M4/11

STANDING BUILDING SURVEY, CORNHILLS FARM, BROXHOLME, LINCOLNSHIRE

NGR: SK 9168 7720
SITE CODE: CFB03

Report prepared for NGH Construction Ltd.,

by

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Summary

- *Prior to the conversion and redevelopment of buildings at Cornhills Farm, Broxholme, a program of building recording was undertaken for NGH Construction Ltd.*

Fig. 1 : Plan showing location of Cornhills Farm. 1:25,000

1.0 Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by NGH Construction Ltd to undertake a standing building survey in advance of the redevelopment and conversion of a series of farm buildings at Cornhills Farm, Broxholme, Lincolnshire. This was to fulfil the objectives of an agreed archaeological scheme of work; based on the recommendations of the Built Environment Officer of Lincolnshire County Council.

This approach complies with the recommendations of *Archaeology and Planning: Planning Policy Guidance Note 16*, Dept. of Environment (1990); *Management of Archaeological Projects*, EH (1991); *Standard and Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures*, IFA (1996) and the LCC document *Lincolnshire Archaeological Handbook: A Manual of Archaeological Practice*, 1998.

2.0 Site location and description

Broxholme is within the administrative district of West Lindsey, approximately 6.8km north-west of Lincoln on the east bank of the River Till.

Cornhills Farm is situated to the east of Broxholme Lane on the immediate south side of Carlton Lane. It comprises a stone farmhouse, with a T-shaped range of brick barns to its south-east. These structures appear to be of 19th century build and are considered to be of historic value. To the north / north-east of the original buildings are later structures (machinery shed and corn drier), possibly of 1960's/1970's construction. These latter are considered to be of little architectural or historical interest.

The site lies on solid geology of the Charmouth Mudstone Formation to the eastern side overlain by Wragby Till, (BGS, 1999). Site elevation is approximately 9m OD.

The National Grid Reference for the centre of the site is SK 9165 7723.

3.0 Planning background

Full planning permission was granted by West Lindsey District Council to convert a suite of former agricultural buildings to domestic dwellings (Ref. M01/P/0559). This permission was granted subject to the undertaking of a standing building survey that would seek to record each structure that is considered to be of historic/architectural value before it is converted.

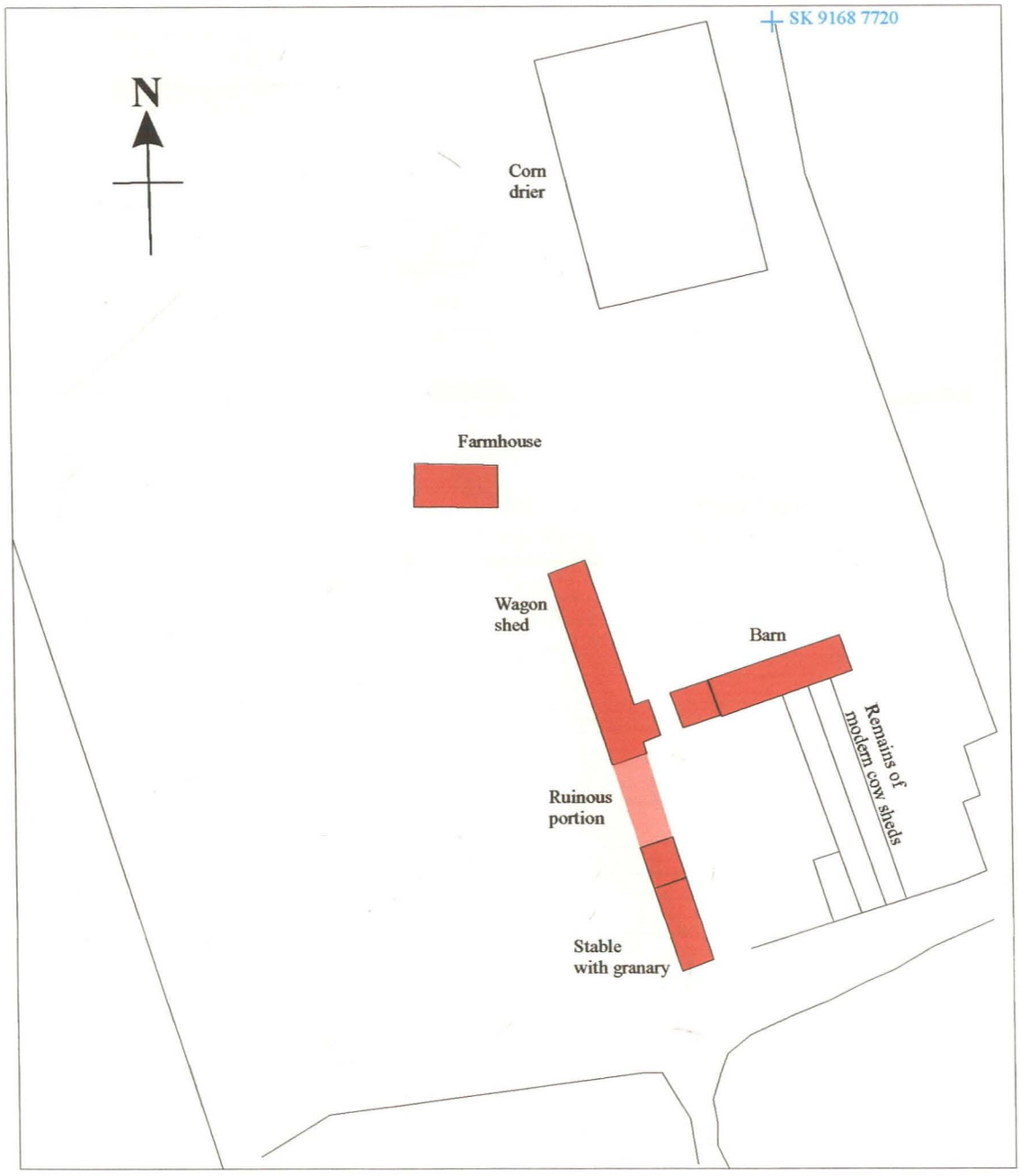


Fig. 2 : Plan showing principal buildings at Cornhills Farm. Those included in this survey are shown in red.
1:1,000

