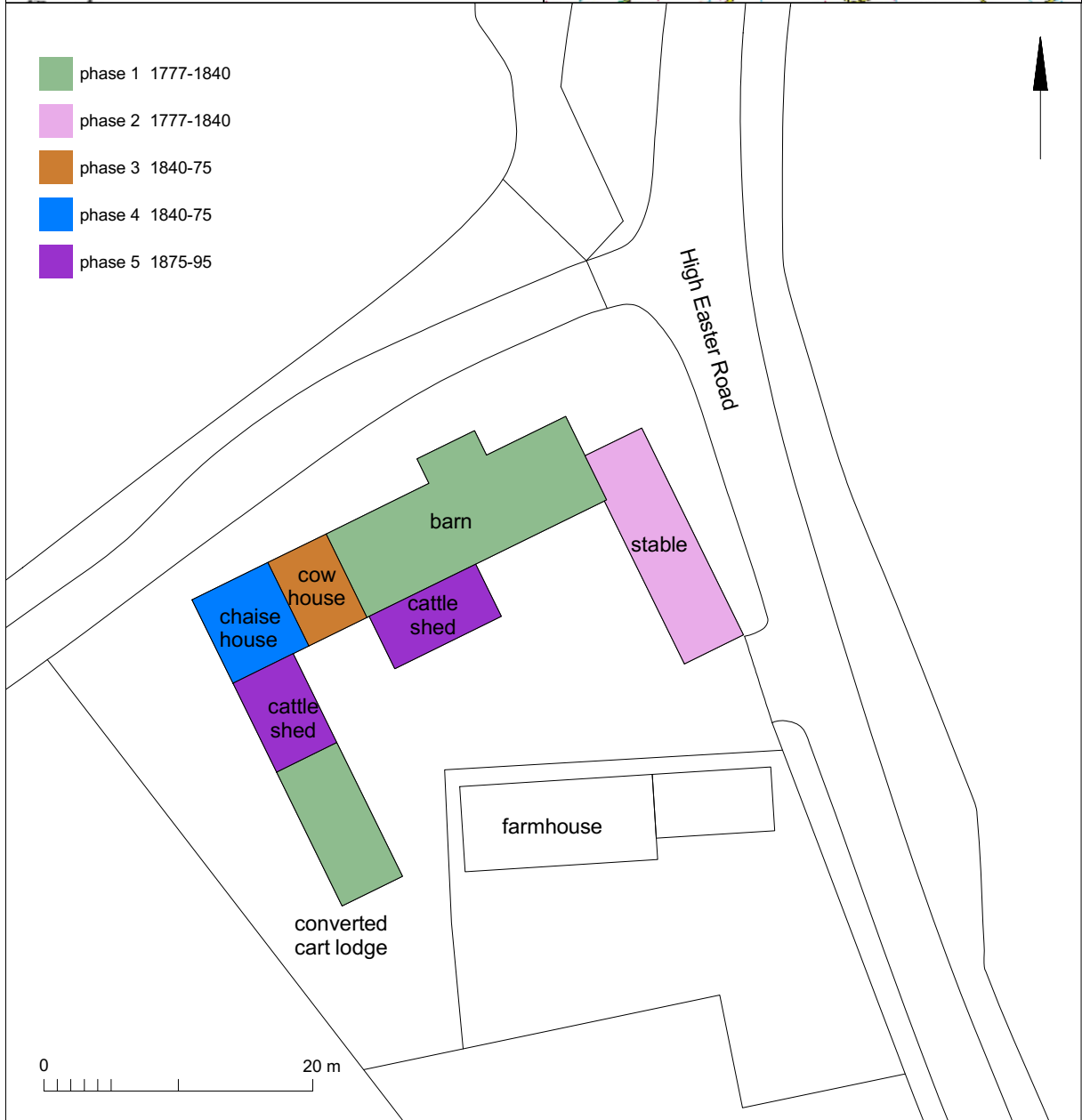
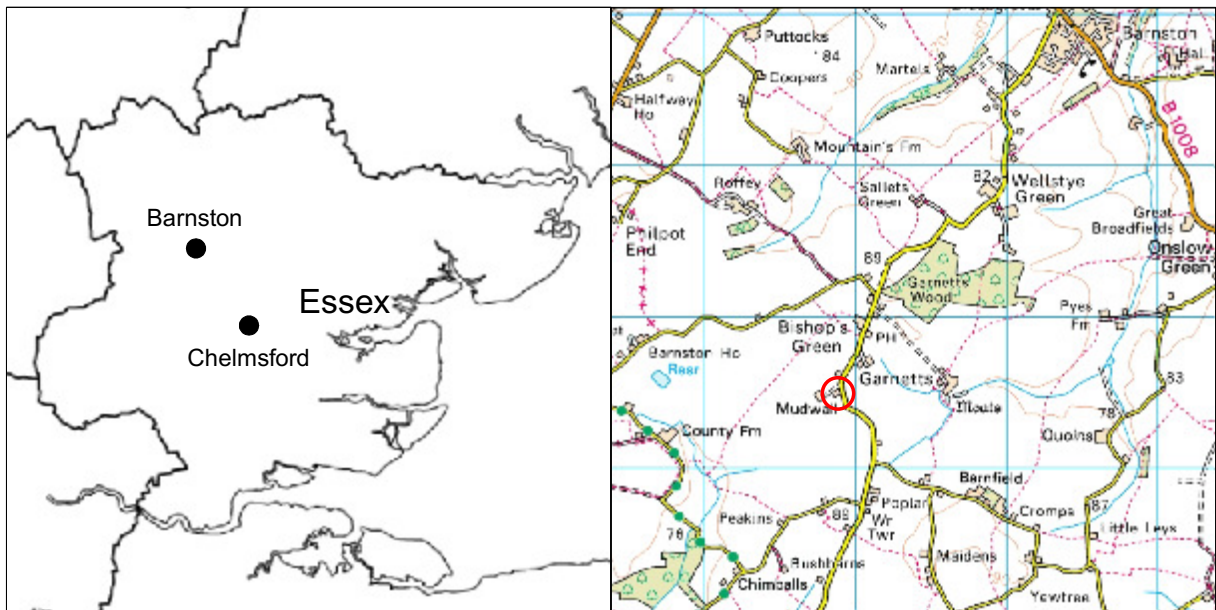
Plate 26 Lean-to cattle shed showing manger with chaff loft above and hatch into main barn – view north

