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**SELLANDS FARM BARN, HEMPSTEAD ROAD,
RADWINTER, ESSEX**

HISTORIC BUILDING RECORDING

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NGR: TL 6180 3772		Report No: 3675
District: Uttlesford		Site Code:
Approved: Claire Halpin		Project No: P4040
Signed:		Date: October 2010

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OASIS SUMMARY SHEET

Project details			
Project name	<i>Sellands Farm Barn, Hempstead Road, Radwinter</i>		
<i>In October 2010, Archaeological Solutions conducted historic building recording at Sellands Farm, Radwinter, Essex. The recording was conducted in compliance with a planning condition attached to planning approval for a proposed barn conversion (EHEM Planning Ref. UTT/1356/08/FUL).</i>			
<i>Technical analysis of the barn revealed three main structural phases, together with periods of modification and repair. Two bays of a probable five-bay, 16th century barn survive in good condition with much original timber. The western bays and original porch were demolished and then rebuilt and extended with a more narrow structure in the later 17th or early 18th century, at which time the surviving remains of the ancient core were also modified with a primary-bracing system and new weather-boarding and render were applied to the exterior. In the mid to later 18th century, two further bays were added to the eastern end, but these were structurally separate until the 20th century. The dwarf wall was probably replaced at a broadly contemporary date. A pair of outshuts was constructed to the north in the later 19th century, thereby preserving some original external fabric. Modern intervention has been particularly harsh, but may have addressed structural problems. The roof of the western range is completely lost, while much of the remaining high-level fabric is fragmentary.</i>			
Project dates (fieldwork)	<i>16-21st September 2010</i>		
Previous work (Y/N/?)	<i>N</i>	Future work	<i>N</i>
P. number	<i>4040</i>	Site code	
Type of project	<i>Historic Building Recording</i>		
Site status	<i>Grade II Listed</i>		
Current land use	<i>Disused barn</i>		
Planned development	<i>Residential conversion</i>		
Main features (+dates)	<i>Late 16th century and later barn</i>		
Significant finds (+dates)	<i>-</i>		
Project location			
County/ District/ Parish	<i>Essex</i>	<i>Uttlesford</i>	<i>Radwinter</i>
HER/ SMR for area	<i>Essex HER (EHER)</i>		
Post code (if known)	<i>-</i>		
Area of site	<i>-</i>		
NGR	<i>TL 6180 3772</i>		
Height AOD (max/ min)	<i>90m AOD</i>		
Project creators			
Brief issued by	<i>Essex Historic Environment Management (EHEM) (Richard Havis/Adam Garwood)</i>		
Project supervisor/s (PO)	<i>T Collins, L Prosser</i>		
Funded by	<i>City Sq Ltd</i>		
Full title	<i>Sellands Farm Barn, Hempstead Road, Radwinter: A Historic Building Recording</i>		
Authors	<i>Thompson, P. Collins, T. Prosser, L.</i>		
Report no.	<i>3675</i>		
Date (of report)	<i>October 2010</i>		

SELLANDS FARM BARN, HEMPSTEAD ROAD, RADWINTER, ESSEX HISTORIC BUILDING RECORDING

SUMMARY

In October 2010, Archaeological Solutions conducted historic building recording at Sellands Farm, Radwinter, Essex. The recording was conducted in compliance with a planning condition attached to planning approval for a proposed barn conversion (EHEM Planning Ref. UTT/1356/08/FUL).

Technical analysis of the barn revealed three main structural phases, together with periods of modification and repair. Two bays of a probable five-bay, 16th century barn survive in good condition with much original timber. The western bays and original porch were demolished and then rebuilt and extended with a more narrow structure in the later 17th or early 18th century, at which time the surviving remains of the ancient core were also modified with a primary-bracing system and new weather-boarding and render were applied to the exterior. In the mid to later 18th century, two further bays were added to the eastern end, but these were structurally separate until the 20th century. The dwarf wall was probably replaced at a broadly contemporary date. A pair of outshuts was constructed to the north in the later 19th century, thereby preserving some original external fabric. Modern intervention has been particularly harsh, but may have addressed structural problems. The roof of the western range is completely lost, while much of the remaining high-level fabric is fragmentary.

1 INTRODUCTION

1.1 In October 2010, Archaeological Solutions Ltd (AS) conducted historic building recording at Sellands Farm Barn, Hempstead Road, Radwinter, Essex (NGR TL 6180 3772; Figs. 1-2). The work was conducted in compliance with a planning condition attached to planning approval for a proposed barn conversion (EHEM Planning Ref. UTT/1356/08/FUL). It was commissioned by City Sq Ltd.

1.2 The historic building recording was carried out in accordance with a brief issued by the Essex Historic Environment Management (EHEM) (Richard Havis/Adam Garwood, dated 10/08/2010), and a specification compiled by AS (dated 19/08/2010), and approved by HCC HEM.

1.3 The recording aimed to make a detailed record of the barn prior to its conversion, taking into consideration the plan, materials and method of construction, date and phasing, function and internal layout, fixtures and fittings, and the context of the farm within its contemporary landscape.

Planning policy context

1.4 The planning context with regard to historic buildings is guided by Planning Policy Statement 5 (March 2010). PPS5 states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The Planning Policy Statement aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. It aims to conserve England's heritage assets in a manner appropriate to their significance. It states that opportunities to capture evidence from the historic environment and to contribute to our knowledge and understanding of our past, and to make this publicly available, should be taken, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE (Figs. 1 - 2)

2.1 Sellands Farm lies approximately 7.5km east of Saffron Walden in north-west Essex, and is located on the B1054 between Radwinter (to the west) and Hempstead (to the east). The barn lies immediately north of the B1054 and south of Sellands Farm in an open plot of land. An agricultural store previously lay to the east although only the concrete hardstanding survives and a metalled track giving access to the barn to the west.

3 METHODOLOGY

3.1 Archaeological databases

The Essex Historic Environment Record (NHER) was consulted in order to identify any local archaeological finds or remains in the area that might be affected by, or relate to the development. Those sites in closest proximity to the site (500m) are listed in Appendix 1 and plotted in Fig 3. Sites beyond the 500m radius are described in the text where relevant.

3.2 The building

3.2.1 The site was visited on the 16th and 21st September 2010 in order to compile descriptions of the building and undertake the drawing and photographic work. Tansy Collins and Lee Prosser compiled the written descriptions and carried out the photographic recording, while Kathren Henry completed the drawing work. Floor plans and a cross-section through a typical truss were produced, along with an internal elevation of a representative panel of timber-framing in the core of the barn. In places these are based on those drawings provided by the client, corrected where necessary. These are included with annotations (Fig. 10).

3.2.2 The photographic recording was conducted using medium format (4.5cm x 6cm) black and white film and included all external views and general internal shots. This utilised a Zenza Bronica ETRS camera and Ilford HP5 IOS 400 120mm film. Colour photographs were taken using a Canon 1000D (10 megapixels) digital camera, duplicating the black and white photography. Where necessary, architectural detail was captured using 35mm black and white film and supplementary colour photography used 35mm Ektachrome colour transparency. External lighting and weather conditions were good at the time of the survey. A scale was used wherever possible, and a flash was employed for internal shots. A pictorial index of the digital photography and selected colour plates are included below together with location plots (Fig. 10)

4 THE EVIDENCE

4.1 Topography, geology and soils (Fig. 1)

4.1.1 Sellands Farm is located at 90m AOD on the lower northern slope of a shallow valley. The local soil is a typical calcareous pelosol of the Hanslope Series. The underlying solid geology is Upper Cretaceous chalk.

4.2 Archaeological and Historical Background

4.2.1 There are few known sites of archaeological interest in the area, and no prehistoric finds have been identified within the vicinity of Sellands Farm. A few putative Roman roads have been suggested in close proximity; a road from Thaxted to Radwinter, may have extended approximately 1km west of the site (EHER 1437) and a second road from Radwinter to Braintree via Great Sampford would also have passed approximately 800m south-west (EHER 47311) but these do not presuppose settlement. Nothing is then evident until the medieval period. The only building of certain medieval origin is Sellands Cottage located 180m east of the site, which is of 15th or 16th century date and Grade II listed (EHER 36388). Six additional post-medieval Grade II Listed buildings are located within the wider area (Fig. 3 & Appendix 1). Remains of World War II anti-tank defences are located approximately 300m to the west (EHER 8893).

4.3 The site

4.3.1 The historic barn is the only outbuilding at Sellands Farm to survive. The house is of 17th and 18th century date, and Grade II Listed, (LB 412043; EHER 36387) so that the barn is curtilage listed by virtue of its association with the house. Like many subsidiary buildings of this nature however, records are scarce and often it is early cartographic sources which give the most information.

4.3.2 The earliest available map is Chapman and André's survey of 1777 (Fig. 4) which depicts the relief of the valley and general vicinity, but no

particular detail concerning the barn, though it is clear that a number of structures were present on the site at this time. By the 1840 tithe map (Fig. 5) the farm is labelled as 'Saldons' with a number of buildings arrayed around a yard. The barn is visible in some detail, including its porch.

4.3.3 The name of the farm had been corrupted into Seldon's Farm on the Ordnance Survey map of 1876-7 (Fig. 6) although information is limited due to the small scale, and the picture remained the same a generation later in 1897 (Fig. 7). Some infilling had taken place between the main range and porch, however. By 1921 (Fig. 8) the current name, 'Selland's Farm' had been adopted.

