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The Malthouse, Harvington Hall, Kidderminster, Worcestershire

Evaluation, Historic Building Recording and Interpretation, 2004

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By Leonie Driver and Malcolm Hislop

For further information please contact:
Alex Jones (Director)
Birmingham Archaeology
The University of Birmingham
Edgbaston
Birmingham B15 2TT
Tel: 0121 414 5513
Fax: 0121 414 5516
E-Mail: bham-arch@bham.ac.uk
Web Address: http://www barch.bham.ac.uk/bufau

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The Malt House, Harvington Hall, Worcestershire
Evaluation, Historic Building Recording and Interpretation

Summary

Historic building recording was carried out at the Malthouse, Harvington Hall, Worcestershire (NGR SO873745) for the Management Committee of Harvington Hall, in advance of refurbishment and conversion into an interpretation centre. The malthouse is a largely 17th-century building of at least five distinct structural phases. It has an ashlar sub-structure and a timber-framed superstructure. Its original purpose is unknown, but it appears to have been converted into a malthouse during the first half of the 19th century, and many features of this period survive, including the malting kiln and malting floor above. A series of 13 tree-ring samples was taken for dating purposes but only five could be cross-matched with any of the reference chronologies. Two of these appear to have been felled in 1657, a date that is compatible with the character of the building. Two others, probably re-used pieces, gave a felling year of 1584. A fifth is unlikely to have been felled before 1545.

1.0 Introduction

In November 2004 Birmingham Archaeology carried out an evaluation, historic building recording and interpretation at the Malt House, Harvington Hall, Worcestershire for the Management Committee of Harvington Hall. The need for this work had been occasioned by a planning application to restore and convert the building to form an education, visitor and heritage centre.

In line with guidance given in Planning Policy Guidance Note 15, Section 2.11 (DoE 1994), the planning authority was advised that further information was required to understand the structure, before they can decide whether to grant planning permission for the scheme.

The work was carried out according to a written scheme of investigation prepared by Birmingham Archaeology (2004), which was itself based on a brief issued by Worcestershire County Council (2004). The investigation adhered to advice issued by the Institute of Field Archaeologists (IFA 1999)

2.0 Site Location and Description

Harvington Hall is situated approximately 3 miles east of Kidderminster, Worcestershire at NGR SO873745 (Fig. 1). The site, which contains a number of large water features, is a scheduled ancient monument of medieval origins. A substantial moat surrounds a triangular-shaped platform containing the Hall and a number of outbuildings including the malthouse, which occupies the east corner (Fig. 2). The Hall has a medieval timber-framed core, but is now principally 16th century in character, and of brick and stone externally.

3.0 Objectives

- Consultation of primary and secondary documentary sources including photographs
- A detailed photographic survey.
- A detailed descriptive and analytical written record.
- Phased plans of the building.
- Dendrochronological sampling

4.0 Methods

A search of all readily available primary and secondary documentary sources including historic maps and photographs was carried out at Worcestershire Records Office, Birmingham Local Studies Library, and the Library of the University of Birmingham.

The photographic survey was carried out with 35mm cameras using monochrome colour negative, and colour transparency films.

The written description was compiled on site using pro-forma building and room record sheets.

The phased plans were produced through annotation of existing scaled drawings provided by Henry Harper, architect.

The dendrochronology was carried out by Nottingham University Tree-Ring Dating Laboratory staff under the direction of Robert Howard.

5.0 Historical Background

The name Harvington is of Anglo-Saxon origin, and is listed in the Domesday Book under the Manor of Chaddesley Corbett. Harvington subsequently became a separate manor, and Hodgetts suggests that this change in status may have led to the construction of the Harvington Hall moat (2002: 6). A fragment of pottery uncovered during ground works in 1991 suggests that the square moat and its platform were in existence in the 13th-century. From 1270 onwards the de Herwyntons appear in surviving documents (*ibid*.). This family owned the manor of Harvington, and was responsible for the developments taking place on the moated site until 1344 after which date the manor was inherited by Thomas Beauchamp, Earl of Warwick (*ibid*. 9).

The earliest known structure on the platform was a medieval timber-framed building on a sandstone foundation. The most substantial survival of this building is the low block facing east which was the solar (*ibid.* 7), which retains at least one timber-framed truss of 15th-century character.

From 1344 onwards for nearly 200 years, the Manor of Harvington (and the manor of Chaddesley Corbett) remained part of the Warwick Estate (*ibid.*9). Evidence suggests

that occupation of the moated site during these two centuries was constant. Alterations to the medieval timber-framed building date from the 14th and 16th centuries, and a green glazed jug dating from the 15th century was found in the moat during the 1930s (*ibid*. 10).

John Pakington, a lawyer, brought the manors of Chaddesley Corbett and Harvington in 1529, and, by his death in 1551, owned over 30 manors in the Midlands, as well as property in London (*ibid* 14). Harvington was inherited by his second son also named John. It was this John Pakington who may have begun to build the Elizabethan parts of Harvington Hall. Construction was continued and probably completed by his son Humphrey Pakington (*ibid.* 21). Buildings were constructed on all four sides of a central courtyard, blocked doorways on the three landings of the Great Staircase indicate the floor levels of the demolished west wing (*ibid.* 21). The tower-like structure that survives at the north end of the site is later than the other parts of Harvington Hall dating from the later 17th century (Pevsner 1968: 192).