Appendix 2

Full list of digital photographic record (images on accompanying CD)

- 001.jpg Mudwall Farm farmyard - view north-west.
002.jpg Mudwall Farm with High Easter Road in the foreground - view west.
003.jpg Weathervane on roof of barn - view north-west.
004.jpg Stable block with the converted two-bayed horse shed and rebuilt tack room in the foreground - view north-east.
005.jpg Barn showing the inserted sliding door and modern render - view north-west.
006.jpg Lean-to cattle shed with chaff loft above - view west.
007.jpg Door to carthorse stable - view east.
008.jpg Flint foundation to brick plinth of barn - view north-west.
009.jpg Side elevation of lean-to cattle shed showing inserted door and fixed ladder to chaff loft - view west.
010.jpg Lean-to cattle shed showing blocked open front and inserted plinth and doorway - view north-west.
011.jpg Cow house with hit-and-miss window and lean-to cattle shed - view north.
012.jpg Cow house with hit-and-miss window and doorway to chaise house - view north-west.
013.jpg 'Four-bayed' cattle shed with weatherboarding blocking original open front - view west.
014.jpg North-west elevation of barn showing midstrey - view south-west.
015.jpg North-west elevation of barn showing midstrey - view south-east.
016.jpg North-west elevation showing chaise house with blocked open front, cow house and barn - view east.
017.jpg Detail of midstrey door hinge.
018.jpg Interior of two-bayed horse shed showing manger and remains of hay rack - view north.
019.jpg Interior of two-bayed horse shed showing surviving manger and hay rack and inserted doorway to the rebuilt tack room - view east.
020.jpg Surviving manger with tethering ring - view east.
021.jpg Truss B of stable block with iron king bolt and sarking boards.
022.jpg Carthorse stable, stall 3 with surviving manger, hay rack and tethering rings. Brick floor is a later addition - view north-east.
023.jpg Interior of cart horse stable showing stall dividers and brick floor - view south-east.
024.jpg Truss A of cart horse stable with iron king bolt.
025.jpg Carthorse stable, stall 1 showing surviving manger and hay rack.
026.jpg Stable block, interior of north tack room with shuttered window in exterior wall - view north-east.
027.jpg Interior of barn - view west.
028.jpg Interior of barn - south-west.
029.jpg Interior of barn - view north-east.
030.jpg Interior of barn looking towards the midstrey - view north.
031.jpg Interior of the barn - view east.
032.jpg Inserted sliding door to barn - view east.
033.jpg Midstrey door with threshold leap and inserted lights above doors - view north-west.
034.jpg Midstrey threshold leap - view west.
035.jpg Inserted door to south wall of bay 5, blocked by exterior render - view south-east.
036.jpg Barn, bay 4 detail of threshing floor.
037.jpg Barn, bay 3 showing inserted hatch to lean-to cattle shed and inserted door to chaff loft - view - east.
038.jpg Barn, bay 3 showing inserted hatch to lean-to cattle shed and inserted door to chaff loft - view south-east.
039.jpg Barn, truss C with iron king bolt - view west.
040.jpg St John's Ambulance stored in barn.
041.jpg St John's Ambulance stored in barn.

- 042.jpg South-west elevation of barn showing inserted door and fixed ladder to chaff loft of cow house - view north.
- 043.jpg Interior of cow house showing position of removed manger - view south.
- 044.jpg Interior of chaise house with blocked inserted doorway to 'four-bayed' cattle shed - view south.
- 045.jpg Interior of chaise house showing the blocked open front with central post and concrete buffer - view north-west.
- 046.jpg Truss of chaise house with iron king bolt.
- 047.jpg Interior of 'four-bayed' cattle shed - view south-west.
- 048.jpg Interior of 'four-bayed' cattle shed showing the exterior of the chaise house and the blocked inserted doorway - view north-west.
- 049.jpg Interior of lean-to cattle shed with inserted plinth and studs to the right and surviving manger - view north-west.
- 050.jpg Interior of lean-to cattle shed showing joists and floorboards of chaff loft - view north-west.
- 051.jpg Original post and concrete buffer for open front of lean-to cattle shed, with inserted brick plinth to either side - view south-east.
- 052.jpg Interior of lean-to cattle shed with inserted wall to the left and inserted hatch above surviving manger - view north-west.
- 053.jpg Interior of lean-to cattle shed with inserted hatch above surviving manger - view north.
- 054.jpg Inserted hatch from barn into lean-to cattle shed - view north-west.
- 055.jpg Sliding door fitting, stamped 'Henderson'.
- 056.jpg Detail of door pull from inserted sliding door on barn, stamped 'Henderson.'
- 057.jpg Detail of door pull and latch on inserted sliding door to barn, both stamped 'Henderson.'
- 058.jpg Detail of handle on inserted garage door to stable block, stamped 'Henderson.'
- 059.jpg Blocked pitching door in south-west gable of barn, exterior covered with render.
- 060.jpg Pitching door in north-east gable of barn, exterior covered with render
- 061.jpg Original corner post of lean-to cattle shed with mortices suggesting the original open front had rails - view west.
- 062.jpg Mudwall Farmhouse - view south-west.
- 063.jpg Detail of tethering ring on roadside wall of stable block - view south-west.



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Fig 5 Site location and block plan.