4.3.4 Specific documents relating to the site include a sale catalogue from 1936 (Fig. 9). The particulars list an *"Interesting Period Residence of moderate size, 2 cottages, Farm Buildings, being recognized as one of the best Farms in the district"*. The farm was bought by A. N. Raynham of Radwinter. In the catalogue, the farmhouse is described as 17th century and the Farm Buildings comprise: *Brick, Timber and Thatched 2-bay open Cattle Shed, Stabling for four Horses, 2 Loose Boxes, 2 Calf Houses, Large Double Barn, Loose Box, Corn Box, Loose Box, Timber and Iron Piggery, 4 Pig Houses and mixing place, Open Shed, Brick, Timber and Thatched 2 Bay open Cart Shed, Granary with 2 small store places under part of Double Barn, Timber and Iron Loose Box and Stall, Coach House, open Cart Shed. Cattle and Horse Yards. Good Pond of Water.* The 1940s OS map (not reproduced) depicts these buildings, so it is presumed that most of the out-buildings were demolished after this date.

5 THE BUILDING

5.1 The barn is aligned north-west to south-east with a midstrey lying on the north-east side and outshuts infilling the area to the north-west. The farmhouse lies to the north, while the area to the south-west is laid to lawn; the whole site is defined by a ditch to the road to the south. The barn is timber-framed, of eight bays and externally weatherboarded, which appears to have been almost entirely replaced in modern times. Consequently the building looks fairly homogenous from the exterior, although closer, internal inspection reveals much greater complexity.

5.2 The timber frame rests on a red brick dwarf wall, standing approximately 1.3 m high topped with a soldier course of later bricks, except for the eastern bays, where no appreciable wall is visible and the weatherboarding descends to the ground. The majority of the brick appears fairly homogenous although slight variation is discernable; in general, a Flemish bonding pattern is used apart from a section of English bond to the south-west, while the area to the north on this side retains a higher proportion of over-burnt headers. Bricks visible in the former end wall, now subsumed within a later extension show that they are unfroged. Generally they measure 8½" x 4" x 2⅜" (216mm x 102mm x 60mm) with a ⅜" (95mm) wide lime mortar joint. The mortar contains some chalk and moderate flint

and is largely original with little repointing visible. The weatherboarding is of softwood and the roof is covered with corrugated metal sheeting.

5.3 The south-west façade (Plate 1) displays a number of interventions. A doorway lies off-set to the north but is itself set in a distinct panel of brickwork which clearly infilled a much wider bay-width aperture. The door is modern, boarded, ledged and braced while the adjoining infill is of 20th century brickwork with cement mortar. At the north end a former doorway has been infilled with red brick although a small area of yellow brick repair is visible. The façade is also pierced by a high-set pitching door with hand-made strap hinges on pintles. There are two windows, each of three panes with the upper pane forming a top-hung casement.

5.4 Weatherboarding to the north-west gable end has been replaced and the dwarf wall also displays some change at the junction with the outshut. The original 18th century fabric is pierced in the centre by a former doorway, now converted to a window and infilled with weatherboarding at lower level. The window is a two-light casement, probably 1980s in date, each light of six panes with the upper two panes to the east forming a top-hung casement. The dwarf wall of the adjoining outshut is lower and comprises a red-purple stock brick of 19th century date. The elevation is pierced by a modern doorway.

5.5 The north-east elevation includes the central midstrey and outshuts to the north-west (Plate 2). The weatherboarding has been replaced as before. Here, the dwarf wall is laid in an unresolved Flemish bond, but the fabric is consistent with that seen elsewhere. A former high-set pitching door was located to the south-east. This is now obscured, but its position is indicated by marks in the weatherboarding and a surviving pintle. The porch and adjoining outshuts are similarly clad although the porch has no dwarf wall. There is a small doorway aperture on the south side, infilled with weatherboarding. The porch now frames a wide, modern door. To the north-west, the outshut consists of two elements. The south element breaks forward slightly with the frame resting on a low wall of cement block-work, while its companion to the north has a stock brick wall. This section is pierced by two casements, each of three panes with an upper top-hung casement. A third window is a six-pane fixed light and appears to be a reused sash. A single weatherboard has dislodged revealing the underlying timber-framing which is of softwood of slender scantling.

5.6 The south-east gable end has been reinforced at lower level with cement render. A few of the upper boards have dislodged to expose the frame.

Interior

5.7 Analysis of the interior reveals a complex structural development with several modifications and repairs. The original roof is in poor condition, partly superseded by flimsy timber supporting the metal sheeting, while all original fabric in the roof of the western bays has been replaced. Two bays to the

south-east of the porch appear to be a truncated fragment of a larger barn of probable 16th century date. The porch and the western bays were later replaced with a narrow structure, while two bays, formerly distinct and separated from the main barn, were added to the south-east, most probably in the late 18th century. The outshuts on the north-east represent the final element, though these are of limited interest. In order to set the barn into a coherent sequence, the descriptions below follow this structural sequence and are labelled on Fig. 10.

Phase 1 – Historic core (Bays 3 and 4)

5.8 Bays 3 and 4 form the historic core where a high proportion of the original timber survives (Plate 3). The brickwork of the 18th century dwarf wall is exposed on both sides, and originally returned to close the former south-east gable end, though this became an internal wall when the eastern element was added. Latterly, this has been broken through on the north-east side to consolidate the space, with some loss of the wall and frame.

5.9 Three pairs of jowled storey posts survive on each side; two on the north-east having a slight splay-cut but those on the south-west waney and so less well defined. The tie-beams are original, fairly waney and preserving large redundant two-pegged mortices with corresponding slots in the posts for substantial braces, but all replaced by solid, nailed-on cranked brackets (Plate 4). Mortices also appear to survive in the upper face for queen posts, though decay has occurred and their presence cannot be confirmed in every case. The southern tie-beam is part of the closed partition of the former end gable, and preserves a continuous wattle groove in the soffit.

5.10 The wall panels are homogenous in construction. On the north-east side the sole-plate survives, though decayed, supporting five regular common studs in each bay, framed by an original continuous wall-plate with soffit groove for wattle and daub. Both panels were originally braced by a single curved downward member from the outer principals trenched over the studs but these have been removed and replaced with a later primary-bracing system which cut the studs, and reversed the brace position. The fabric, however appears to be substantially original with careful reuse as the studs retain wattle grooves and stave-holes. The south-west side is similar, though the studs show greater disturbance. In Bay 3 to the south, two have been truncated to insert a pitching door, which also cut through the later brace. Bay 4 appears to have been originally braced from the central bay-post rather than the outer member.

5.11 The roof, as noted above is now fragmentary. Principal rafter couples survive with a collar clasping a single slender purlin in each pitch. The rafters retain empty mortices for wind braces and the purlins also appear to be notched, and so original. Where they survive, the common rafters appear to be of similar scantling, with five in each bay. Two originals survive on the east side of Bays 3 and 4, three on the west side of Bay 3 and four on the west side of Bay 4.

5.12 The closed partition between Bays 3 and 2 formed the end of the original barn. The sole-plate survives in good condition, though cut when the barn was consolidated with its adjoining bays. The cut end provides a view of about 50 growth rings and surviving sapwood in the oak. A good robust prick-post survives. Its counterpart above the tie-beam has been lost but a mortice remains in the collar. In-line mid-rails have four short pegged studs in each register. All is original as the mid-rails have soffit grooves while wattle stave holes and notches also survive in all studs. The lower registers are now primary-braced, but there is no evidence of any earlier arrangement. The lower, eastern studs and brace were removed when the south range was consolidated, but mortices remain. The studwork closing the roof at the apex may include later replacements, but the soffit of the principal rafters is pierced at regular intervals with wattle-stave holes and the collar is also properly grooved to the underside. The south, formerly external face is conspicuous by the presence of lath impressions and nails from its later cladding. Some old softwood weatherboarding survives, indicated by the facet-headed nails but most is circular-sawn softwood and can therefore be no earlier than the 18th century in date, and possibly early 19th century. This is identical to surviving elements in the outshut, noted below.

5.13 Measurements of all accessible timber were taken. The scantlings can be summarised as follows:

Sole-plate	7" x 4" (178mm x 102mm)
Principal bay post	6" x 7" (152mm x 178mm)
Wall-plate	8" x 8" (203mm x 203mm)
Common stud	average 5½" x 3½" (140mm x 89mm)
Lost brace (estimate)	6½" x 2" (165mm x 51mm)
Tie-beam	9" x 7½" (229mm x 191mm)
Prick-post (south gable)	10" x 5" (254mm x 127mm) with ¾" (19mm) peg-hole)
South mid-rail	10" x 5" (254mm x 127mm)
South sole-plate	7" x 6" (178mm x 152mm)

5.14 No assembly markings were visible on any timber with the exception of a Roman III marked on Bay 3.

Phase 2 – midstrey and north bays (Bays 5-8)

5.15 The midstrey, occupying Bay 5 is contiguous with the historic core but notable differences suggest it was rebuilt with the northern element. The treatment of the surviving north-east post of Bay 4, which belongs to the 16th century phase, suggests that there was always a porch in this position, as it has no morticing for a brace on its north-western face, nor any trace of wattle staves and holes. The corresponding south-west post, by contrast does preserve this evidence which suggests that it was at least partially framed. The south-west bay panel is structurally part of the northern extension. The wall-plate is scarfed to its more ancient companion but then extends continuously into the northern extension, with no wattle groove present. Latterly, the member has fractured at the centre and failed. Secondary inner

posts define the threshing door, but all the lower studwork has been replaced by modern softwood, brickwork and a modest door of no interest. Three original rafters appear to survive in the roof at this point, although as elsewhere are effectively redundant.