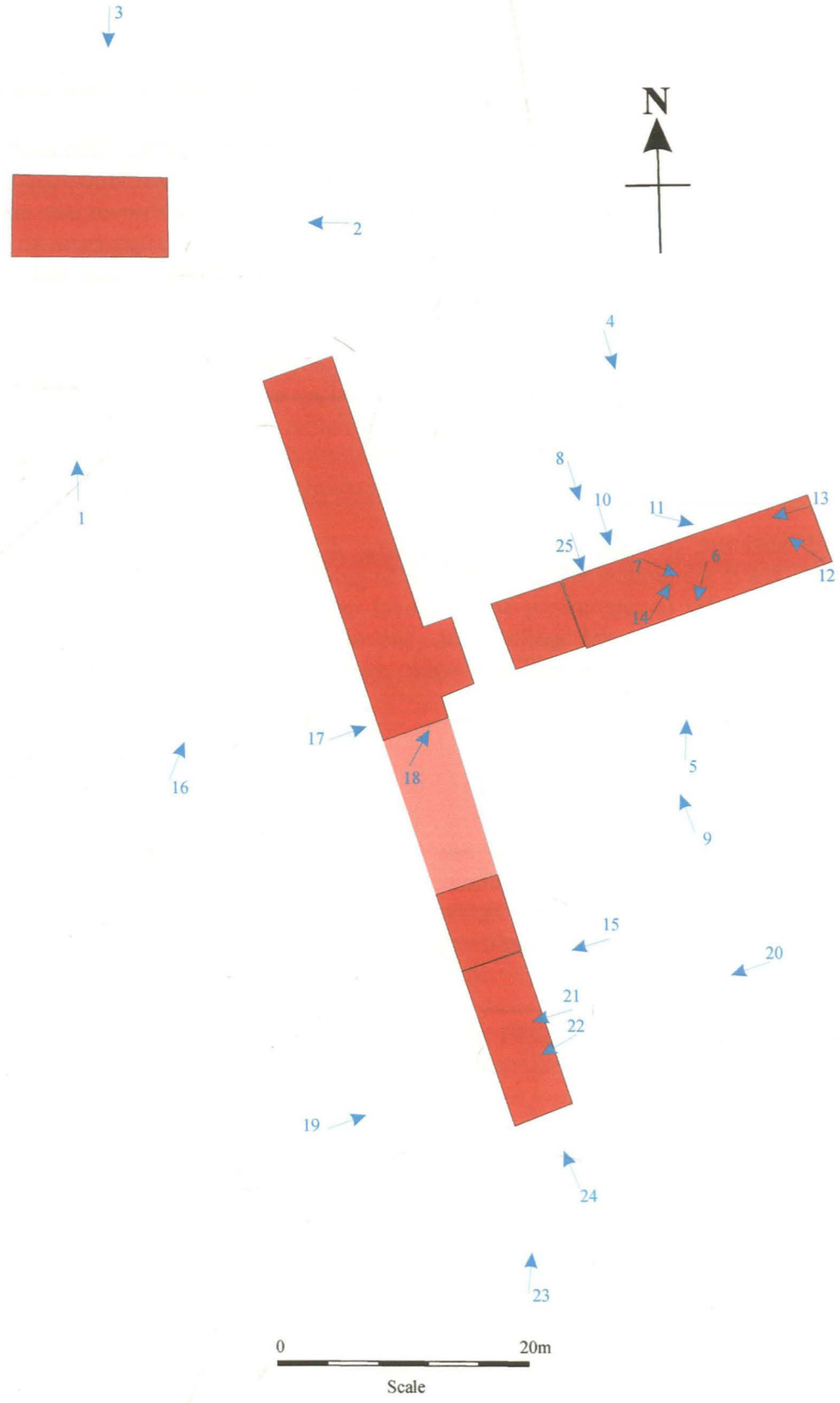


Fig. 3 : Plan showing buildings surveyed with the location and orientation of photographs included in this report.
1:500

4.0 Archaeological and historical background

The first historical reference to Broxholme is in the *Domesday* Book of 1086, when the land was owned by Robert of Tosny (Morgan & Thorne, 1986). The entry for Broxholme also records a church in the village. The place-name derives from the Old Danish *brōk* meaning 'a marsh' and the Old Norse *holmr* meaning 'raised land amidst a marsh'. The Scandinavian origin of the place-name indicates that the settlement predates the Domesday Survey by some years (Cameron, 1998).

The population of the village was little affected by the outbreak of The Black Death, in the mid 14th century, or by the enclosure of the parish, which began in the early 17th century. The population also remained relatively stable throughout the 18th and 19th centuries, being around 22 households at the start of the 18th century, and fluctuating between 19 and 26 households in the 19th century.

A major reorganisation of the parish took place in 1839 after its purchase by Frederick Robinson, with the re-enclosing of the it into regular rectangular fields, and the abandonment of much of the former layout of the post-medieval village. Some earthworks survive that can be related to this earlier village layout, including house plots, a major north – south hollow way, ridge and furrow and field boundaries (Everson et.al., 1991).

5.0 Methodology

The standing building photographic survey was undertaken by the author and involved photographing of all the building elements, as well as preparing written notes and sketches. The photographs and drawings were referenced to architects drawings provided by NGH Construction Ltd, (specifically Walters drawing numbers A1/1, A1/3, A2/1a, A2/2a, A2/5c, A2/6c and A2/7c).

This approach conforms to Royal Commission on the Historic Monuments of England Level 2, with additional emphasis placed on the photographic portion of the record.

The archaeological programme took place between the 8th and 9th of December 2003.

6.0 The standing building survey results

The buildings surveyed comprised two main elements, the first of these being the farmhouse to the north (fig 2). This is a 3 storey structure constructed of coursed, roughly hewn limestone blocks bonded with soft, white lime mortar which contained occasional charcoal flecks. The internal walls were rendered with a similar though degraded mortar. The upper stories were not inspected internally as stairways were unsafe.

The house was laid out on a two bay plan, typical of the Lincolnshire vernacular, (Roberts, 1974). Thus, there are two rooms on each floor opening from a central entrance hall or stairway. The windows in the first 2 storeys were all set into the south wall, presumably to take advantage of the light and view, while the attic rooms each

had a window in the gable end, (see plates 1 & 2). Although the internal walls could not be inspected, a number of alterations and features in the north wall were visible externally, (plate 3). There were a number of blocked openings, comprising four doorways, 2 each at ground and first floor level and a smaller hatch, which may have opened onto an under-stair storage area. Examination of these openings revealed that they had been inserted into the original fabric, the jambs being partly brick-built. This tends to suggest that a second row of rooms had been added, converting the house to a double pile layout. These openings were presumably blocked when this additional structure was demolished. One of these blockages was partly ruinous, and examination of the bricks used demonstrated that they were un-frogged and of probable early 19th century date.

A further blocked opening in the south wall was positioned high up to the western side of the ground floor. This is an unusual position for a window; a pitching door seems a more likely explanation, which suggests that this part of the building was originally designed for storage of a freshly harvested crop rather than as accommodation. It was presumably blocked in advance of the construction of the purported extension discussed above.

The gable ends exhibited a feature known as tumbling-in, where brickwork is laid at right angles to the slope of a gable forming triangles by tapering into horizontal courses, (Pevsner & Harris, 1989). This feature is typical of Lincolnshire architecture. The top of the two longer walls were also brick built, three courses in dentition bond serving as a kneeler on which the lower roof timbers rest.

A 2-storey brick extension had been added to the west side of the building, a phase of activity that also saw the division of the property into two flats. There was also a small brick outbuilding added to the southeast corner of the building.