The sandstone for the foundations and dressings came from the quarry at the northwest corner of the moat, which is marked on an estate map of 1745-6 by Thomas Thorp. Hodgetts also suggests that the bricks were probably fired in two fields to the northeast of the Hall "*they are marked on a Georgian estate map as Brick Kiln Holts and Brick Kiln Monks*" (2002*:* 22).

The Pakington family owned and resided at Harvington Hall until 1631 when the Hall was inherited by Lady Yate. She lived there until her death in 1696 when Harvington was passed to her elder sister Mary, the wife of Sir Robert Throckmorton (Hodgetts 2002: 48). The most important change to the hall, whilst under the ownership of the Throckmorton family, came in the early 18th century when the west and north sides of the courtyard were demolished by Sir Robert, the 3rd Baronet (*ibid.* 51). In 1743 Sir Robert, the 4th Baronet, converted the upper floor of a range of farm buildings, which lie to the northeast of the malthouse, into a chapel, which survives today (*ibid.* 52). Less than 100 years later in 1825 the Georgian chapel was replaced by a new church, built across the road from the hall by Sir George Throckmorton, the 6th Baronet. Thirteen years after this Sir Charles Courtenay Throckmorton, the 7th Baronet built the Priest's House on the south side of the church, and for the first time in 250 years there was no priest living in the hall (*ibid.* 58).

During the 19th-century the hall became neglected and gradually stripped of its furniture, fixtures and fittings, the Throckmorton income diminished rapidly and the family began to sell off its estates (*ibid.* 67). In 1923 Mrs Ellen Ryan Ferris bought the moated site, its buildings, the church and priest's house and gave them to the archdiocese later consolidated into the Birmingham Roman Catholic Diocesan Trustees Registered. This trust has owned the property ever since (*ibid.*). In 1930, structural work began at the hall and in 1931 it opened to its first visitors. Programmes of restoration and preservation were carried out throughout the 20th-century on both the hall and its outbuildings, and have continued to this date.

Little early documentary evidence of Harvington Hall survives, and even less survives describing the outbuildings which help to sustain life at the hall. The malt house, of

which this report is the focus, is practically undocumented. From its appearance, materials and construction, the building is thought to date from the 16th/17th-century. For this reason it is thought that the malt house could have been constructed by Humphrey Pakington (resident at the hall between 1578 and 1631) who, along with his father, was responsible for the early Elizabethan developments made to Harvington Hall.

The layout of the hall and its associated outbuildings is depicted on the estate plan by Thomas Thorp, drawn in 1745-6. This clearly shows the position of the rectangular malt house on the northwest edge of the island. A photograph of *c.* 1930 (Squiers 1933) shows that the southeast elevation of the malthouse contained a cart entrance at that time (Plate 1), and a photograph of unknown date (Plate 2), though probably from the mid-20th century, shows that the southwest elevation had a lean-to building built against it and extending as far as the edge of the moat.

6.0 Description of the Building

6.1 Exterior

The Malthouse is a rectangular two-cell structure, of three roof bays, aligned northwest-southeast facing northeast towards the interior of the platform (Plate 3). It has two main storeys and a gable-lit loft, of which the ground storey is built or faced in sandstone ashlar, in contrast to the upper storeys, which are timber-framed. The roof is covered in plain tile. It is immediately obvious from a superficial perusal of the building that there are two quite definite building phases marked by a vertical joint in the masonry, accompanied by corresponding differences in the character of the timber framing (Plate 4). Of these two main elements, the southeast block is of two roof bays and the northwest block of a single bay.

The Southeast Block

Northeast Elevation (Fig. 3)

Central boarded door flanked by a pair of two-light wooden mullioned windows with leaded panes. Neither door, nor windows were provided with a stone lintel, and the stonework is supported on timber. This gives the stonework above, which in each case consists of three stone blocks, a structurally precarious appearance (Plate 5), though in the case of the right-hand (northwestern) window the ends of the blocks are gently angled to produce a joggled joint (Plate 6). The timber framing above comprises a single tier of square panelling infilled with horizontally laid bricks (Plate 7). At the northwestern end of the elevation the main post stands directly on the top of the sandstone rather than a sill beam (Plate 8). At the southeastern end the corner post is supported on a sill beam, though this appears to be a replacement, so the original arrangement might have been different (Plate 9).

Southwest Elevation (Fig. 4)

The rear elevation towards the moat is one of the most archaeologically challenging. The wall sits on a chamfered plinth. This is broken towards the northwest end of the elevation by a blocked doorway (Plate 10) and by a roughly central, but irregular vertical building break, the plinth being at a slightly lower level to the right (southeast) of the break (Plate 11). The left-hand (northwest) jamb of the blocked opening appears to be regularly cut and chamfered, but the right-hand (southeast) side is roughly hewn, and evidently a modification to the original fabric. The opening has an irregular shouldered head that appears to be the result of accidental modification rather than a deliberate construction.

Approximately mid-way between the two breaks in the plinth there is a blocked small, roughly square aperture in the plinth, the purpose of which is unknown but which could represent a secondary feature, perhaps to accommodate a timber, and possibly associated with the lean-to that formerly stood in this position. Other blockings or repairs within this elevation may represent the positions of former timbers.