5.16 The north-western bays are narrower than the main body of the barn so that the midstrey, when constructed needed an extra panel on the north to compensate for the shortfall (Plate 5). The midstrey is effectively independent, structurally of the main barn as it has secondary inner posts adjoining the barn's main storey posts, and was tied in by lapping the wall-plates over the tie-beams, while on the south, the post was transfixed with a long bolt through the adjoining sole-plate, secured by a forelock bolt.

5.17 The whole midstrey area is marked by heavy modification, but the principal structural elements survive, including jowled outer corner posts; the south-east corner being slightly splay-cut, and inner posts which as noted above, give the midstrey independent support from the main structure. These both retain redundant mortices at high level, presumably for braces to a now lost tie-beam. The south-east wall preserves an original sole-plate standing on a low dwarf wall of 18th century brick, while the mid-rail is also well preserved, jointed to the principals by two pegs. Four original lower studs survive; a fifth has been removed to accommodate a small doorway and some later softwood has been propped in to give additional support. Little of the upper register survives except the lower stump of a single stud, a primary brace which is pegged and a companion lower stud, though this is badly decayed. Everything else has been repaired in modern softwood, though peg-holes show that the original upper studs were slightly staggered to their lower counterparts. On the north wall only a short section of the sole-plate has survived truncation to give access to the adjoining outshut. The secondary inner post is slightly jowled. The mid-rail survives with a single lower stud, but the upper register is largely intact with a primary brace on the west side and much external lath and plaster render to the rear face, which has been protected from later removal within the outshut. The additional, compensating western panel is fairly simple with a high sole-plate at the same level as the northern extension and three long studs, though only one is complete.

5.18 The entire north-east gable end and roof of the midstrey have been replaced in modern fabric.

5.19 Visibility in the north-western range is hindered by modern timber and plasterboard lining (Plate 6), partitioning and a suspended ceiling, but it is clear that nothing historic above tie-beam level survives, except at the northern gable end. Bay 6 is the most clearly exposed and is defined on the south by a pair of slightly jowled principal posts set on a high, well-preserved sole-plate on the 18th century brick dwarf wall. Slender braces triangulate the uprights to a waney tie-beam. The west brace is a reused timber of some age with redundant notch-lap joints, while the east example is modern. Similar posts define the northern side of this bay but their braces have been sawn off and the tie-beam is only partially visible above a modern suspended plaster

ceiling. The north-east wall panel is well preserved and of the same form as the later modifications of the historic core, having cranked primary downward braces from the principal posts; the north brace truncated for an inserted aperture, but preserving earlier external weatherboarding and render almost intact. The south-west wall is of similar form with one or two reused members, but no original cladding. Bay 7 is not generally visible apart from a short section of sole-plate on the south-west side with a downward primary brace from the centre. A small short section of the tie-beam is visible, where the eastern brace appears to survive.

5.20 The north-east wall was completely removed when the outshut was built but the wall-plate survives above the plastered ceiling. Bay 8 forms the north gable end and affords similarly limited views of an identical wall panel on the south-west wall (fairly decayed) and a jowled north-west corner post. Limited visibility of the gable suggests that many of the original studs and primary braces survive together with a tie-beam, though nothing diagnostic can be said.

5.21 The outshuts are divided into two distinct areas, but the north-west outshut is of limited interest having a flimsy softwood roof of 19th century date and clad internally by horizontal bead-moulded softwood boarding – much of this now obscured behind plaster-board. The only feature of note is provided by a six-pane fixed window which is probably a reused sash of early 19th century date. The south-eastern outshut, however, is of more interest as it has enclosed two formerly external walls to the midstrey and barn, and so preserved them (Plate 7). The earlier pattern was of lower weatherboarding (the boards measure 6½” or 165mm) with lath and plaster above in a manner common on agricultural buildings in Essex in the 17th and 18th century. The softwood is circular-sawn, but appears contemporary with the plaster. The outshut is probably late Victorian as the partitioning to the adjacent area is of good softwood boarding. Latterly, the area appears to have housed some mechanical plant, though only concrete pads and some Fletton brick supports remains.

5.22 Less timber was available to measure scantling, but those accessible are as follows:

Sole-plate	6½” x 4” (165mm x 102mm)
Principal bay post	6” x 5” (152mm x 127mm)
Tie-beam	6” x 6½” (152mm x 165mm)
Wall-plate	7” x 7” (178mm x 178mm)
Upward brace	5” x 3½” (127mm x 89mm)
Common stud	4” x 3” (102mm x 76mm)
Primary brace	5” x 3” (127mm x 76mm) with ¾” (19mm) peg-hole)

Phase 3 – south element

5.23 Bays 1 and 2 were clearly added later. The timber is all substantially

of oak but of more refined and slender scantling than the adjoining area, with signs of heavy modification and partial replacement in places. As elsewhere, little of the original roof survives but the fragmentary remains are fairly waney. The general pattern is of primary-bracing in all panels, divided by in-line mid-rails with a varying number of common studs in each bay (Plate 8). The south-east gable end is only partially visible behind a large stack of boards and timber but many of the common members have clearly been replaced in softwood. The corner posts are fairly waney and unjowled, and though the original prick-post has been lost, the in-line mid-rails survive; the east member heavily cambered. The tie-beam is waney and preserves a regular arrangement of mortices for common studs though only a few originals survive on the east side in the upper register. The lower fabric is obscured, but a brace is visible on the western side and much of the lower fabric has been infilled with 18th century brick with plaster, similar to the wall panels, noted below. Much of the upper studwork to the apex has been replaced, although the original collar survives.

5.24 Waney principal posts at the bay division support the original tie-beam with solid cranked brackets as elsewhere. The north-east wall is the better preserved. There is no dwarf wall and only a few courses of brick underpin the sole-plate which is poorly preserved and has been partly replaced at the northern end. In-line mid-rails are pegged to the principal with a single peg; that in Bay 2 retains evenly-spaced redundant mortices for a low hay loft. The south-east mid-rail is roughly chamfered and retains a redundant lap-dovetail joint which suggests that it is a reused tie-beam. Both upper and lower registers are downward-braced from the central stud, though in Bay 2 one of the upper braces has been truncated and the studs removed for a pitching door, now blocked, while the lower register now has only a single brace to the south. The common studs are fairly slender but of roughly even scantling. The lower walling retains partial nogging of plastered brickwork laid on edge to approximately 1m in height, corresponding with the dwarf wall in the adjoining bays, and finished with an inward chamfer.

5.25 The wall-plate is noteworthy as it retains chamfering and distinct but plain stops to the south of the bay division post (Plate 9), where an unused mortice for a principal post and a notch in the upper face suggest that this was originally the bay division, but that a change occurred during construction, necessitating the lengthening of the plate with a face-halved and bladed scarf joint to the north-west. This is confirmed by similar evidence on the corresponding wall-plate to the south-west. The south-west wall is less well-preserved though the sole-plate is in better condition and has been scarfed at the point where the wall-plate has similarly been extended. The mid-rail of Bay 2 retains the same mortices for a loft as noted above. The lower registers of both bays have lost all original studwork and bracing, but some fragments of the brick nogging remain at the south end. The upper register of Bay 2 has only a single brace but this may mark the position of a pitching door as there is extensive decay in the wall-plate at this point. One or two of the studs here are clearly reused from a building contemporary with the historic core, as they retain wattle stave notches.

5.26 The roof may pass with little comment. One or two waney rafters of softwood and oak remain *in situ*, particularly on the west pitch but they now have no structural purpose and are only supported by a slender purlin clasped by several pegged collars – all superseded by a modern softwood construction for the existing corrugated sheet metal. Some riven battens survive from what was originally a tiled roof.

5.27 A summary of the timber scantling follows:

Sole-plate	6½" x 4" (165mm x 102mm)
Principal bay post	6" x 5" (152mm x 127mm)
Common stud	4" x 3" (102mm x 76mm)
Primary brace	5" x 3" (127mm x 76mm) with ¾" (19mm) peg-hole
Wall-plate	7" x 7" (178mm x 178mm)
Tie-plate	6" x 6½" (152mm x 165mm)
Upward brace of truss	5" x 3½" (127mm x 89mm)

6 DISCUSSION

6.1 Technical analysis reveals three main structural phases, excluding several campaigns of repair and modification, and the addition of the western outshuts which are of limited historic interest. The ancient core is represented by Bays 3 and 4, lying to the south-east of the porch, which is most likely 16th century in origin. Most of the original timber survives, including robust studwork and evidence for former trenched-over tension bracing with various grooves, stave holes and notches for the original wattle and daub panel infill. A single well-preserved bladed scarf joint and the slight splay-cut of the principal posts might suggest a date in the latter half of the 16th century. Unfortunately the roof is so heavily disturbed that it now yields little useful information, but it is of conventional clasped side-purlin form, originally wind-braced and possibly once had queen posts, which strengthens the 16th century attribution. The south-eastern side of Bay 3 originally formed the south-east gable end while the existing midstrey bay appears, from circumstantial evidence, to have been the location of an earlier porch. It might thus be assumed that in its original form the barn was of four or five bays. Confirming assembly marking is absent, however.