To the south east of the farmhouse was a 'T' shaped arrangement of brick buildings comprising a barn and other single and two storey buildings. The barn was aligned east-west with large double doors in the north and south sides, the northern being the full height of the building to facilitate the entrance of high-loaded wagons, (plates 4 & 5). In between these doors was a threshing floor of packed earth although this area may originally have been floored with oak planks. To the north and south of this floor was a wooden threshold supported by stone blocks integral to the building walls, (plates 5 & 6), a similar arrangement to that seen at Johnsons Farm, Little Hale, (Barnswell & Giles, 1997).

To the west and east of this floor were storage areas originally for the un-threshed crop and the waste that periodic threshing would produce; the easternmost supported by a cast iron pillar, (plate 7).

The upper storey of the western side of the barn was ventilated by a series of gaps in the brickwork arranged in ornamental diamond patterns, (plates 8 & 9). There was also a blocked pitching door in the northern wall, which also gave onto this upper storey.

The barn had been considerably modified from its original design in order to allow the use of steam power for threshing and probably also for other purposes. Two drive

shaft holes had been let into the northern wall and re-enforced with timber, (plates 10 & 11). These would have transferred power from an external steam engine to a series of internal shafts and belts, which could in turn transmit it to threshing or other machines. The easternmost of these shafts survived, (plate 11), and connected with an internal arrangement of belts, pulleys and drive shafts which distributed the power, (plate 12). As part of this re-design an internal brick wall was added, dividing the easternmost lower space into two smaller rooms. These additions were clearly contemporary with or later than the conversion to steam threshing, as a slot for a drive belt was part of its original form, (plate 13). The presence of the engine outside the barn is demonstrated by grooves in the brickwork made by the flywheel, (plate 10). When this wall was added a doorway and window were inserted into the north wall to give access and light to the room created. At the same time, an original ground floor doorway had been blocked, as it would have been obstructed by the engine and its drive belts.

Two further openings were visible above these; a doorway to the first floor had been inserted and subsequently blocked, and to the east of this was a window (it was obscured by ivy and so its phasing could not be determined).

With the conversion to stream power, the function of a barn such as this underwent fundamental changes. It was no longer necessary to store large quantities of un-threshed grain for gradual processing throughout the winter as machines could process the entire harvest in a matter of days. The threshing floor too became obsolete and would now only serve as a loading bay where a wagon could be placed to transfer its cargo to the barn. As mentioned above, the lower part of the barn was converted to a machine room while the upper stories took on the function of a granary. This is demonstrated by the presence of a chute set in the floor and metal hoppers, both of which would have served to dispense grain stored in the upper area, (plates 14 & 7).

To the west of the barn, a small single storey shed had been added, roughly keyed into the existing brickwork. This originally took the form of an open shed, the southern wall supported by a single rounded pillar built of bull-nose bricks. Internally it was divided into 2 animal stalls with a wooden partition. Visible on the back (northern) wall were a hayrack and manger for each stall. Due to the unsafe nature of the roof, it was impossible to closely examine these fittings to determine if they were part of the original layout.

The south side of the shed was later blocked with a doorway to the west and a wooden slatted window to the east. The door jambs were partially constructed of large worked limestone hinge blocks; like those seen on the long range of buildings to the west, and suggesting that they are contemporary, (plate 15).

A further range of buildings ran north to south, forming the western side of the complex. The northernmost portion comprised a single storey open shed; its western side supported by a series of bull-nosed brick pillars, (plate 16). Two isolating walls had been inserted, dividing off the northernmost bay and separating the shed from the enclosed room to the south. This structure is a wagon shed similar to one seem at Woodside Farm, Newton. It faces away from the barn and the busier areas of the farm in order to allow room for the bulky wagons to turn and manoeuvre. Where possible, these sheds are built facing north in order to protect the wagons stored within from

harmful sunlight; however this was clearly not possible here, (*ibid*).

The function of the two rooms immediately to the south of this shed cannot be determined from the available evidence, however the fact that they open onto the wagon shed tends to suggest a connection with their use or maintenance.

The centre of this range was derelict, consisting of little more than the ends of walls and a modern concrete floor, however some conclusions can be reached from these fragmentary remains. Two cast iron and rubber doorstops were present on the external western walls, (plate 17), demonstrating that there had originally been sliding doors here. Two tack pegs (plate 18) were built into the internal walls of this room, and so it clearly housed harnesses or similar gear. As there is no evidence for animal housing in the design of this building and it had large doors opening away from the farm yard it seems to have been used for the storage of bulky items, possibly ploughs and other tools used away from the farm house and yard.

In its later form a door linking it with the two storey buildings to the south was blocked and two tether rings fixed to the south wall, indicating that livestock housing was a subsequent function.

The rooms immediately to the south of this derelict shed were unsafe and so only external observations could be made. Two doors opened onto a single room from which a stairway gave access to the upper storey. These doorways and others original to this block had large limestone hinge blocks, identical to those seen on the extension to the west of the barn; indicative of a common construction date. The function of this space was unclear from the available evidence.

The southernmost part of this range was of two storeys, the upper portion of which was not accessible. However, observation of the ceiling revealed it was of lathe and plaster construction, a feature common to granaries as it helps to discourage rodents. This room had three wooden slatted openings for ventilation in its western side, (plate 19) and two glazed and two blocked windows in the eastern, (plate 20). Below this granary was a three-stall stable, (plates 21 & 22) with a floor sloping towards the access corridor to aid mucking out, hay racks and mangers on the western wall, and east facing windows to make the best use of the early morning light. This arrangement of a lath and plaster floored granary over a stable of this type is typical of the late 18th to 19th centuries, for example Manor Farm, Helpringham, (Barnwell & Giles, 1997).

The southern part of the ground floor comprised a small room, which housed a workbench against its southern wall. In its original form, this room had a large arched opening in the southern wall, the function of which is unclear (plates 23 & 24).

7.0 Discussion and conclusions

The farmhouse to the north of the site was a two bay structure typical of vernacular architecture in Lincolnshire. Unfortunately it exhibits no characteristics that would allow it to be precisely dated, however some generalisations can be attempted.

The majority of crew-yard farms such as this one started to develop during the middle of the 19th century, based around established farms that would have comprised little more than a barn and a farmhouse (Barnwell & Giles, 1997). The granary and stable building to the south of the new west range exhibits features characteristic of a late 18th to 19th century date and so it seems probable that the house precedes this period. The fact that a large amount of re-modelling of this building had already taken place by the early 19th century tends to suggest that it was in existence by the beginning of this period.