Above the blocked doorway, at first floor level, is a section of weatherboarded timber framing of closely spaced studs. This is framed on the right-hand (southeast) side by a well-cut stone jamb, though the stonework in this area has a modified appearance, but this is the result of a large crack to the right (southeast). This area of framing does not correspond in height to the square-panelled framing at the southeast end of the elevation, which only occupies the upper half of the second storey. It may be significant that there is a slight offset in the stonework at first-floor level, beneath this latter area of framing, that corresponds with the base of the framing at the northwest end of the block, a suggestion, perhaps, that this area has been subjected to modification.

Southeast Elevation (Fig. 5)

Mid-20th-century three-light wooden mullioned window at ground level. To the right of the window there appears to be a joint in the masonry, and above it the stone is grey rather than pink. These anomalies seem to correspond with the evidence of the 1930s photograph, which showed a carriage opening in this elevation, and suggest that a section of the wall at ground level has been rebuilt. Square-panelled timber framing above, the panels filled with horizontally laid bricks. Jowelled corner posts with short straight tension braces extending from post to the sill beam. The sill beam itself appears to be a replacement as there are no pegs in it corresponding with the posts, studs or braces. Tie beam and two collars with shuttered hatches to both upper floors. Weatherboarded apex.

Northwest Elevation

The northwest elevation of the Southeast Block is now an internal wall, but structural detailing leaves no doubt that it was formerly an external façade. The elevation has been a good deal altered at ground level and is partly obscured by the malting kiln and other alterations. However, the southwest end of the wall was constructed of sandstone and incorporated a chamfered plinth of the same character as that on the southwest elevation; it is probably contemporary (Plate 12). The sandstone steps down towards the northeast and extends no further than the centre of the wall. Above it is painted brickwork laid in

stretcher bond and the northeastern half of the wall is timber-framed, much modified, though a few surviving fragments together with peg holes in the main rail suggest that it was formerly made up of closely spaced studs (Fig. 8, Plate 13). A break in the sequence of peg holes suggests that there was an opening, either a door or window, at this end of the elevation. The framing of the upper storeys is also of closely spaced studs a pattern that is carried up into its tie beam and two-collar roof. At second-floor level, redundant mortices in the soffit of the upper collar show that there was originally a mullioned window in the gable.

The Northwest Block

Northeast Elevation (Fig.3)

In contrast to the Southeast Block the Northwest Block has a plain projecting stone plinth, which is carried around the three sides of this part of the malthouse. Central old boarded door with leaf-head strap hinges, probably 17th century (Plate 14). It could not be ascertained whether this doorway was original or whether it had been inserted. The vertical jamb stones in the upper half of the frame look awkward, contrasting markedly with the horizontal jamb stones in the lower half of the frame. In common with the doorway to the Southeast Block, there was no stone lintel, only the wooden lintel of the doorframe. It is possible that this doorway represents an opened out window, the upper jambs of which survive, though not the head or sill. The timber framing above consists of a single tier of rectangular panels, though redundant peg holes in the sill beam show that the present configuration is a modification to the original pattern of closely-spaced studs. The panels are infilled with brick laid in stretcher bond, except for the centre panel, which contains a hatch.

Southwest Elevation (Fig. 4)

17th-century central two-light chamfered mullioned window with rebated frame to ground storey. Timber-framed upper storey of closely-spaced studs containing diagonally laid brick nogging.

Northwest Elevation (Fig. 7)

17th-century chamfered two-light mullioned window with rebated frame to ground floor left (Plate 15). Boarded door with timber lintel to ground floor right (Plate 16). The door jambs are well-cut but unmoulded. The plinth has been rebuilt in brick on the right-hand side, and to a lesser extent on the left-hand side. First-floor timber framing of closely spaced studs containing brick nogging laid diagonally or horizontally. Short straight tension braces between corner posts and sill beam. Central inserted hatch level between sill beam and tie beam. Blocked window to left with sill formed by sill beam, and blocked window to the right at a higher level with head level with tie beam. Tie-beam and double-collar roof.

6.2 Interior

Ground Floor (Fig. 8)

Southeast Block

GF01

Concrete floor raised above the ground surface and built up from its original level. In the north corner are some steps leading down 0.5m to the floor level of the Southeast Block. The southeast and northeast walls are of whitewashed brick apparently contemporary with the outer stone skin and bonded to it by occasional stone ties, which pass right through the wall. At its southeast end the southwest wall is of stone but rough in character compared with the fine outer face. Adjacent to it is a stretch of whitewashed brick, but this dates from the later 20th century. Set back from the face of this section, the southwestern half of the wall is stone, and the upper part of the blocked opening visible on the outer face can be seen.

The first floor is carried on two cross beams, each of two sections, supported at the junction on an early to mid-19th-century square-sectioned brick pier with rounded corners, situated towards the southwest side of the room. The longer sections of the beams are chamfered with run out stops and empty mortices for a series of former joists, and are clearly re-used members. In the centre and southeastern sections, the existing joists measure 4ins x 4ins, and in the northwestern section 5ins x 3ins, except for the three southwesternmost which measure 5ins x 4ins and are laid flat, medieval fashion. There is a hatch in the ceiling on the northeast side of the room and another in the south corner.

Northwest Block

The Northwest Block is divided into two by an inserted northwest-southeast aligned partition wall, which is built against the northwest window. This wall is 4½ins thick and built of brick ranging from 2ins to 2½ins in thickness. These are probably reused and the wall is likely to be of early 19th-century date.