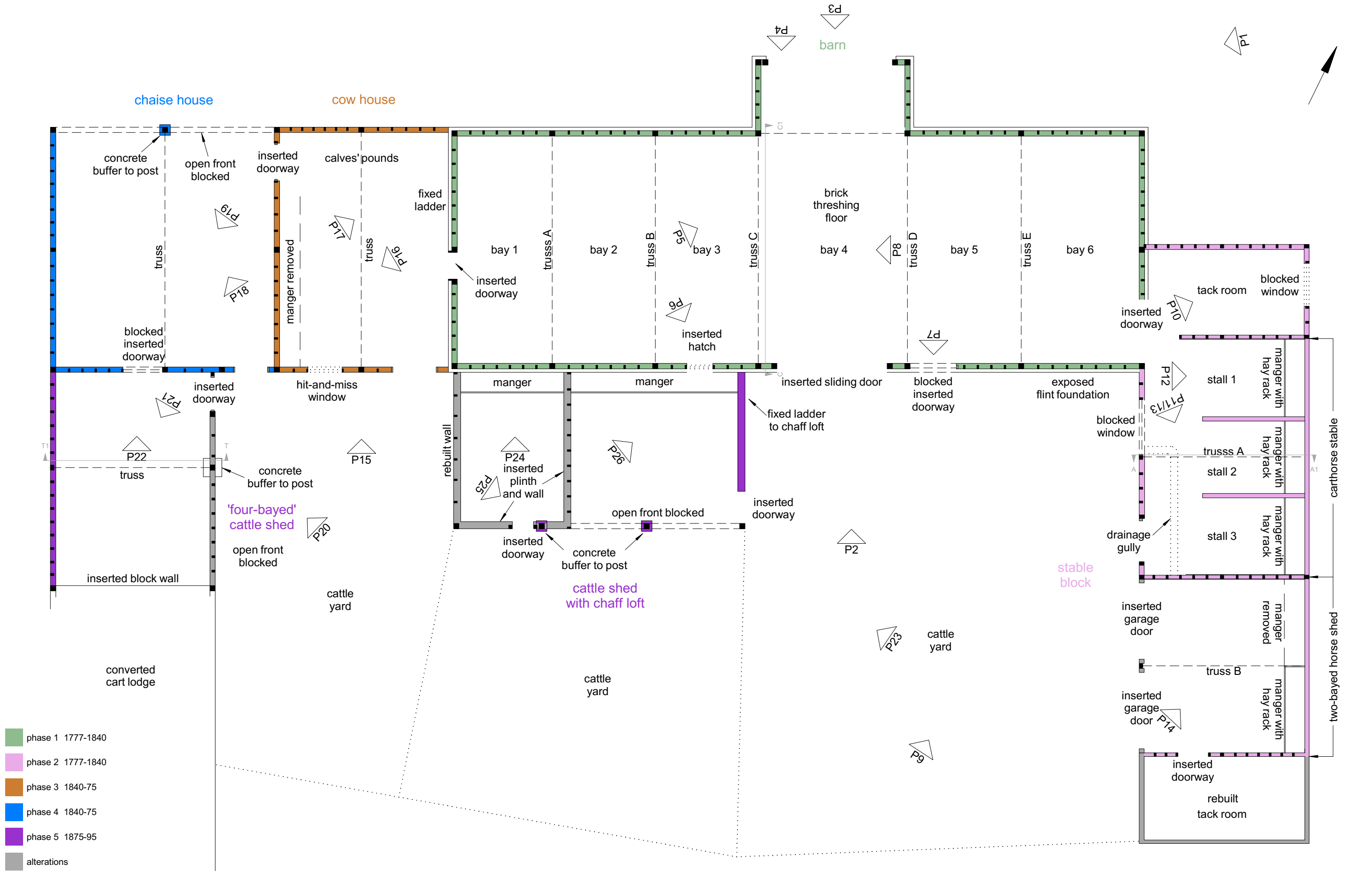


Fig 6 Floorplan of Mudwall Farm showing location and orientation of photographs included in the report.