The construction of the western range of brick buildings was part of an ongoing change in agricultural practice that has been dubbed the agricultural revolution. In search of increased productivity, a number of changes were made during the mid to late 19th century. To provide increased arable yields additional fertilizer in the form of manure was required, which led to an increase in the numbers of cattle kept, made possible in part by the adoption of root crops as winter fodder. It was to improve the efficiency of this part of the business that crew yards were constructed, (Barnwell & Giles, 1997). Typically, this would be a three-sided structure with the barn on the north to provide shelter and low ranges of other buildings to the east and west, forming yard facing south to take advantage of the warmth of the sun. The buildings considered here form the north and west sides of such a structure. These provide shelter for the stock over winter, improving meat yields as well as serving to collect manure and mix it with straw bedding ready for distribution to the fields. In many parts of the country the yard was eventually covered in order to protect the manure from the detrimental effects of rain although this was not considered necessary in Lincolnshire due to the lower than average rainfall, (*ibid.*). Examination of the 1891 O.S. map (see fig. 4) demonstrates that this farm developed into a double- yard 'E' shaped plan, although only the barn and western ranges survive to the present day.

At approximately the same time as these changes were taking place, another revolution in the form of the adoption of steam power was also occurring, evidence of which was seen at Cornhills Farm. The increasing efficiency and economy of steam engines led to their adoption by farmers in the middle to late 19th Century. By 1850 steam power was in general use on larger farms and by 1870 the bulk of machines that would be installed were already in place, (Harvey, 1980). As these machines were installed the barn which had previously been used to store and process the freshly harvested crop changed function. The new machines could quickly process the crop, removing the need to store it through the winter when it would be processed on a piecemeal basis. This allowed the barn to used for the storage of the processed grain, a function demonstrated by the presence of a grain chute in the existing structure. This of course would make the granary over the stable obsolete, no bad thing as the heat and steam produced by the horses had a detrimental effect on the grain stored there.

The range of buildings surveyed is an example of a type of complex that developed

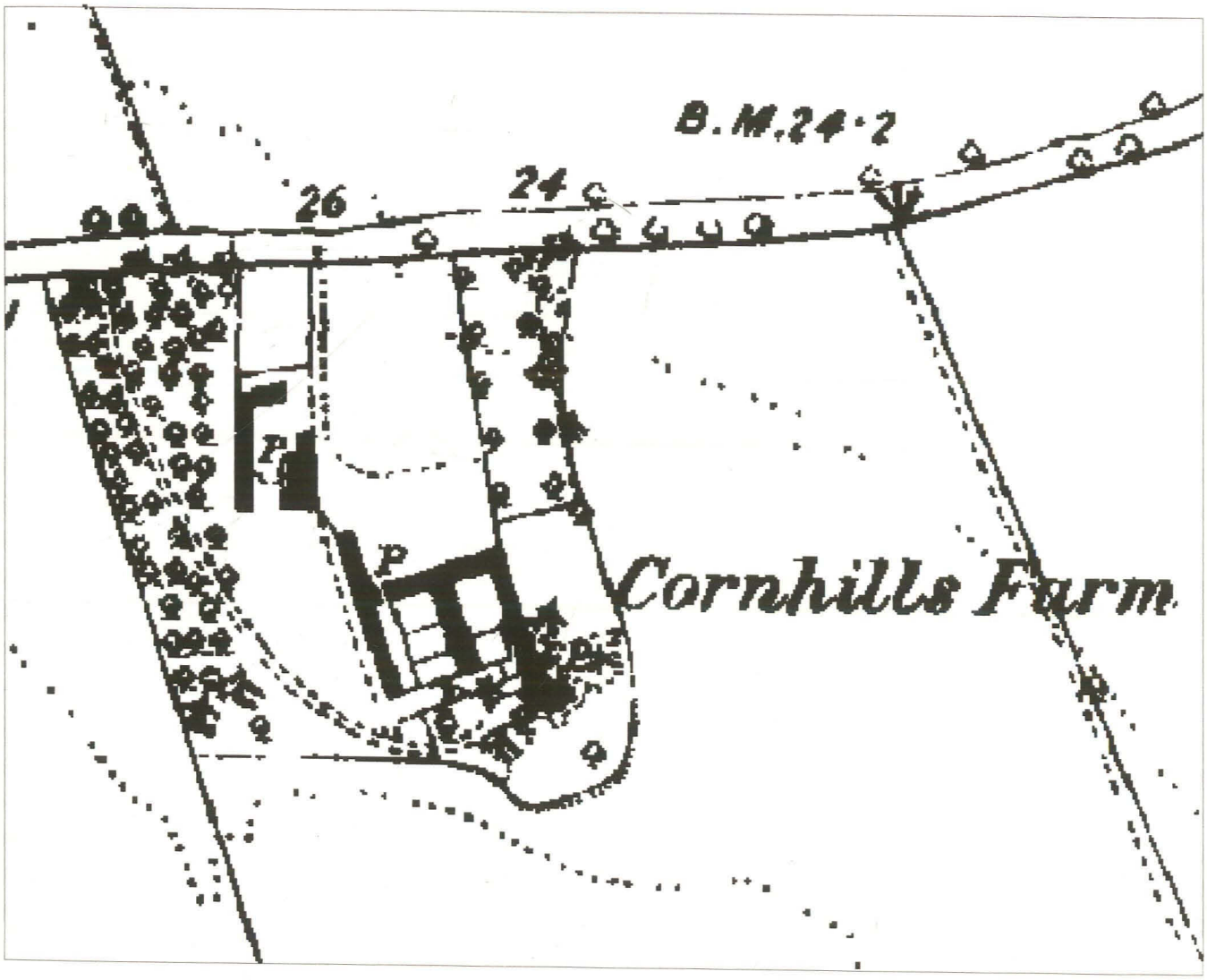
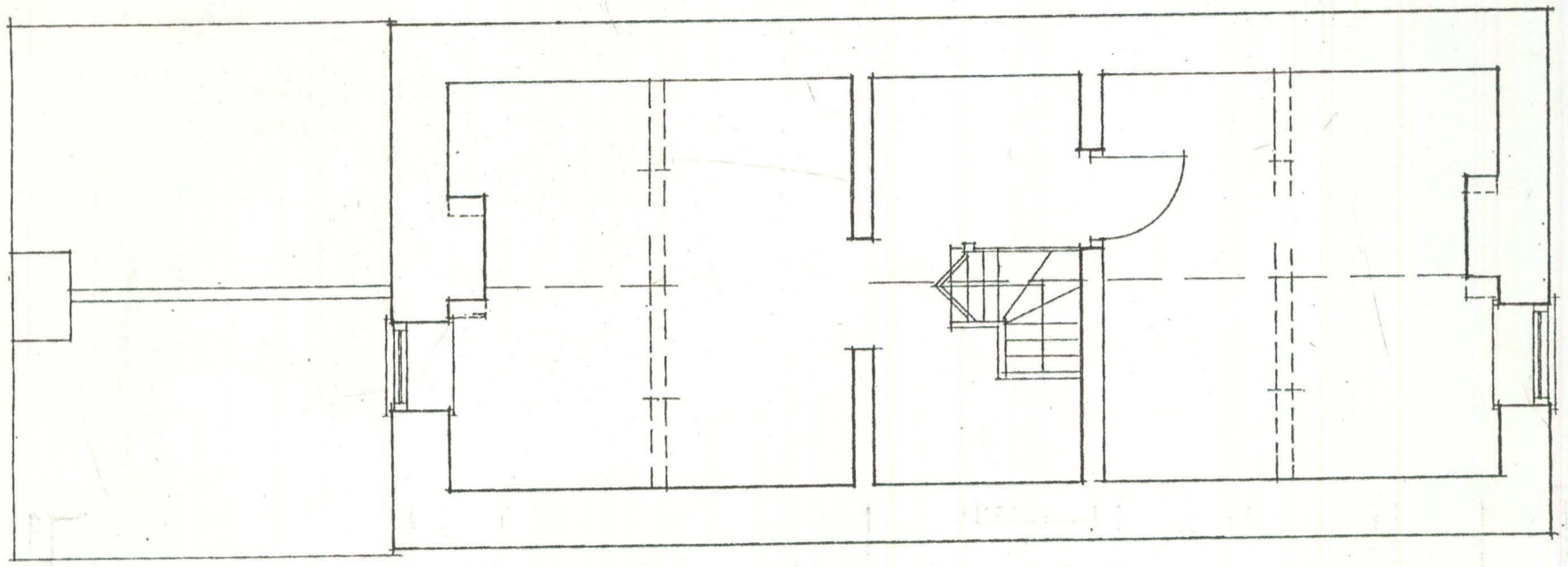
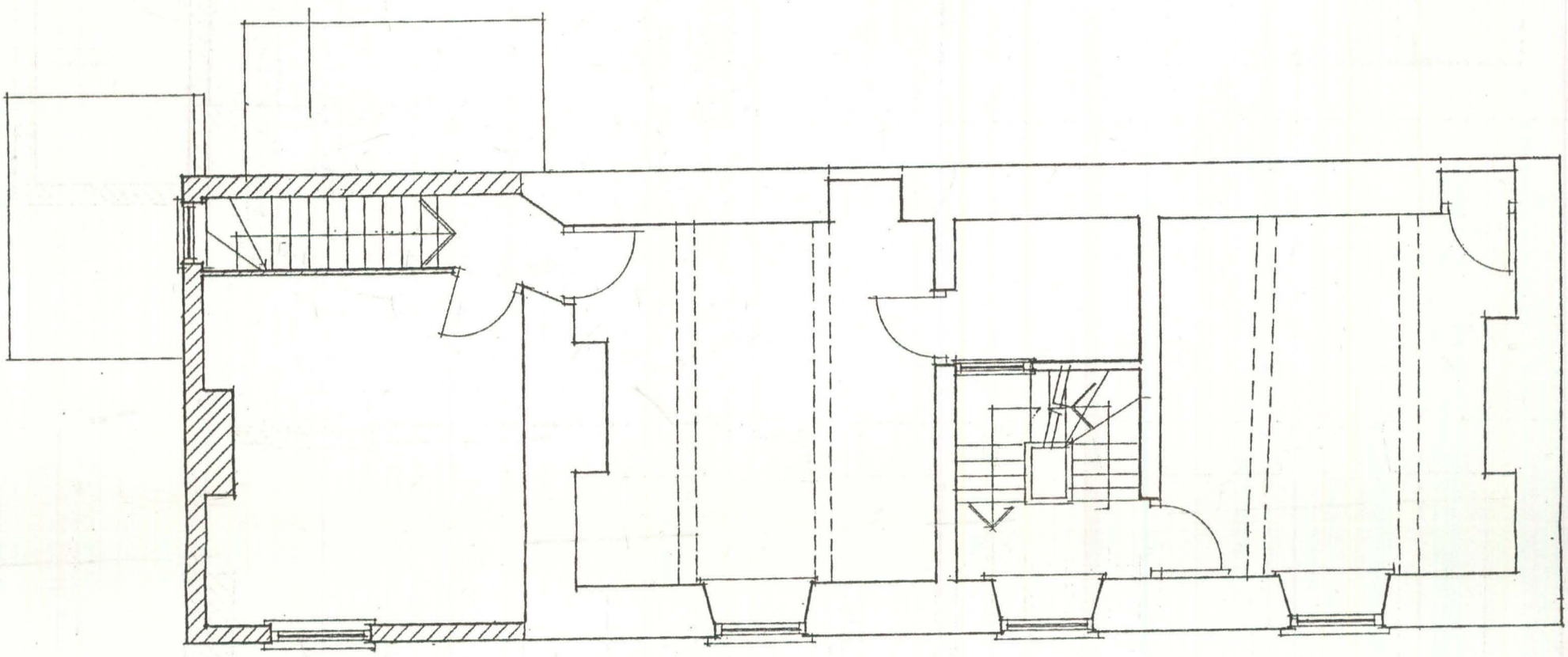