6.2 Two distinct later structural phases are apparent in rebuilding to the north-west and the addition of a separate, two-bay structure to the south-east. They differ in a number of marked characteristics. The northern extension has the appearance of greater age, being constructed of fairly chunky oak of middling quality by comparison to the relative refinement of the south bays, and the continuing use of archaic elements such as the jowling of the posts and strapping with forelock bolts. However, the wall panels are primary-braced, which might conventionally suggest a later 17th century or very early 18th century date. There is no ready explanation why this extension was constructed with narrow bays, except perhaps that there was an intention to provide outshuts, perhaps a different use was envisaged or the available

timber restricted size. At a similar period, the historic core was probably modified with primary bracing in the wall panels.

6.3 The southern addition is all oak, fairly slender and is used efficiently, while no dwarf wall was constructed; instead the timber is framed from the ground in upper and lower registers and partial brick nogging may have been added as an afterthought or as part of a later upgrading. Several members including the wall-plates were carefully dressed with chamfers and stops, on both sides defining the position of a proposed bay division which ultimately does not appear to have been used. It then seems that the whole structure was lengthened slightly during construction and extra timbers were scarfed on, thus necessitating the relocation of the bay division and leaving all the careful chamfer-stopping mis-positioned. When the new frame was constructed, it was clamped to the main barn with iron. In many respects this construction is consistent with the early – mid 18th century. Bay 2 also seems to have had a low hay-loft carried on the mid-rails.

6.4 The barn has undergone several phases of external treatment. The original frame was in-filled with wattle and daub, presumably replaced in the 18th century with a mixture of weather-boarding and render, but this must be a fairly late manifestation of the tradition as the softwood boards are circular sawn. If the attributed invention of the circular saw is accepted, this cannot be earlier than the late 18th century unless the timber was imported ready-sawn, which may push the date back slightly. It clearly pre-dates the construction of the outshuts in the later 19th century.

6.5 Modern intervention has been particularly harsh but may have addressed structural problems. The roof of the north extension is completely lost, while elsewhere only fragments remain, now left redundant by the application of corrugated sheeting. The outshuts are probably late Victorian or even early 20th century in date. In themselves they are of limited historic interest, but they have served to preserve important traces of the earlier external fabric, which was not replaced when the existing weather-boarding was applied.

ACKNOWLEDGEMENTS

Archaeological Solutions Limited would like to thank the client Mr Laine Manoli of City Sq Ltd for commissioning the project.

AS would also like to acknowledge the input and advice of Mr Richard Havis of ECC HEM.

DEPOSITION OF THE ARCHIVE

An archive of all materials produced by the report has been created and listed according to English Heritage (MAP2) and RCHME standards. Copies of the final report will be lodged with the HEM, EHER, and the Essex Record Office. The archive will be lodged with Saffron Walden Museum.

BIBLIOGRAPHY

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SSEW 1983 *Soil Survey of England and Wales: Soils of South East England (sheet 4)*. Harpenden, Rothamsted Experimental Station/Lawes Agricultural Trust

SSEW 1983 *Soil Survey of England and Wales: Legend for the 1:250,000 Soil Map of England and Wales* Harpenden, Rothamsted Experimental Station/Lawes Agricultural Trust

WEB SITES

Heritage Explorer

APPENDIX 1: HER Information

SHER number	National Grid Reference	Details
<i>Romano-British AD 43-410</i>		
1437	6059 3875	Roman Road (course of): Conjectured prolongation of road from Thaxted to Radwinter
47311	6226 3664	Roman Road: Runs from Radwinter via Great Sampford to Braintree and connects with Radwinter Road to Great Chesterford
<i>Medieval AD 1066-1539</i>		
36388	6193 3779	Sellands Cottage: Grade II listed timber-framed hall house, 15 th /16 th century
<i>Post-medieval AD 1539-1900</i>		
36385	6147 3778	Potash: Timber-framed house Grade II listed, 17 th /18 th century
36386	6152 3777	St Crispin: Grade II listed timber-framed house, 18 th /19 th century
36387	6178 3776	Sellands Farmhouse: Grade II listed (412043) 17 th century timber-framed with 18 th century addition to the north-west
36399	6122 3755	The Plough Inn: Grade II listed timber-framed, 18 th century
36400	6129 3746	Hockhams: Grade II listed timber-framed house, 17 th century
36401	6134 3740	1 and 2 Old Hill: Grade II listed timber-framed house, 18 th century
36402	6141 3736	The Hobbs: Grade II listed timber-framed house, 16 th century
<i>Modern</i>		
8893	6147 3778	GHQ Line Anti-Tank Ditch: WWII ditched defences around Cheltenham, part of many hundreds of miles of defence lines created after the Dunkirk evacuation

APPENDIX 2: Historic Cartographic and Photographic Information

Fig. No.	Map Description	Date	Scale
1	Site location (OS Explorer)	Modern	1:25,000
2	Detailed site location	Modern	1:500
3	HER information	Modern	
4	Chapman and Andre's map of Essex	1777	
5	Tithe map	c.1840	
6	OS First Edition	1877	1: 10,560
7	OS Second Edition	1897	1:2,500
8	OS	1921	1:2,500
9	Sale Catalogue	1936	6 inches to 1 mile
-	OS	1940s	1:10,560

APPENDIX 3 HER SUMMARY SHEET

Site name and address:	<i>Sellands Farm Barn, Hempstead Road, Radwinter</i>
County: <i>Essex</i>	District: <i>Uttlesford</i>
Village/Town: <i>Radwinter</i>	Parish: <i>Radwinter</i>
Planning application reference:	UTT/1356/08/FUL
Client name/address/tel:	Laine Manoli of City Sq Ltd
Nature of application:	LBC
Present land use:	Disused barn
Size of application area:	Size of area investigated 258m ²
NGR (8 figures):	TL 6180 3772
Site Code:	
Site director/Organization:	Archaeological Solutions Ltd.
Type of work:	Historic building recording
Date of work:	August 2010
Location of finds/Curating museum:	Saffron Walden
Related SMR Nos:	Periods represented: Late 16 th century and later
Relevant previous summaries/reports: -	
Summary of fieldwork results:	<p>In October 2010, Archaeological Solutions conducted historic building recording at Sellands Farm, Radwinter, Essex. The work was conducted in compliance with a planning condition attached to planning approval for a proposed barn conversion (EHM Planning Ref. UTT/1356/08/FUL).</p> <p>Technical analysis of the barn revealed three main structural phases, together with periods of modification and repair. Two bays of a probable five-bay, 16th century barn survive in good condition with much original timber. The western bays and original porch were demolished and then rebuilt and extended with a more narrow structure in the later 17th or early 18th century, at which time the surviving remains of the ancient core were also modified with a primary-bracing system and new weather-boarding and render were applied to the exterior. In the mid- to later 18th century, two further bays were added to the eastern end, but these were structurally separate until the 20th century. The dwarf wall was probably replaced at a broadly contemporary date. A pair of outshuts was constructed to the north in the later 19th century, thereby preserving some original external fabric. Modern intervention has been particularly harsh, but may have addressed structural problems. The roof of the western range is completely lost, while much of the remaining high-level fabric is fragmentary.</p>
Author of summary: Tansy Collins	Date of Summary: 29.10.2010

**APPENDIX 4
ARCHAEOLOGICAL SOLUTIONS
BUILDING RECORDING ARCHIVE FORM**

Site Details							
Site Name: <i>Sellands Farm Barn, Hempstead Road, Radwinter</i>					NGR: TL 6180 3772		
County: <i>Essex</i>				Museum Collecting Area: Saffron Walden			
Site Code:				Project Number: 4040			
Date of Work: October 2010				Related Work:			
Brief/s				Specification/s			
Date		Present		Date		Present	
10.08.2010		Yes		19.08.2010		Yes	
Site Records (Description)							
4 sheets A4 notes							
Site Drawings (Give Details of Formats & Size)							
1 sheet A4 drawing film							
Architect's Drawings:							
3 sheets A3 drawings (annotated)							
Digital Drawings							
Printouts of Drawings			Printouts of Data			Digital Data	
In report						Digital photographs and drawings on CD	
Reports							
Report No		Report Type				Present	
3675		Historic building recording				Yes	
Site Photographs							
Black & White Contact Prints					Colour Slides		
Film No	Film Type	Negs	Negs Present	Contacts Present	Film No	Negs	Present
1	120mm	1-15	Yes	Yes	1	16-20	Yes
2	120mm	1-15	Yes	Yes			
3	120mm	1-8	Yes	Yes			
Photographic Location Plans Present? (Give Details)							
In report and separate printout in archive folder							
Digital Photographs (Give Details):							
Digital photography duplicates black and white photography. Index and selected plates printed in report. Separate printout of index included in archive folder and digitally on CD.							