GF02a

This room is entered from a doorway at the north corner of GG01. It forms a passageway or lobby leading to GF02b. It was also entered from a doorway in the northeast wall, which has splayed jambs, and lit by one half of the window in the northwest wall.

GF02b

GF02b was entered from a doorway in the partition wall but also directly from the outside via a door in the northwest wall with splayed jambs. It contains the malting kiln, which is a square, red brick construction dating from *c.*1830, which occupies the centre of the room leaving a passageway around all four sides (Plate 17). The walls are carried up and over the passages as half vaults to create a funnel shaped kiln. The stoke hole is on the northwest side. It has a semi-circular arch and is directly in front of the hearth (Plate 18). Inside the kiln are the broken remains of the cast iron disperser plate that covered the hearth.

First Floor (Fig. 9)

Southeast Block

FF01 (Plate 19)

20th wooden steps ranged against the southwest wall leads up to the first floor. The staircase is divided from FF01 by a 19th/early 20th century stud and lath partition, plastered on the northeast side. Mid-20th-century floorboards, laid around the earlier hatch on the northeast side of the room. Above the hatch is a 19th-century wooden windlass, complete with iron handles, chain and hook (Plate 20). The second hatch in the south corner of the building is currently under the stairs to the second floor.

Like the room below (GF01), the lower parts of the northeast and southeast walls have a brick skin bonded into the outer stone skin by occasional stone ties. The brick infill panels of the timber-framed upper part of the walls are covered in coarse plaster, similar in character to that which covers the stair partition. In the northwest wall of this room a doorway has been inserted to give access to FF02b in the Northwest Block.

Like the first floor, the second floor is supported on two cross beams, each made up of two sections. The northeastern ends are supported on brick piers and there is a post at the south corner of the stair partition, which carries the two ends of one of the two-piece beams. This floor is otherwise supported on rails that have been nailed to the walls, and appears to be a later insertion.

Northwest Block

The first floor of the Northwest Block is also divided into two rooms by the upward extension of the brick partition wall noted at ground level (Plate 21).

FF02a

FF02a is situated directly above GF02a and forms a narrow room, possibly given over to storage. The floor has not survived, but an offset in the stone walls shows that there had probably been a first floor in the Northwest Block since it was constructed. There are no indications as to what this room was used for, but it may have been for storage.

FF03b (Plate 22)

FF03b was the drying floor. The floor was of perforated ceramic tiles supported on a network of cast iron beams. The room was open to the roof, which carried two pairs of trenched purlins and a ridge piece.

Second Floor (Fig. 10)

Southeast Block

SF01 (Plate 23)

Situated directly above FF01, this room has an intermediate collar and tie-beam truss with a pair of raking struts. In the soffit of each rafter, immediately below the collar is a redundant inclined mortice containing the sawn-off end of a tenon, and indicating that there may have been a second pair of raking struts formerly. On the other hand, a third mortice in the soffit of the northeast rafter, though not in that of the southwest rafter, may suggest that these rafters are reused. In the centre of the truss the top of the tie beam, which protruded above floor level has been cut away to facilitate access between the two bays, so it is possible that the truss was partially closed originally. The roof has a series of very long raking windbraces (Plate 24).

7.0 The Tree Ring Dating

A series of 13 cores was taken from the roof timbers for the purpose of tree-ring dating. Almost all the samples showed bands of distorted or contracted rings, which made them impossible to cross match with any of the reference chronologies. However, it was possible to get dates for five samples. Two of these, one from a tie beam at the northwest end of the building, and one from a stud in the west wall, both retained a complete complement of sapwood. Both gave the same felling date of 1657. Two other samples, which came from two timbers, probably reused, that made up a single purlin, gave a felling date of 1584. The felling date for the fifth dated sample, the collar of a truss located towards the southeastern end of the building, could not be determined because it had no sapwood, but it unlikely to have been felled before 1545. The full details of the sampling and processing will be included in a separate report.

8.0 Interpretation

8.1 Phasing

Analysis of the fabric revealed several structural phases. In general, the sandstone ashlar masonry with its finely jointed large stone blocks is typical of high quality stonework of the 16th and 17th centuries. The timber framing is probably contemporary, the short straight tension braces, for instance, are unlikely to be earlier than the mid-16th century, but would be at home in the 17th century too. In view of the tree-ring dating, it is assumed

that the building is substantially 17th-century in date, and that the major part of it was erected soon after 1657.

Phase 1 (16th/17th century)

This earliest phase comprises the central section of the southwest elevation and a short section of its return, which now forms part of the partition wall between the two main blocks. It is built of sandstone ashlar, and has a chamfered plinth. At first-floor level, the northwesterly section only extends as far as first-floor level above which it is now timber-framed.

Phase 2 (16th/17th century)

Phase 2 saw the construction or reconstruction of the southeast block, which incorporated the fragmentary remains of Phase 1. The ground storey is of ashlar and there is a chamfered plinth on the southwest side. The openings are plain and undiagnostic of date, and it not certain that any of them, except perhaps the splayed doorway on the northwest side, is original. The building was timber-framed at first-floor level. This framing now comprises closely spaced studs at the northwest end and at the northwest end of the southwest side. Elsewhere it is made up of square panels, which start at a higher level, and which probably represent a later (probably 17th-century) reconstruction. This building was probably open to the roof, and had a carriage opening at its southeast end, though it is not certain that the latter was an original feature.