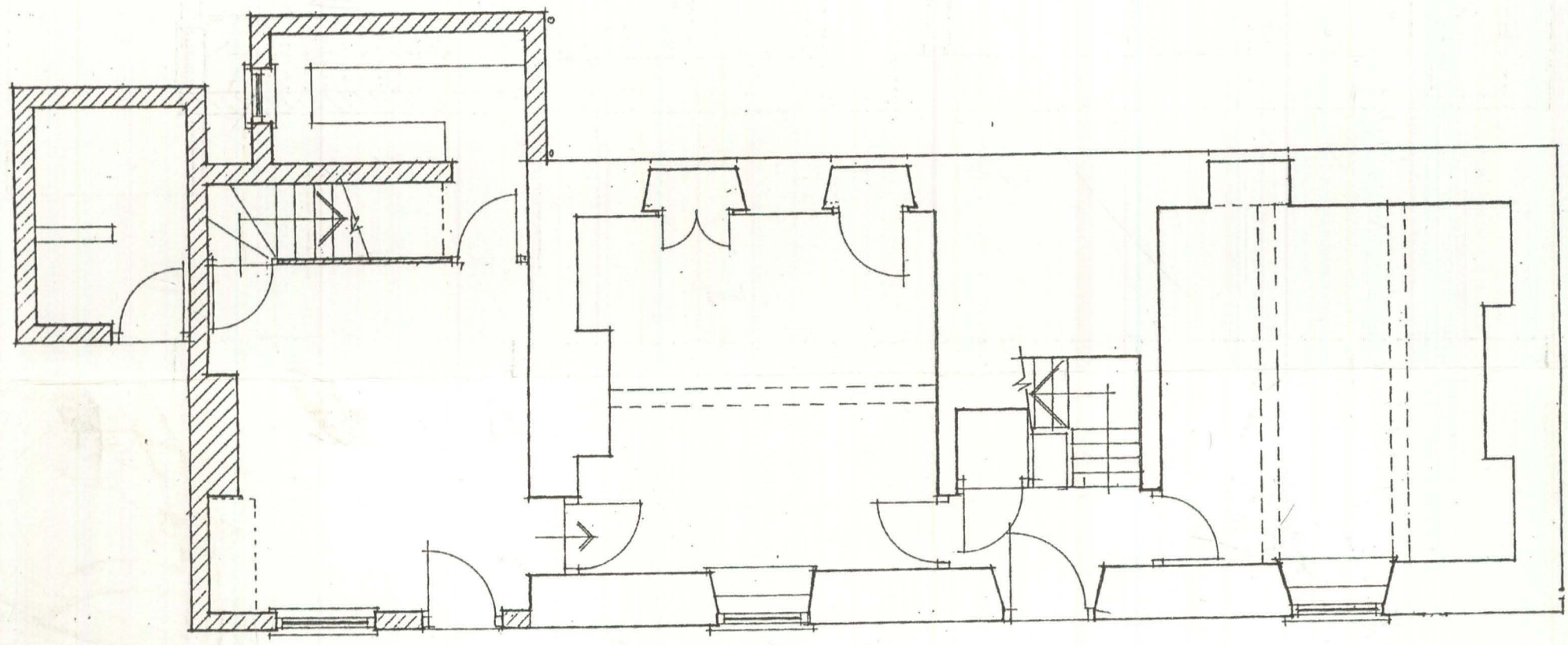
Fig. 4 : Excerpt from 1891 Ordnance Survey Map showing Cornhills Farm. Note additional elements to crew yard to east of surviving structures. Not to scale.