PLATES



1 South-west elevation of the barn, taken from the south-west (01)



2 Rear outshuts, taken from the north (04)



3 Bays 3 & 4, taken from the north-west (10)



4 South-west end of the truss between Bays 3 and 4, taken from the east (37)



5 Midstrete (Bay 5), north-west wall panel, taken from the south (14)



6 Bays 6 & 7, western wall panels, taken from the north (17)



Plate 7 South-east outshut showing formerly external walls of the midstrey and barn, taken from the north (16)



Plate 8 Bays 1 & 2, eastern wall panels, taken from the south-west (07)



Plate 9 Unused configuration for a bay division on the north-east wall of Bay 1, taken from the west (26)

PHOTOGRAPHIC INDEX



1

South-west elevation of the barn, taken from the south-west



2

Southern gable end, taken from the south



3

Northern gable end and outshut, taken from the north-west



4

Rear outshuts, taken from the north



5

Southern end and midstre, taken from the east



6

Bay 1, taken from the north



7

Bays 1 & 2, eastern wall panels, taken from the south-west



8

Former end wall of the barn between Bays 2 and 3, taken from the south-east



9

Roof structure above Bays 1 & 2, taken from the north



10

Bays 3 & 4, taken from the north-west



11

Bays 3, 4 & 5, taken from the south-east



12

Roof structure, above Bays 4 & 5, taken from the south-east



13

Midstrey (Bay 5), south-east wall panel, taken from the west



14

Midstrey (Bay 5), north-west wall panel, taken from the south



15

South-east outshut, taken from the south-west



16

South-east outshut showing formerly external walls of the midstrey and barn, taken from the north



17

Bays 6 & 7, western wall panels, taken from the north



18

Eastern wall panels of Bays 6 & 7 to the rear outshuts, taken from the west



19

North-west outshut, taken from the north



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Window, north-west outshut, taken from the west



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South-west wall of Bay 8, taken from the north-east



22

North-west wall of Bay 8, taken from the south



23

North-east wall of Bay 2, taken from the south-west



24

Face-halved and bladed scarf joint in the wall-plate of Bay 2 (north-east side), taken from the west



25

North-east wall of Bay 1, taken from the south-west



26

Unused configuration for a bay division post, positioned to the south of the actual bay division on the north-east wall of Bay 1, taken from the west



27

Former tie-beam reused as a mid-rail on the north-east wall of Bay 1, taken from the south



28

South-west wall of Bay 1, taken from the north-east



29

Lower section of the south-east external wall (Bay 1), taken from the north-west



30

South-west wall of Bay 2, taken from the north-east



31

Former tie-beam, reused as the west post of Bay 2, taken from the south-east



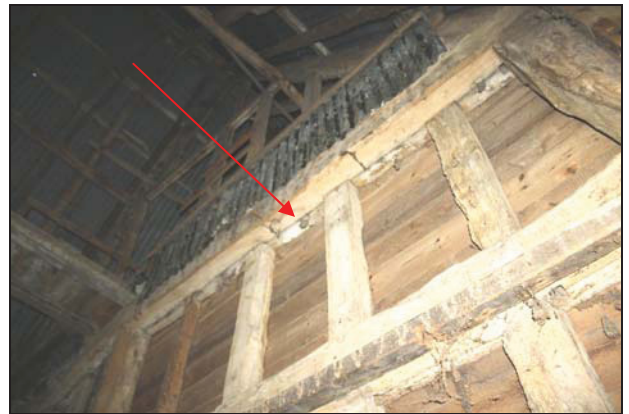
32

Face-halved and bladed scarf joint in the wall-plate of Bay 2 (south-west side), taken from the north



33

South-east side of Bay 3 (former end wall), taken from the north-west



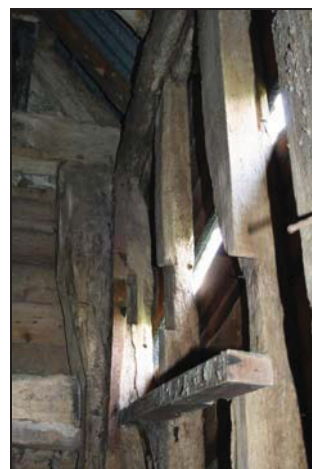
34

South-east wall-plate of Bay 3 showing soffit-groove (indicated), taken from the west



35

North-east wall of Bay 3, taken from the south-west



36

North-east wall of Bay 3 showing mortices for the lost brace, taken from the north-east



37

South-west end of the truss between Bays 3 and 4, taken from the east



38

South-west wall of Bay 4, taken from the north-east



39

South-west wall of Bay 5, taken from the north-east



40

South-west wall of Bay 6, taken from the north-east



41

North-east wall of Bay 6, taken from the south-west



42

North-east wall of Bay 4, taken from the south-west



43

Redundant notch lap joints for a brace, north-east side of Bay 4, taken from the south



44

Original tension brace, in situ, north-east side of Bay 4, taken from the west



45

North-east wall of Bay 3, taken from the south-west



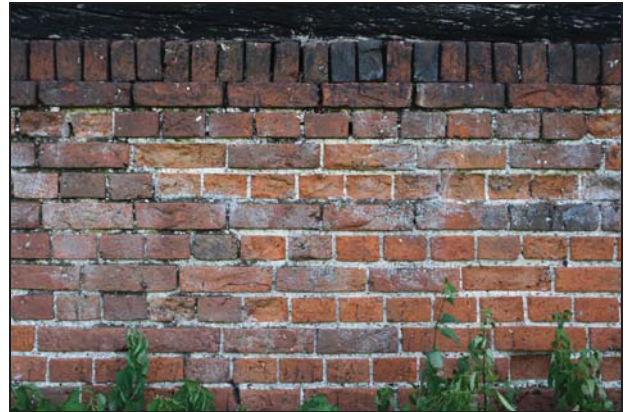
46

North-east end of the truss between Bays 3 and 4, taken from the south



47

Typical sample of external brickwork on the north-east side of the barn (Bay 3), taken from the north-east



48

Typical sample of external brickwork on the south-west side of the barn (Bay 3), taken from the south-west



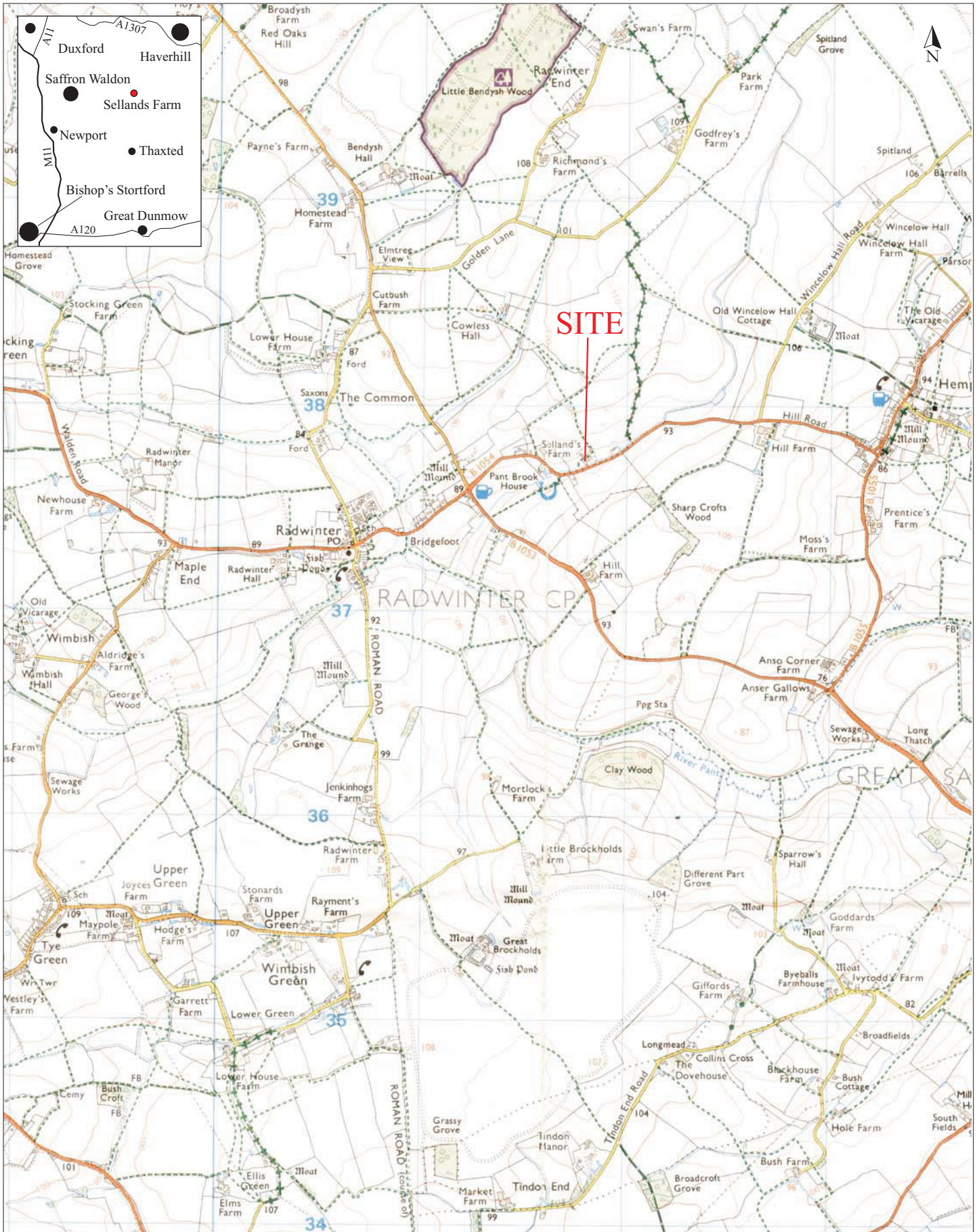
49

Typical sample of external brickwork on the south-west side of the barn (Bay 7), taken from the south-west