Phase 3 (17th century)

This phase involved the building of the northwest block, a two-storey structure with some domestic characteristics. It was built in ashlar below and had timber framing of closely-spaced studs above, at the same the same level as the square panelling on the southeast block. Diagnostic details include the 17th-century mullioned windows with chamfered surrounds.

Phase 4 (Early 19th century)

Conversion of the building into a malthouse with the insertion of the malting kiln, the partition within the northwest block and the upper floors.

Phase 5 (Mid-20th century)

Infill of a carriage opening in the southeast elevation and insertion of a window in its place. The windows in the northeast elevation may date from this period as well.

8.2 The Function of the Malthouse (Fig. 11)

Malt provides the alcohol, colour and much of the flavour to beer and is an essential ingredient in the brewing process. In order to produce malt, barley is germinated, turning its stores of starch into sugar. The germination process is then halted by heating the

grains creating malt. Since the 19th-century maltings have become large and fewer in number, and the processes taking place within have become increasingly mechanised. They produce malt in vast quantities, and are often located within brewery complexes (Brunskill 1982:101). In the past, however, there were many small malt houses operating in villages, towns and cities. For centuries the process was manual, relying upon physical strength and the knowledge and skill of the maltster. Malting was a seasonal activity usually carried out during the winter months from September to April (*ibid*.).

A manual of brewing written in 1793, only two or three decades before the installation of the malting kiln at Harvington, provides an account of the theory and practice of eighteenth century brewing (A Practical Brewer 1793). Within this manual the process of malting (vital to the production of beer) is described in detail. This account provides an insight into the likely workings of the near contemporary malt house at Harvington Hall.

The process began on the ground floor of the southeast block, where raw barley was brought into the building. It is likely that the ground floor was used for storage and as an area to soak the barley. Large stone or wood cisterns would have been filled with fresh water, the grains added to them and the barley submerged for three days. The *Practical Brewer* highlights the importance of stirring the mixture to separate the grains and suggests that the water be changed at least once during the period of soaking. At the end of the three days the grains were thoroughly rinsed and drained for a period of twelve hours (*ibid*: 15).

When thoroughly drained the barley would have been hoisted through the open hatch onto the first floor. Here the grains would be laid thinly across the whole floor, the *Practical Brewer* suggested a depth of around ten to fifteen inches (*ibid*: 16). For the next twenty days (sometimes as many as twenty-five) the barley would be turned with wooden shovels every twelve hours until germination had taken place. It was very important that the temperature be regulated during these days, because if the temperature rose above 50° the malt could assume a bitter taste (*ibid.*) The germination room at Harvington Hall had only one shuttered window, situated in its east wall, which facilitated the regulation of the temperature so that a dark and cool environment could be maintained.

The germinated barley was then moved to the second floor of the malt house, which would have contained the withering floor (*ibid*: 17). Here, the third stage in the malting process was carried out. On this floor the grains were laid out in the same way as they had been on the malting floor. The grains were allowed to dry here for a period of three to four days, turned over three or four times a day (*ibid*.). After this time and ensuring that the grains were sufficiently dry, they were moved via a wooden chute at the northwest end of the room onto the kiln-drying floor situated at first-floor level in the northwest block.

The drying or curing of the grains by the kiln was the final stage in the production of malt. The surviving kiln floor of the malt house is constructed of ceramic tiles, a floor made from this material being used to produce brown malt because it could be heated to a

high temperature (*ibid*: 20). Beer brewed from brown malt had a rich colour and flavour. The grains were spread evenly over the drying floor at a depth of two inches and were turned regularly, every quarter of an hour, in order to ensure that every grain was dried (*ibid.*). It was necessary to heat the drying floor gradually to avoid scorching the grain, and the whole process may have taken several hours to complete. The Practical Brewer suggests that it was good practice to dry only three floors of malt a day, taking time over the drying process produced a much higher quality malt (*ibid*: 21). From here the malt would have been put into sacks and stored for a minimum of three months (*ibid*: 22) before it could be used by the adjacent brew-house.

9.0 Conclusion

Several aspects contribute to the historic and architectural significance of this Grade II listed building. First of these is the early fabric, most of which dates from the 16th/17th century, and which includes most of the masonry as well as the timber-framed walls and roof structure. Particularly important masonry details are the two mullioned windows in the Northwest Block, the plinth, and, internally, the first floor offset, all of which contribute to the interpretation of the early building. The two doorways on the northeast side are probably in the position of 17th-century openings and although they appear to have been modified, they contain early fabric. None of the other three openings at ground level, all windows, have any semblance of being early in character. That in the southeast elevation is entirely mid to late 20th century in date, being situated within the former carriage opening. The other two windows, in the northeast elevation, are likely to date from this period too.

Of the timber framing, that comprising closely spaced studs seems to be the earlier type, and is probably of 17th-century date. This pattern is found throughout the Northwest Block, and on parts of the southeast block. The wider panels are confined to the Southeast Block, and are likely to date from the 17th century. Both styles are fairly typical of the West Midlands vernacular. The character of the roof timbers is compatible with a date in the 17th century, and the felling date of 1657 given by two of the samples is likely to be very close to the date of construction. Regarding the brick nogging, the diagonally placed bricks are more certainly part of the original design, and more significant architecturally and historically, and again, a vernacular feature typical of the region. The horizontally laid bricks are of lesser interest.