Second floor



First floor



Ground floor.

N

0 2m

Scale

Fig. 5 : Plan of farmhouse.
1:50

nationwide through the middle of the 19th century but with some local peculiarities. It seems to have been based around an earlier barn and a farmhouse that may be earlier still. Examination of a trial hole excavated against the north wall of the barn demonstrated that it was set on stone foundations, (plate 25), and may be a successor to an earlier stone structure.

8.0 Effectiveness of methodology

The methodology employed for the standing building survey allowed a rapid yet thorough record of the structure to be made, appropriate for a building of this age and type.

9.0 Acknowledgements

The authors would like to thank NGH Construction Ltd for commissioning this report and for providing drawings, and Chris Clay from PCA for researching and writing the historical background.

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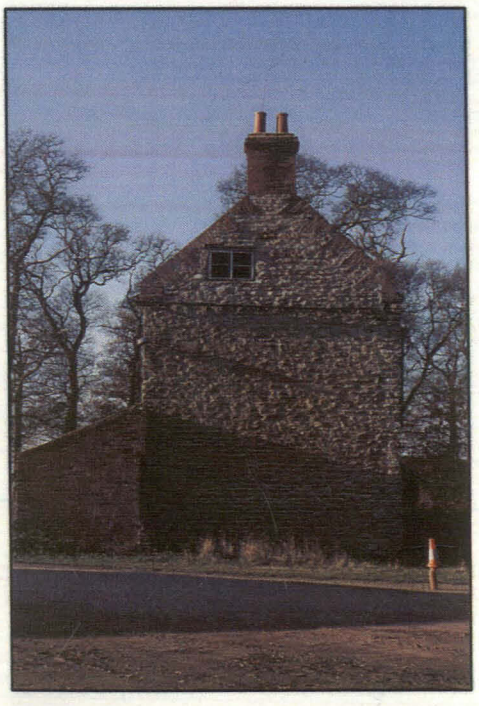
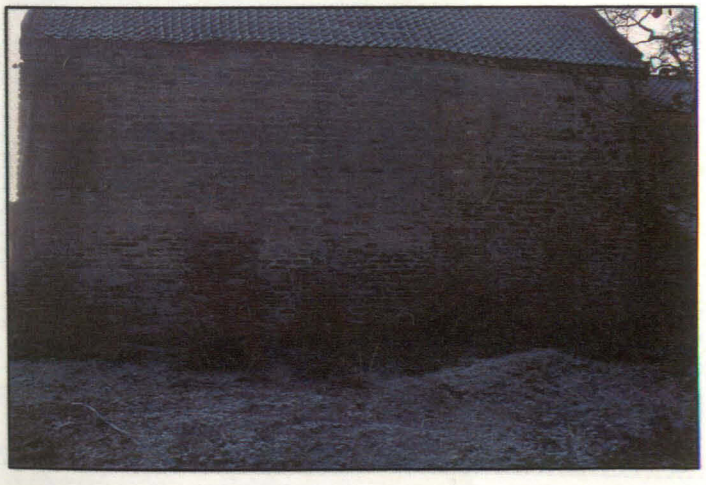
Appendix 1. Colour plates

Pl. 1 : South elevation of farmhouse. The brick buildings to either side are later additions. Note 2 bay layout with rooms either side of a central stairwell.



Pl. 2 : Eastern elevation of farmhouse. The upper window provides light to one of the attic rooms, the brickwork at the top of the gable is known as tumbling-in and is typical of Lincolnshire architecture.

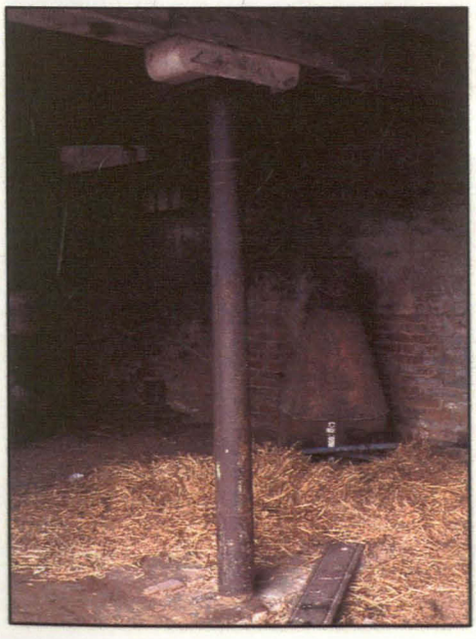


Pl. 3 : Northern elevation of farmhouse. The blocked openings were inserted after the house was built, presumably to give access to a further range of rooms. They were then blocked when this range was demolished.

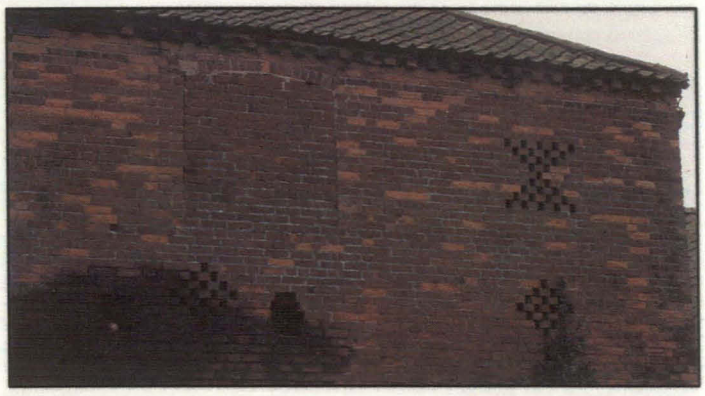
Pl. 4 : North elevation of barn. The large wagon door has been partially blocked with corrugated iron, to the bottom left a lean-to marks the area where a steam engine would have stood.