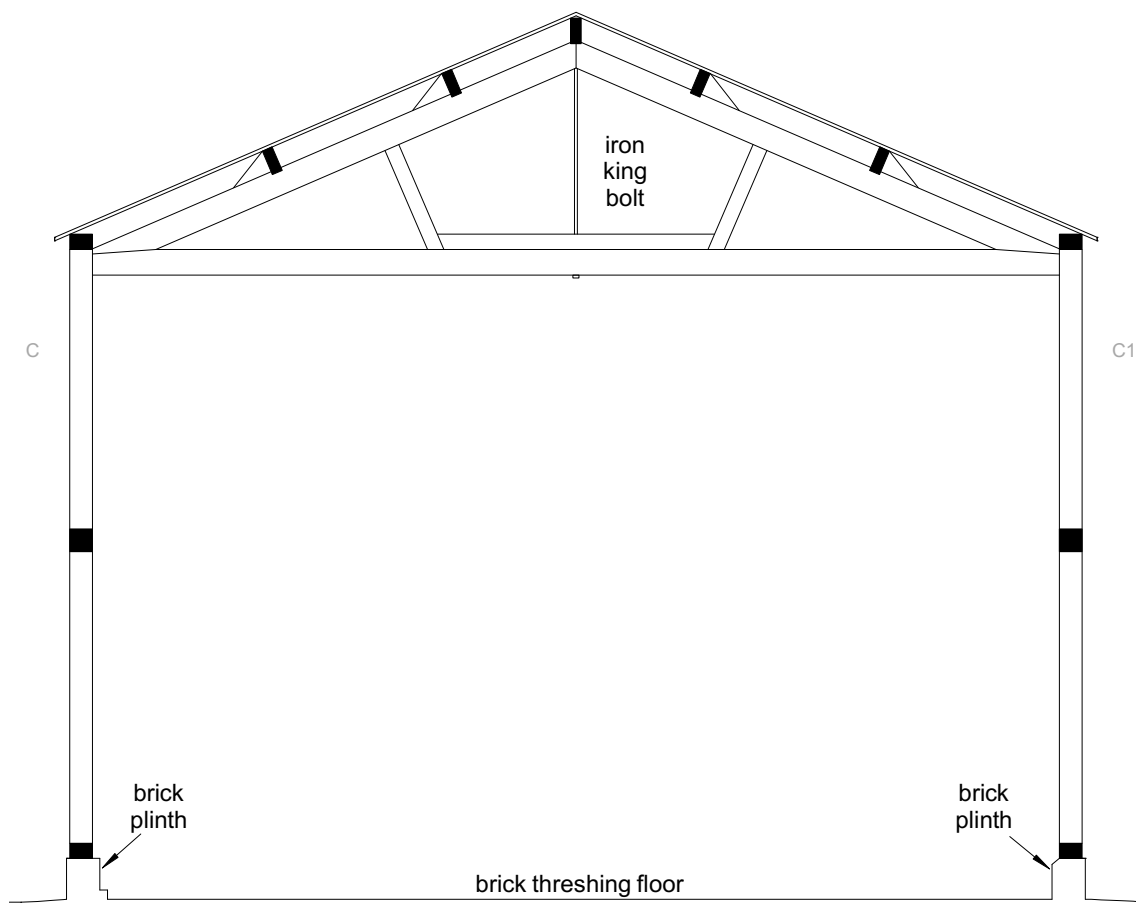


Fig 7 Cross-section of barn truss C.