Many of the significant internal details are associated with the malthouse phase. They include, in the Northwest Block, the malting kiln and its associated vaulting and brick flooring, the northwest/southeast aligned timber-framed partition wall, and the tiled malting floor. In the Southeast Block are the brick pillars, the trapdoor and associated windlass, and the first and second floors.

Items that are not of special interest are confined to the Southeast Block, and include the concrete floor at ground level, the stretch of 20th-century brickwork against the southwest wall at ground level, and the stairs, both of which appear to be of recent origin.

10.0 Acknowledgements

The project was managed for Birmingham Archaeology by Malcolm Hislop, and the survey work carried out by Malcolm Hislop and Leonie Driver. Robert Howard of the University of Nottingham carried out the tree-ring dating. The illustrations were prepared by Nigel Dodds.

11.0 References

A Practical Brewer, 1793. *The Theory and Practice of Malting and Brewing*, London.

Brunskill R.W. 1982, *Traditional Farm Buildings of Britain and their Conservation*, Gollancz.

Birmingham Archaeology 2004, *Written Scheme of Investigation for an Evaluation, Historic Building Recording and Interpretation of the Malt House, Harvington Hall, Worcestershire (WF/0696/29004).*

Peters, J.E.C. 1981, *Discovering Traditional Farm Buildings,* Shire.

Pevsner, N. 1968, *The Buildings of England: Worcestershire,* Penguin.

Squiers, G. 1933, *Secret Hiding-Places.*

Worcestershire County Council 2004, *Requirements for an evaluation, historic building recording and interpretation of the Malt House, Harvington Hall, Worcestershire.*


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Fig.1

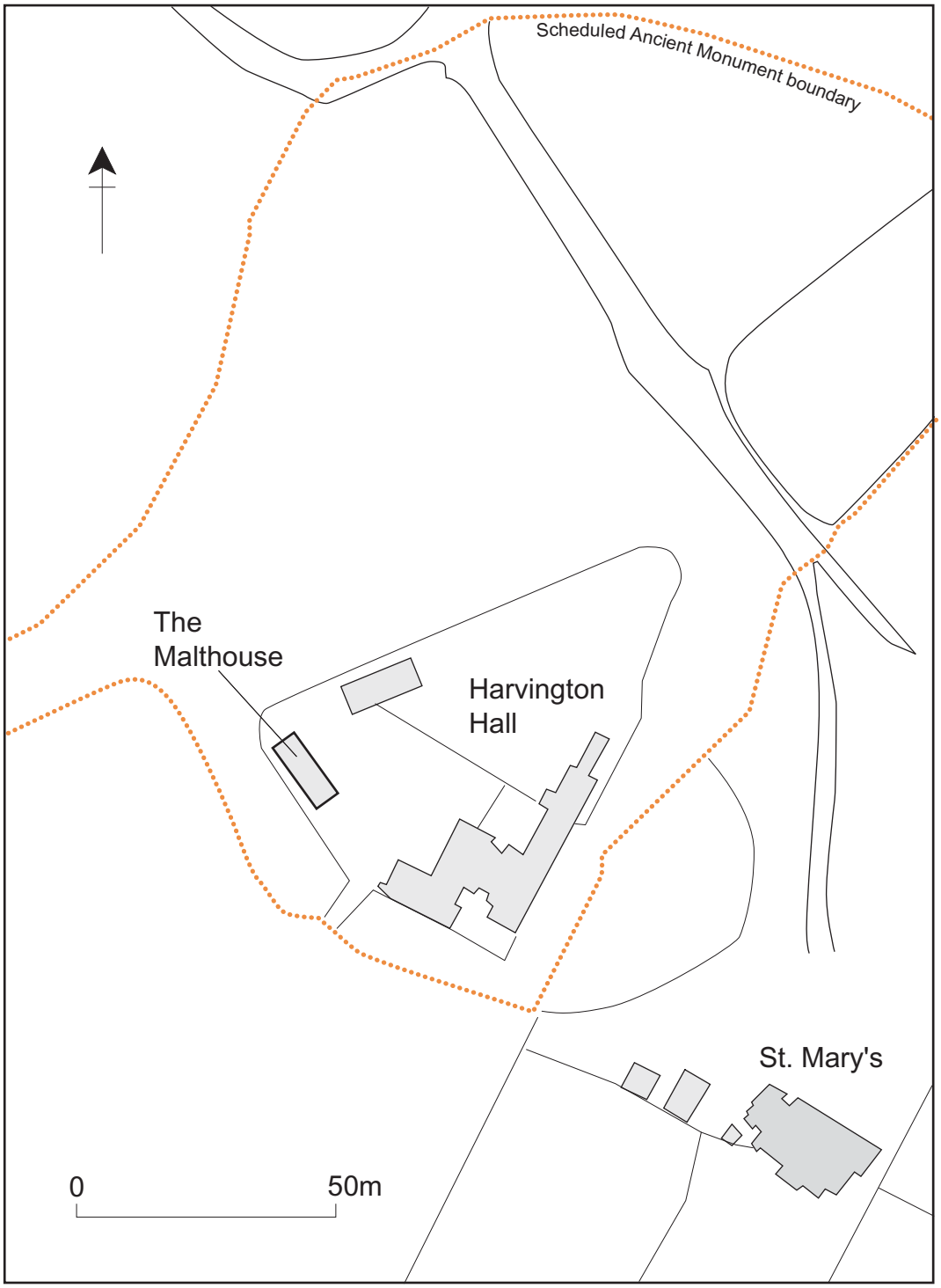

Scheduled Ancient Monument boundary
The
Malthouse
Harvington
Hall
St. Mary's
0
50m