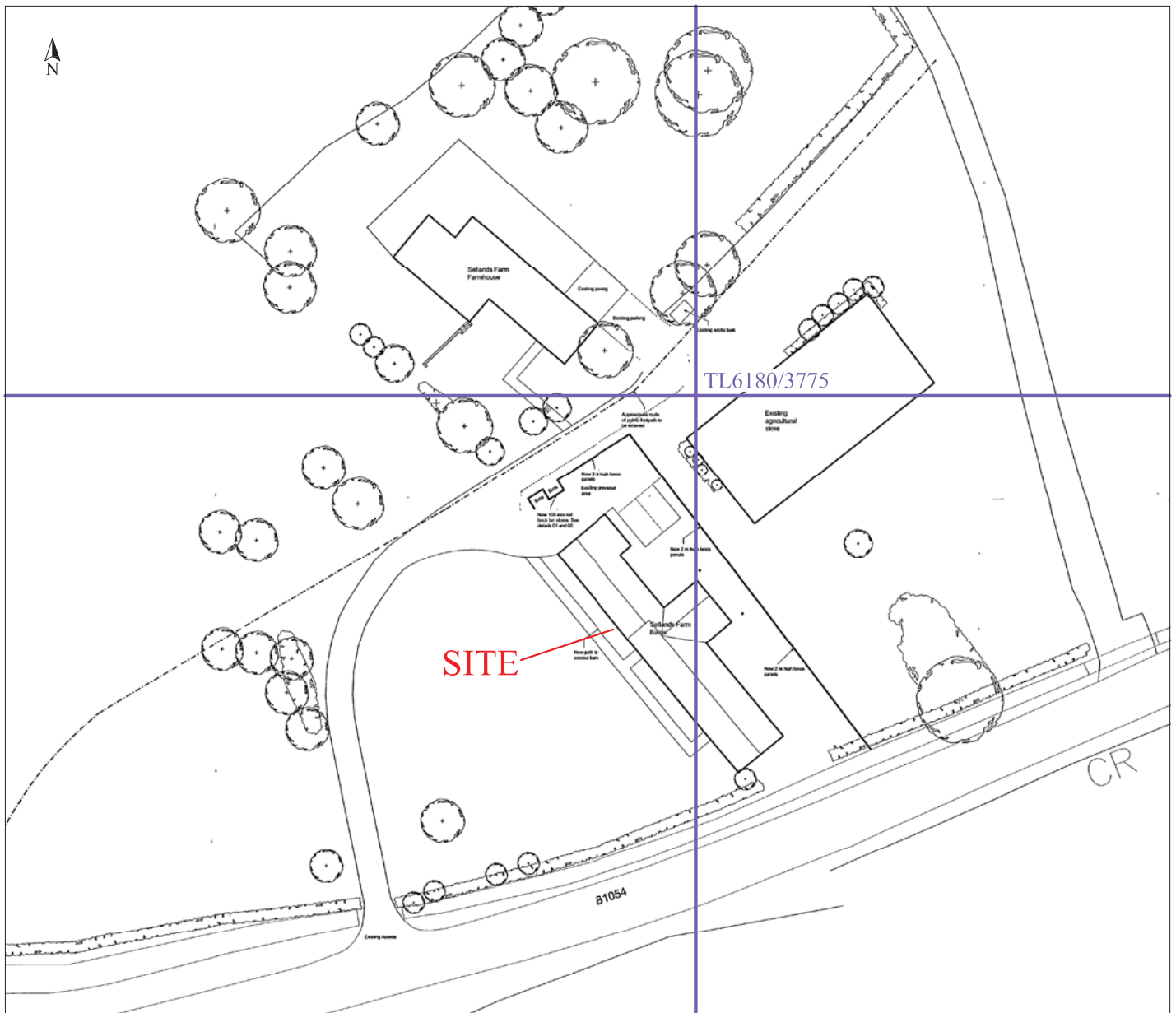
50

Roof structure above bays 6, 7 and 8 (the northern range), taken from the south-east



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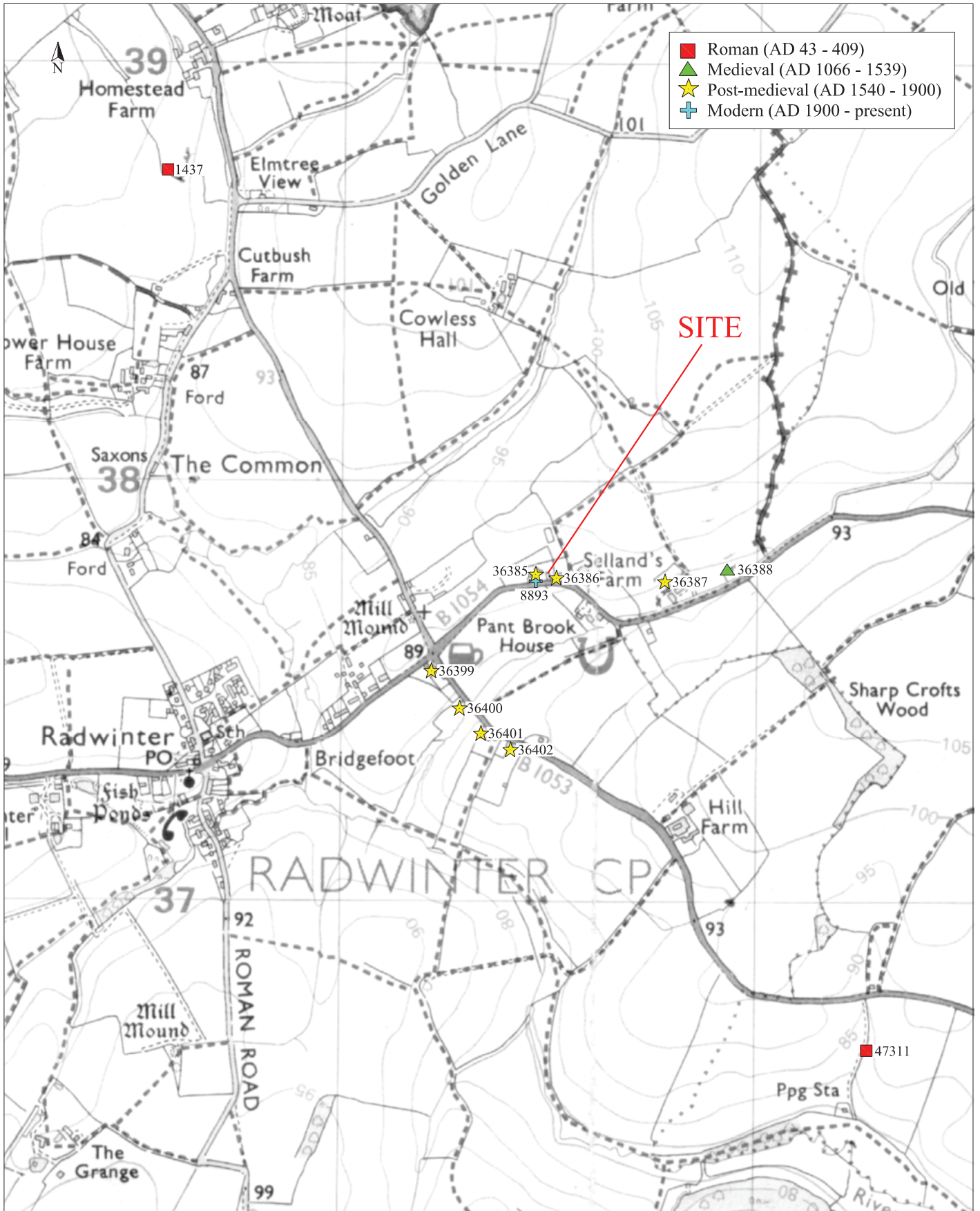
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Fig. 1 Site location plan
 Scale 1:25,000 at A4