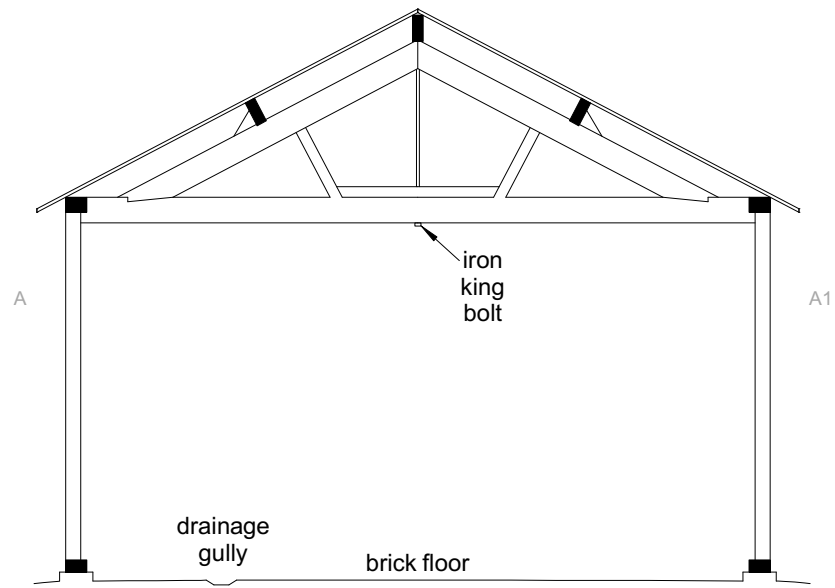


Fig 8 Cross-section of stable truss A.

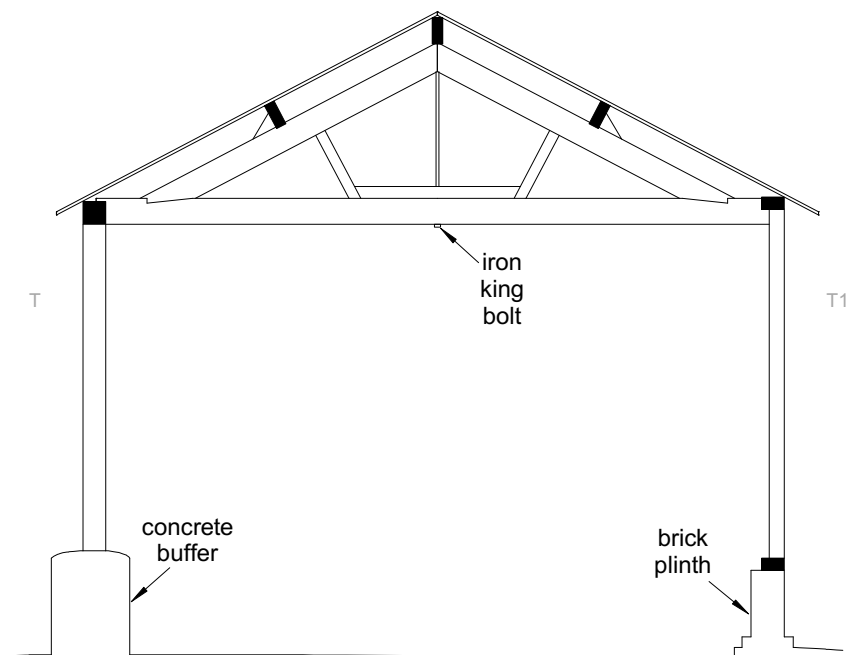


Fig 9 Cross-section of 'four-bayed' cattle shed truss.



Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Address: Mudwall Farm, High Easter Road, Barnston, Essex	
Parish: Great Dunmow	District: Uttlesford
NGR: TL 6282 1749 (c)	Site codes: CAT project – 13/04f ECC HEM code – BARMW13 Museum accession – 2013.10
Type of work: Building recording	Site director/group: Colchester Archaeological Trust
Date of work: April 2013	Size of area investigated: n/a
Location of curating museum: Saffron Walden Museum	Funding source: Client
Monitored by: Richard Havis of Essex Historic Environment	
Further seasons anticipated? No	Related EHER numbers: -
Final report:	CAT Report 702
Periods represented:	19th century
Summary: <i>A programme of building recording was carried out by the Colchester Archaeological Trust on a complex of farm buildings at Mudwall Farm, High Easter Road, Barnston, Essex in April 2013. The work was commissioned by Alun Design Consultancy Ltd on behalf of Mr E Butler. The farm buildings are arranged in a regular courtyard U-plan with the farmhouse detached to the south. The complex includes a large threshing barn, stable block, chaise house and cattle sheds. The structures date from throughout the 19th century. Mudwall Farm is good example of the evolution of a planned farmstead in the 19th century and retains many of the original features.</i>	
Previous summaries/reports: none	
Keywords: farm	Significance: *
Author of summary: Chris Lister	Date of summary: May 2013