Fig.2

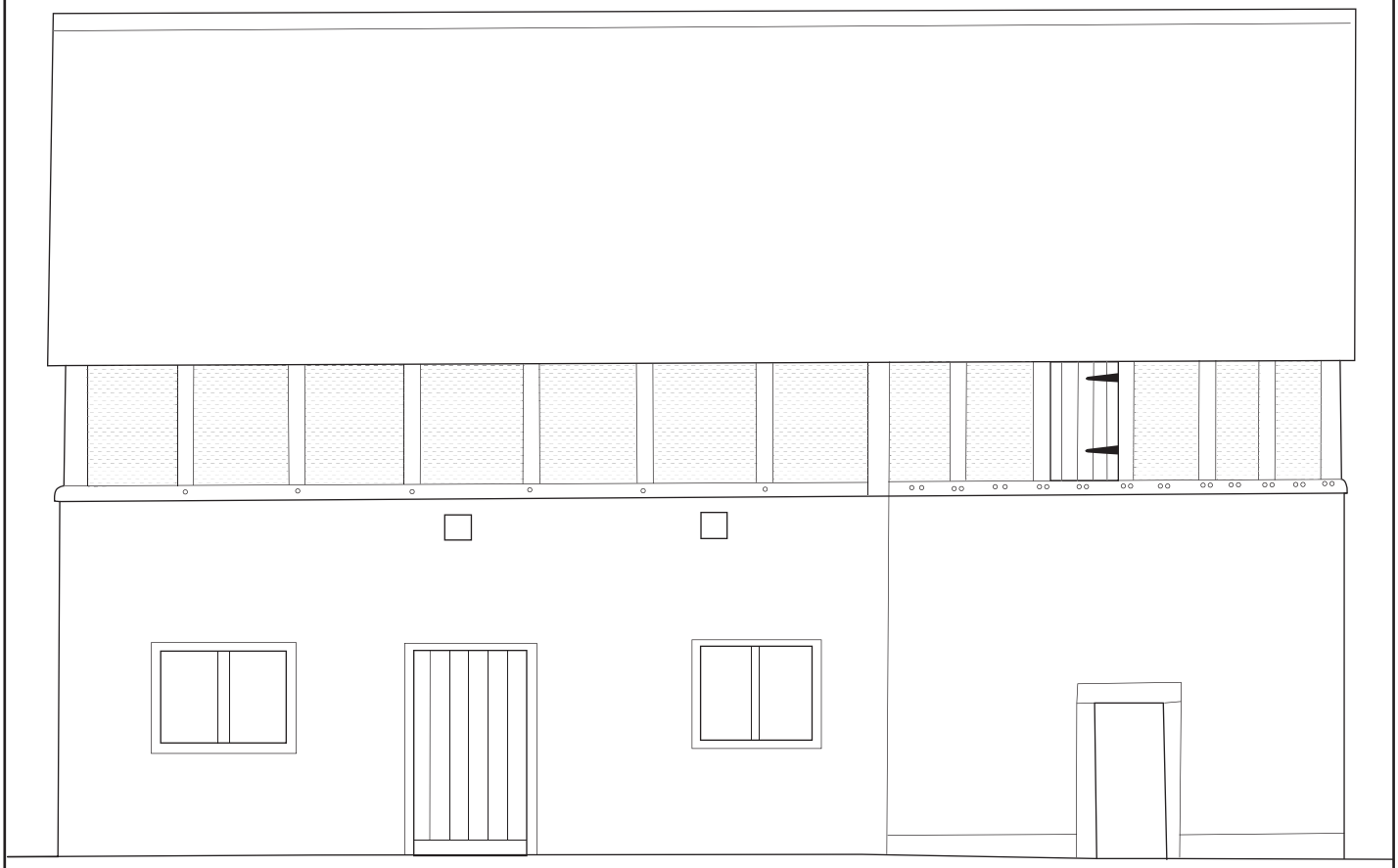


Fig.3 Northeast Facing Elevation

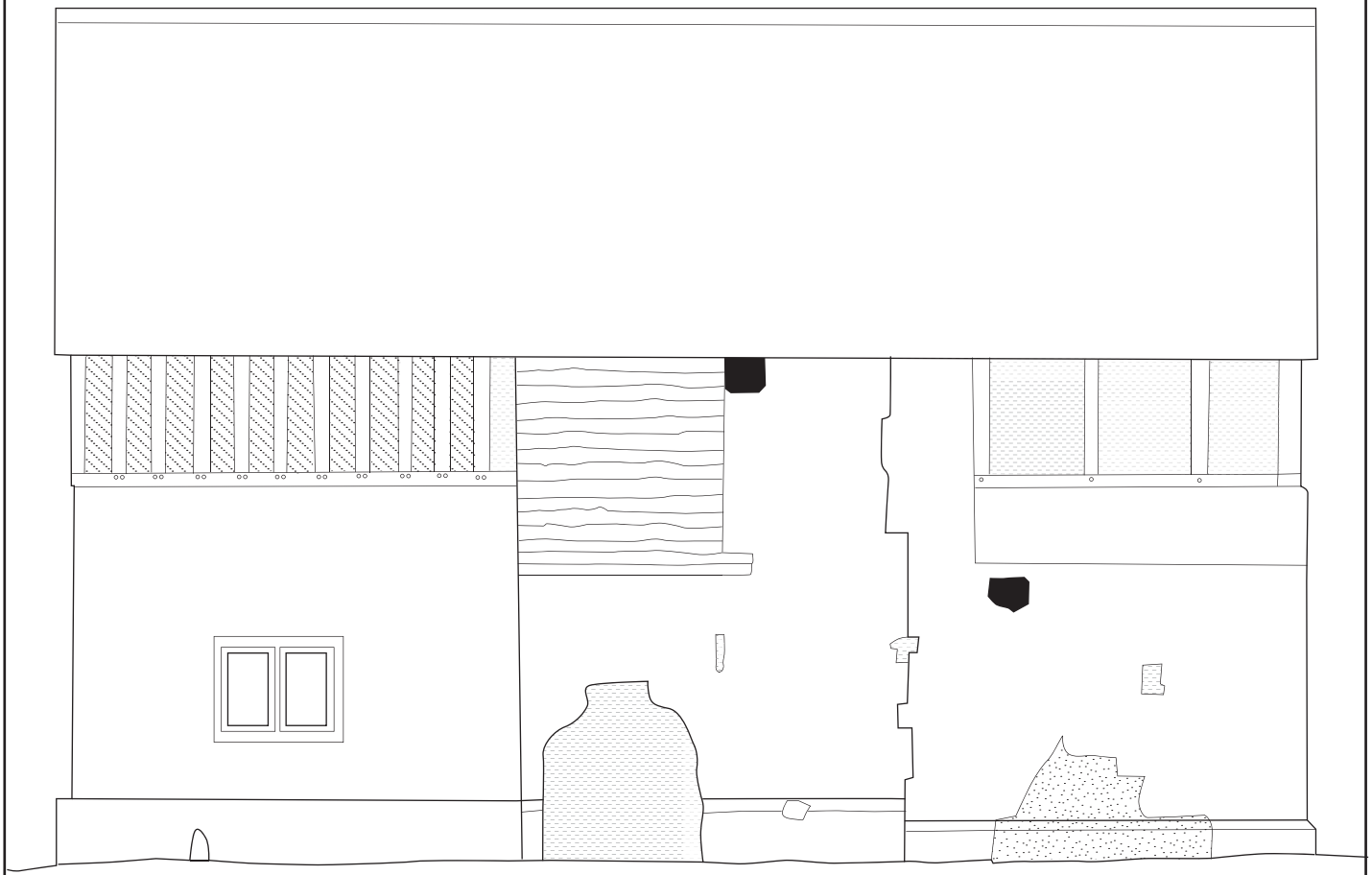


Fig.4 Southwest Facing Elevation