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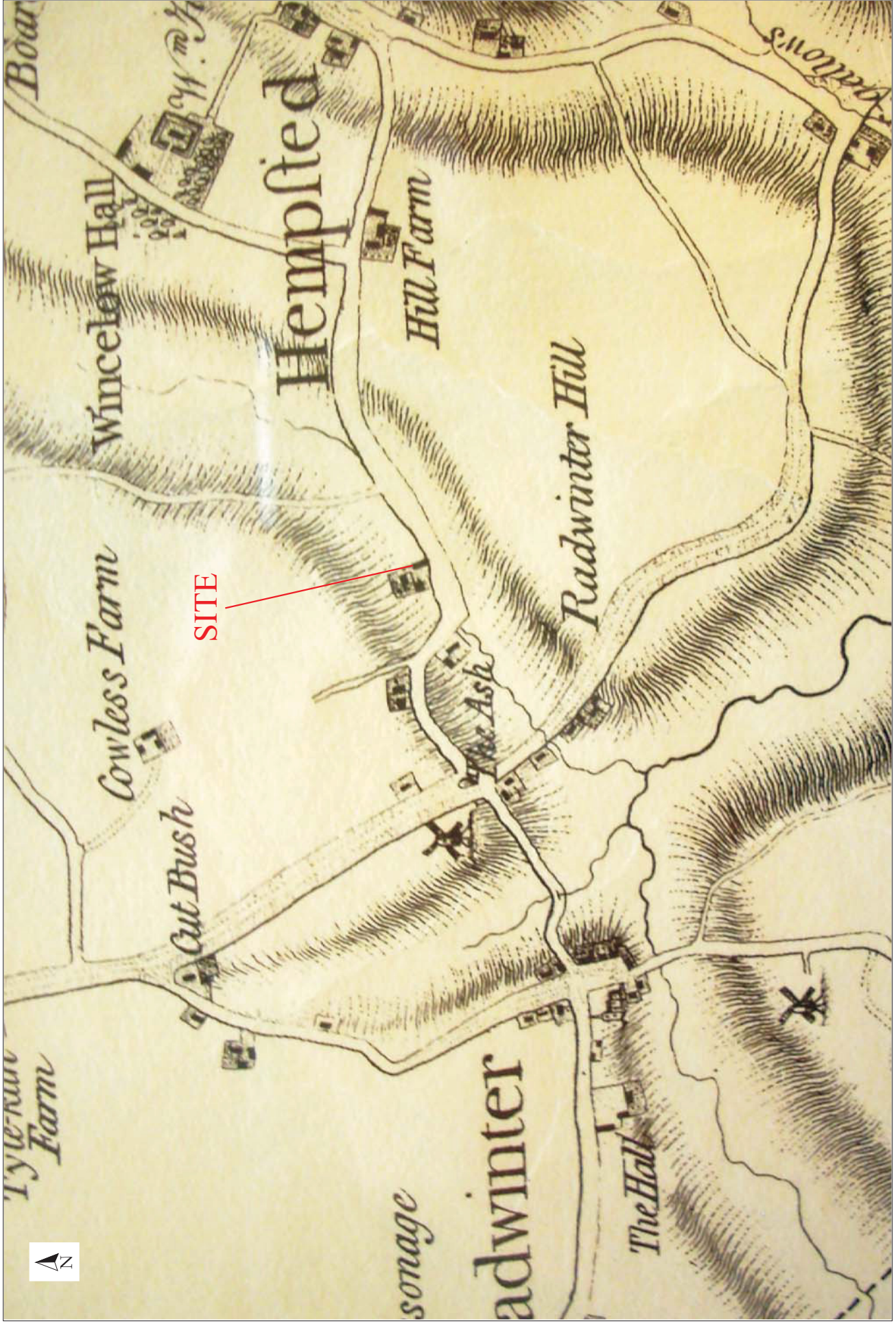


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Fig. 2 Detailed site location plan
 Scale 1:750 at A4



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Fig. 3 HER Data
 Scale 1:12,500 at A4



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Fig. 4 Chapman & Andre's map, 1777

Not to scale

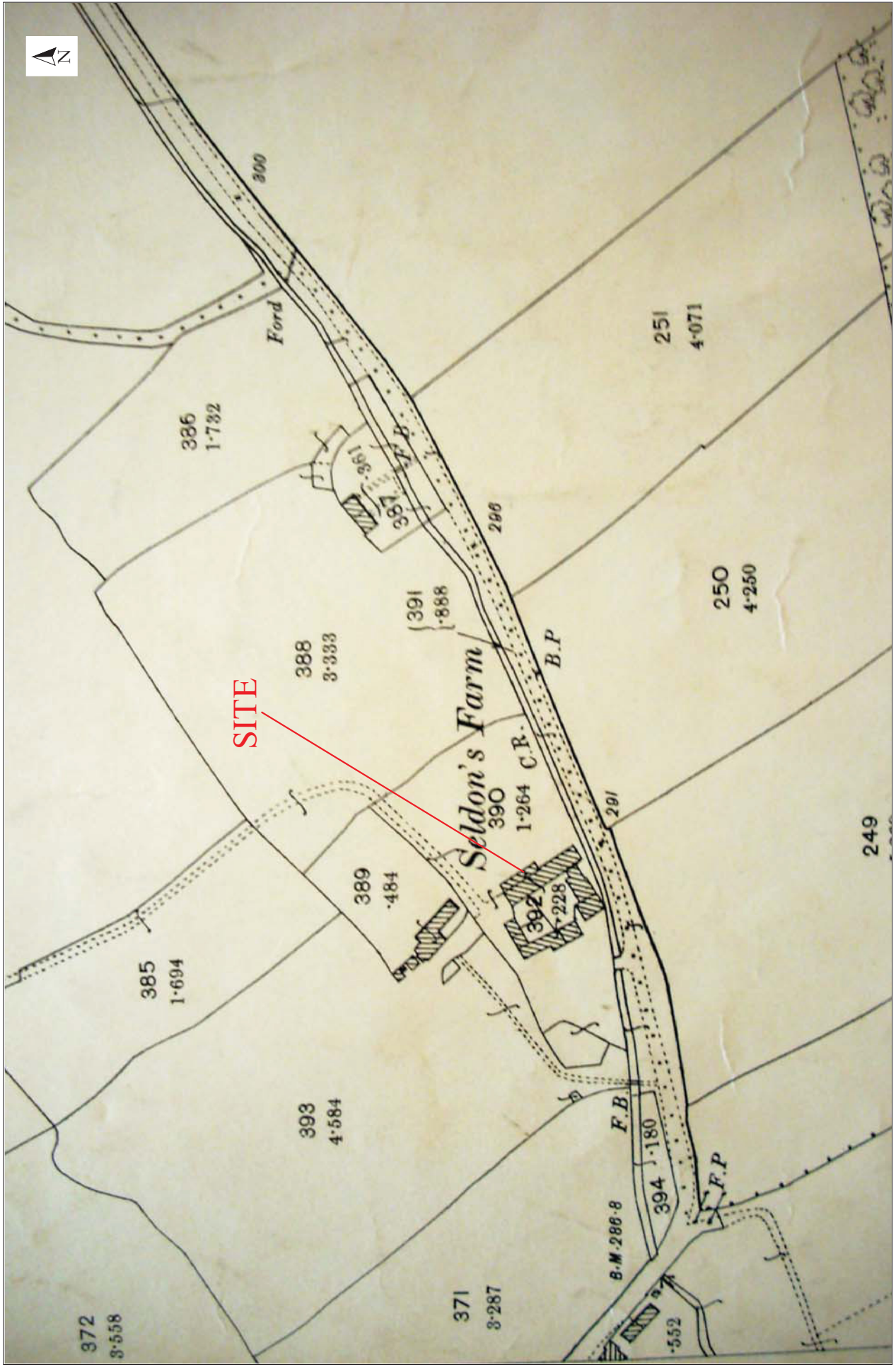


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Fig. 5 Tithe map, 1840
Not to scale



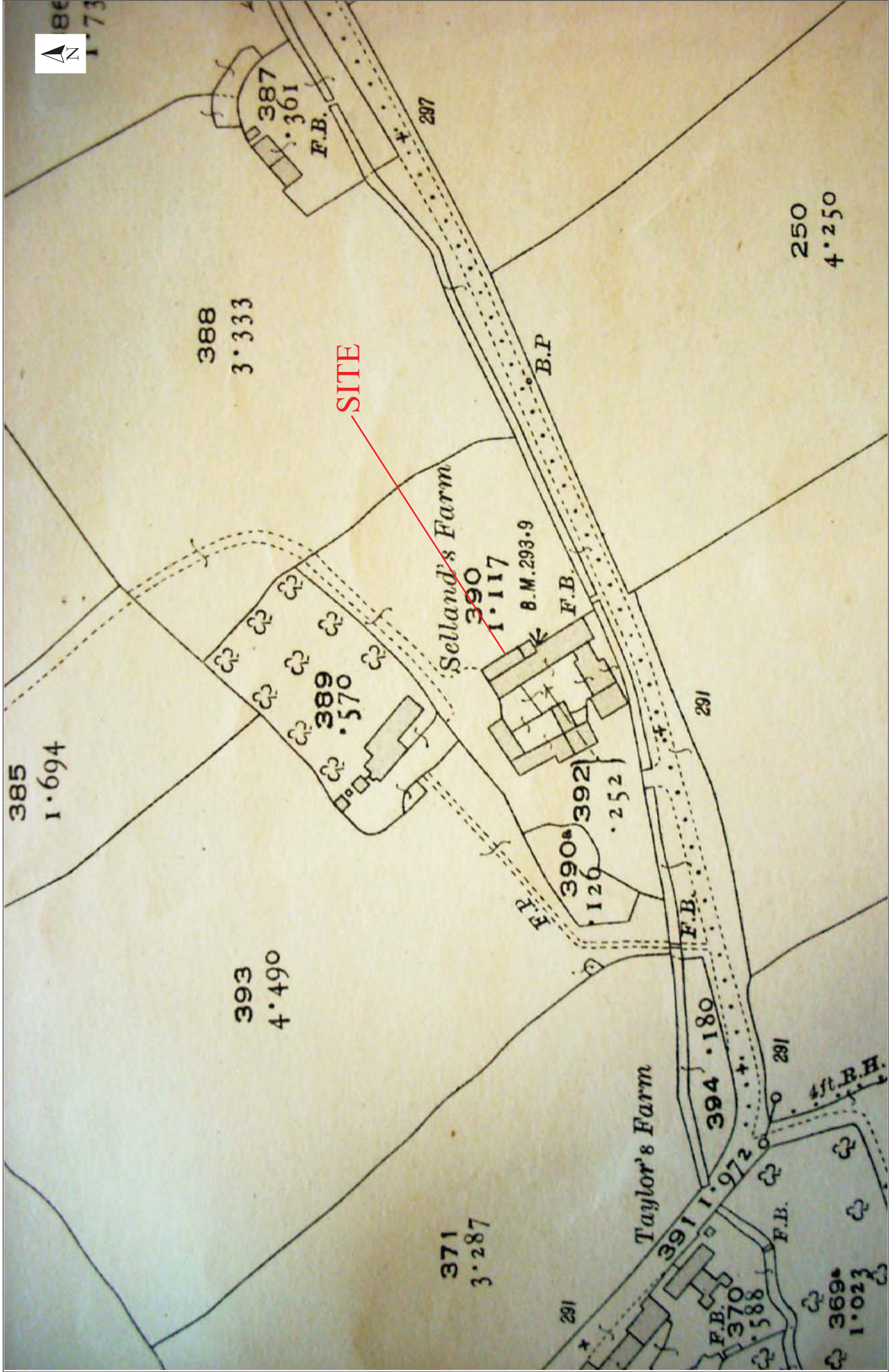
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Fig. 6 OS map, 1876-7
Not to scale