Pl. 5 : Southern barn door. This is lower as it was only designed for unloaded wagon. Note the threshold at the base of the door and the stone hinge blocks common to many buildings in the complex.

Pl. 6 : Southern barn door, internal view. Note threshold mounted in stone blocks integral to the building wall. The earth floor in the foreground may have originally been covered with oak planks.

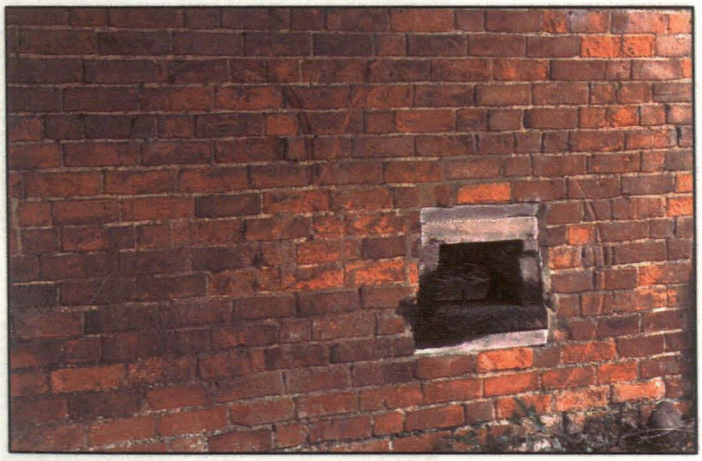


Pl. 7 : Interior of barn showing cast iron pillar supporting storage loft above. Behind it is a metal hopper, which would have been used to channel processed grain.



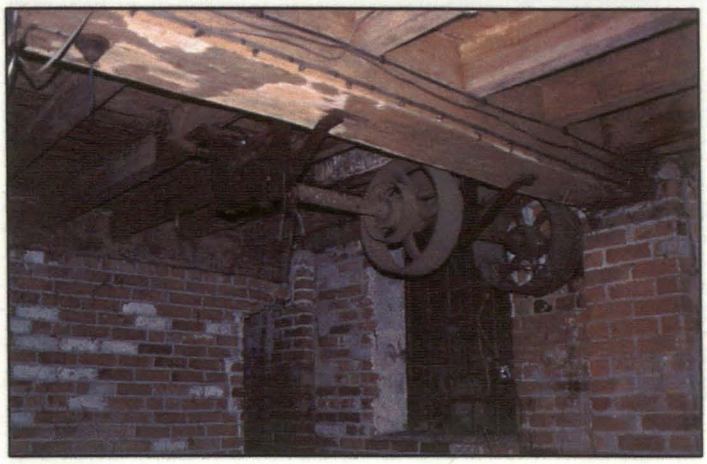
Pl. 8 : North elevation of barn. Note blocked pitching door and ornamental brickwork providing ventilation to upper storage area.

Pl. 9 : South elevation of barn. The ornamental ventilation holes on this side give onto both storeys. Note the scar of a later roofline, later demolished.

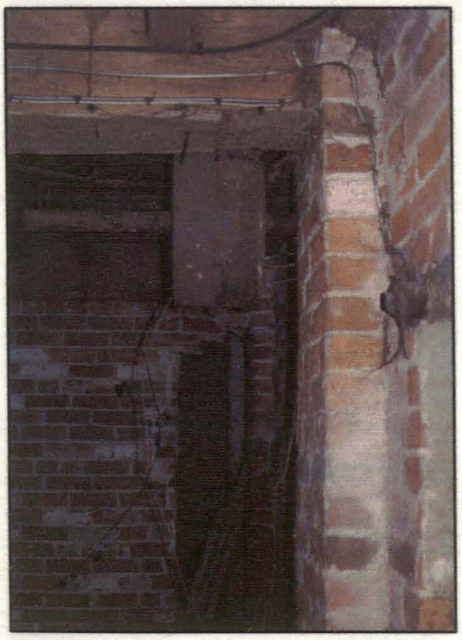


Pl. 10 : Drive shaft hole let into northern wall of barn. Note circular grooves in brickwork caused by the wheels of an external steam engine.

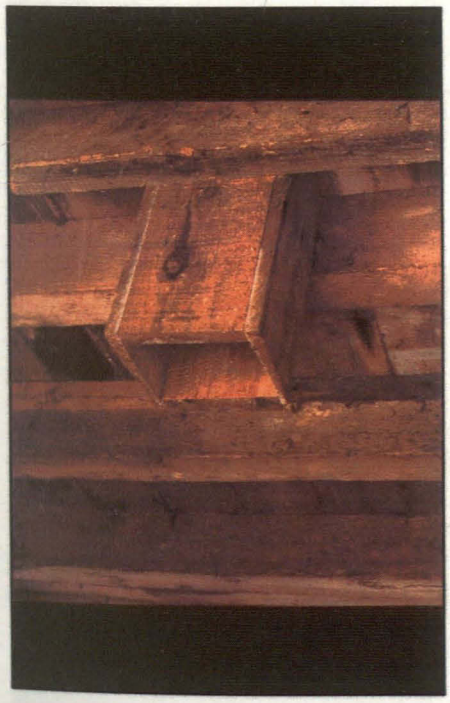
Pl. 11 : A further drive shaft hole, positioned higher and to the east. In this case the drive shaft and pulley survive, see also plates 12 and 13.



Pl. 12 : Internal shot from east end of barn showing drive shaft and power take-off pulleys. One of the drive belts fed through an internal wall to the room to the west, see below.

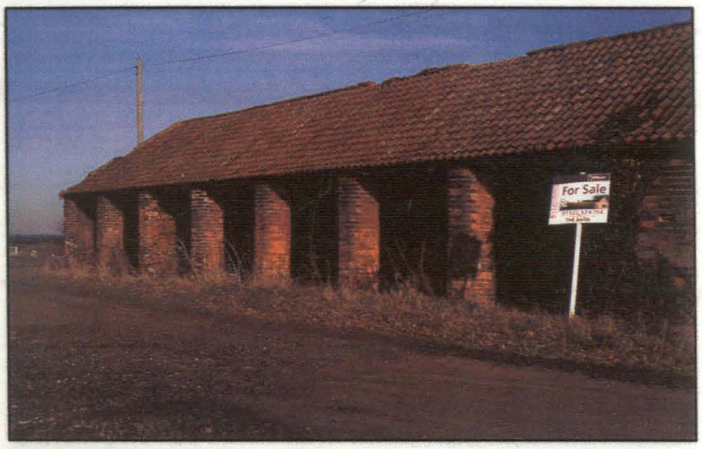


Pl. 13 : Shot looking along the line of drive belt. The pulley at the top of the frame would have fitted a belt that passed through the hole in the wall below into the room beyond.