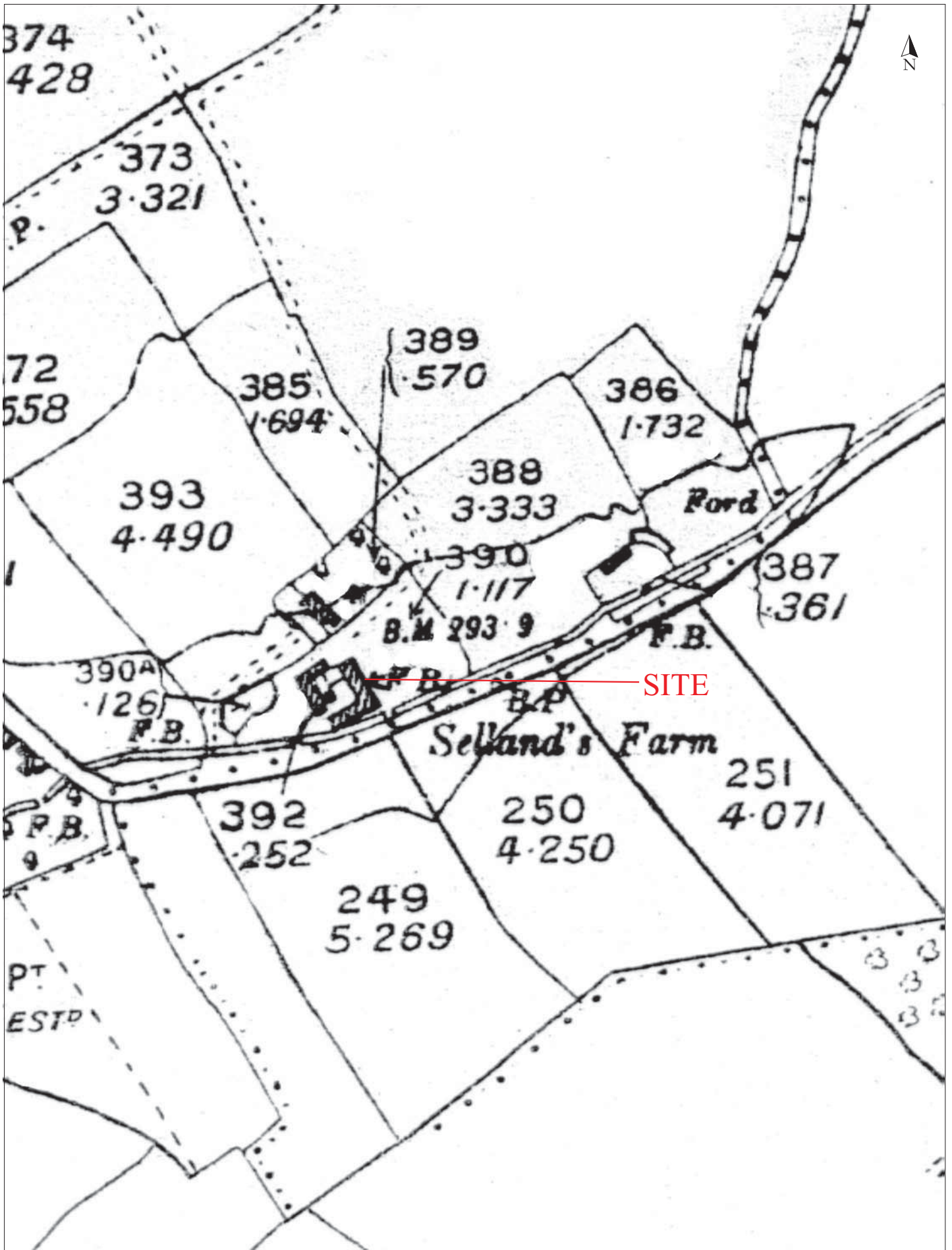
Reproduced from the 1897 Ordnance Survey 25" to 1 mile map with the permission of Her Majesty's Stationery Office. © Crown copyright Archaeological Solutions Ltd Licence number 100036680

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 Fig. 7 OS map, 1897
 Not to scale



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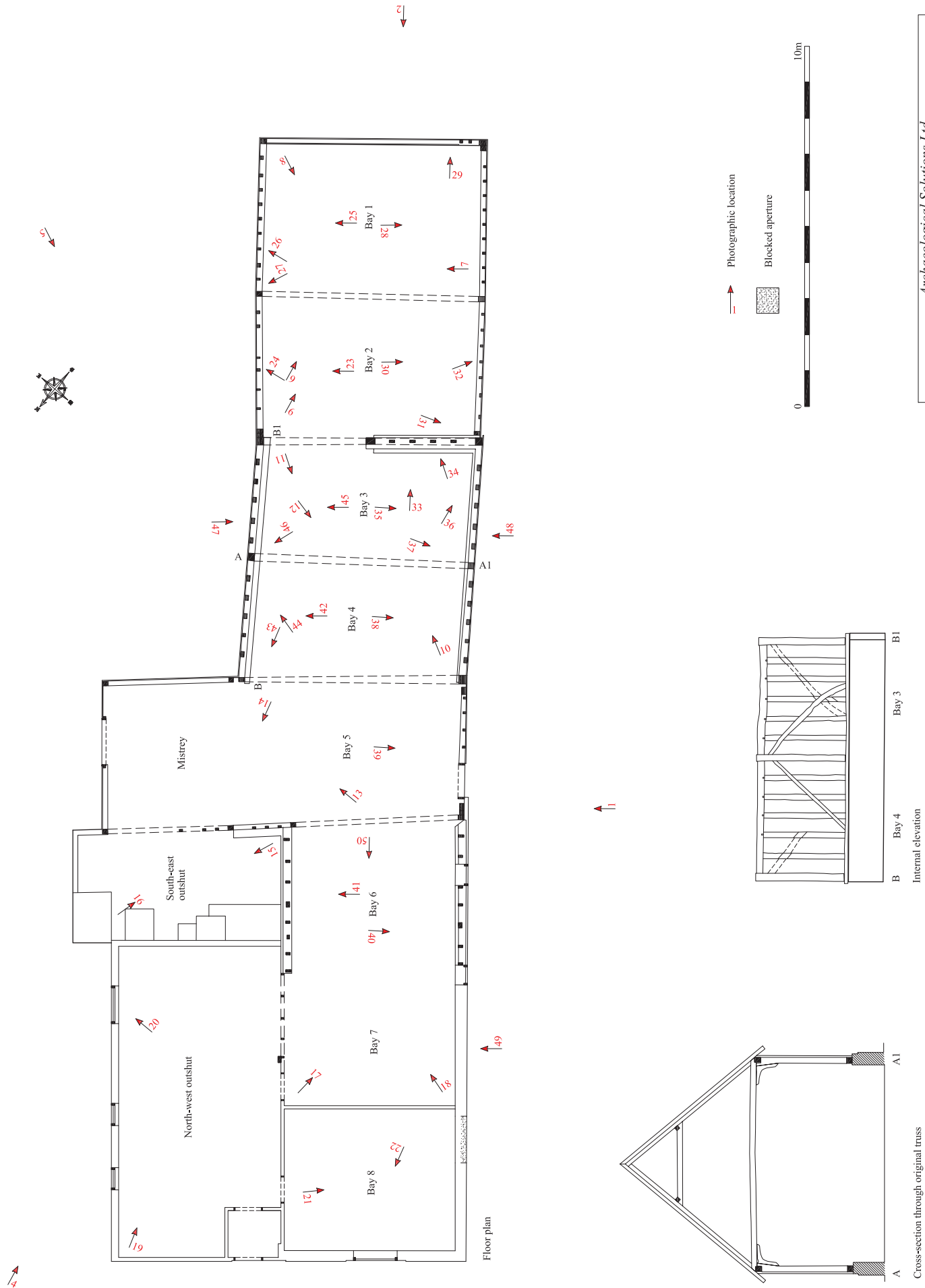
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 Fig. 8 OS map, 1921
 Not to scale



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Fig. 9 Map from sales catalogue, 1936

Not to scale



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Fig. 10 Floor plans, elevation & section
 Scale 1:100 at A3