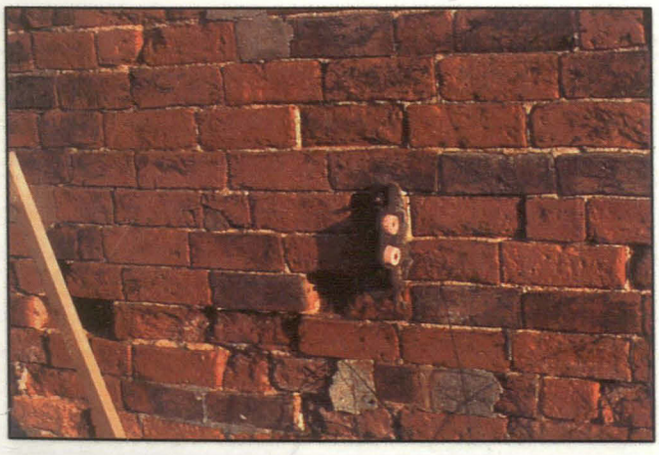


Pl. 14 : Grain chute leading from the upper to lower storeys of the barn. This would have served to pass processed grain from storage above to be distributed or used below.

Pl. 15 : Stone hinge block from eastern side of the stable building. This is similar to other hinge blocks in this range as well as to the doors blocking the south side of the barn extension.

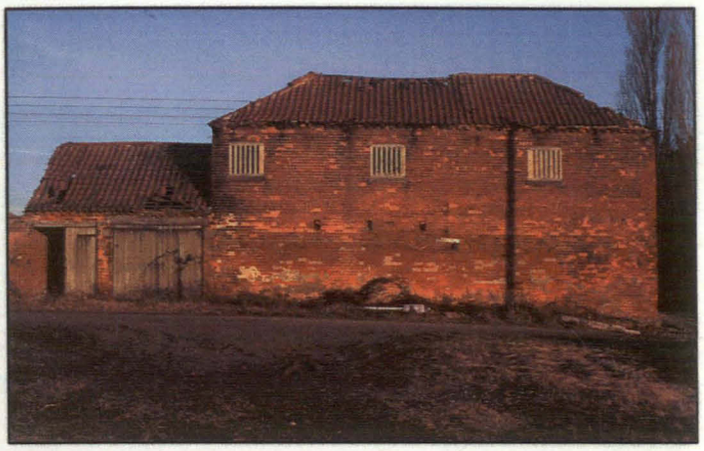


Pl. 16 : Western side of wagon shed, open with the roof supported on pillars. Sheds of this type usually faced away from the yard so that wagons would have more room to manoeuvre.

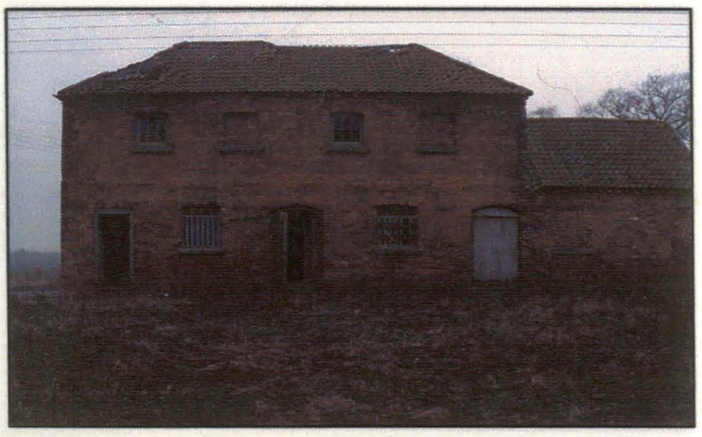


Pl. 17 : Door stop from collapsed portion of north-south range. This demonstrates that this room was originally entered via a sliding door.

Pl. 18 : Harness or tack hook from the interior of the ruinous room. This space seems to have been designed for the storage of harnesses as well as other bulky gear (hence the sliding doors).



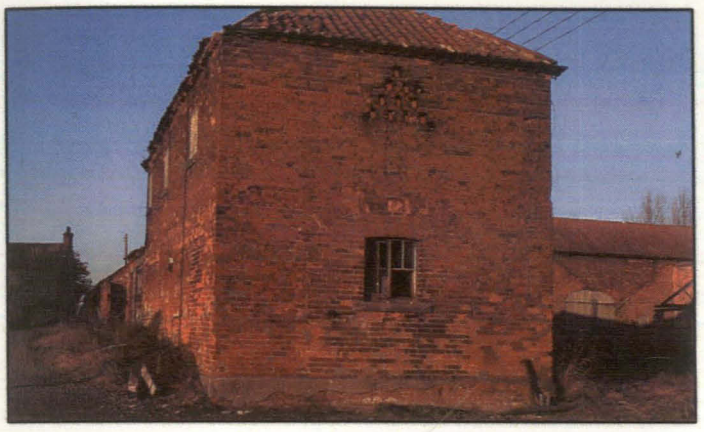
Pl. 19: West elevation of Stable building. This housed three stalls on the ground floor with a granary above. The slatted windows provided ventilation for the grain stored therein.



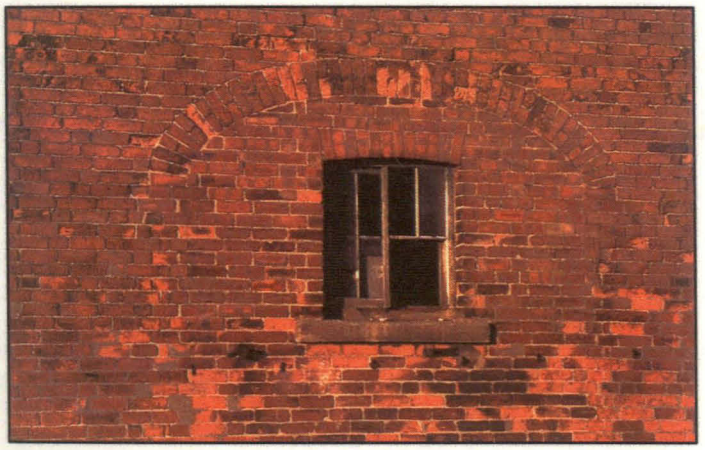
Pl. 20 : East elevation of Stable building. The windows to the ground floor stables face east to make the best of the early morning light.

Pl. 21 : Central stall of the stable block with a hay rack above and manger below. The floor of this building sloped towards the door to aid mucking out.

Pl. 22 : Southern stall of stables. The arched openings below the manger are to accommodate the litter that would build up.



Pl. 23 : Southern gable-end of stable block. Note further ventilation provided by gaps in brickwork. The window is inserted into a later block, see close-up below.



Pl. 24 : Blocked opening in southern wall of stable building. The purpose of this redesign could not be determined.

Pl. 25 : Trial excavated against northern wall of barn showing stone foundation. It is possible that this is a re-used foundation from an earlier barn contemporary with the farmhouse.