Herring Bone Brick

Brick

Concrete Repair

0 4m

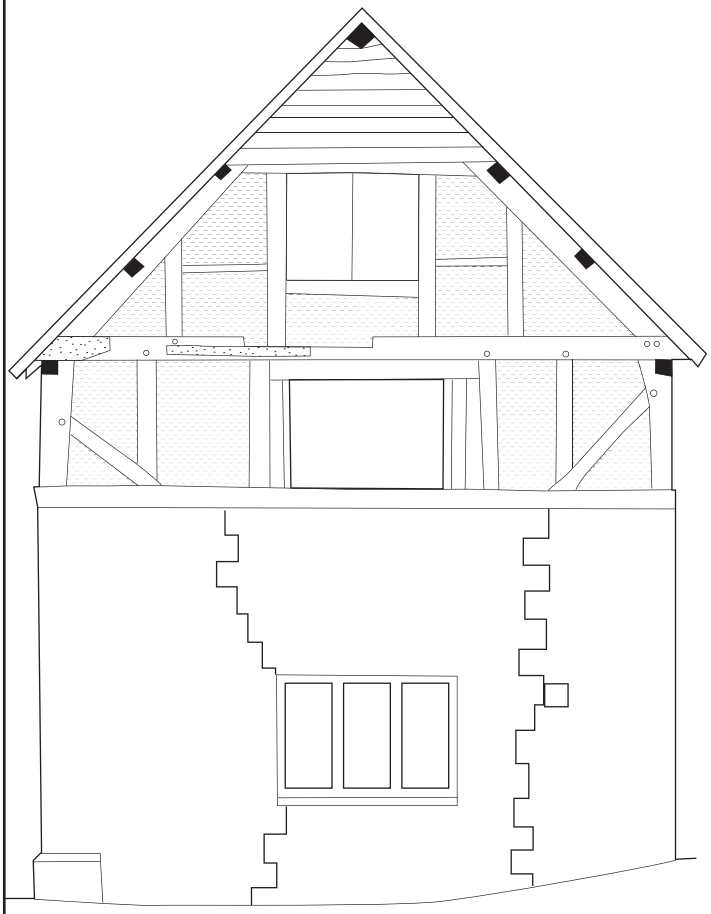


Fig.5 Southeast Facing Elevation

Fig.6 A-A

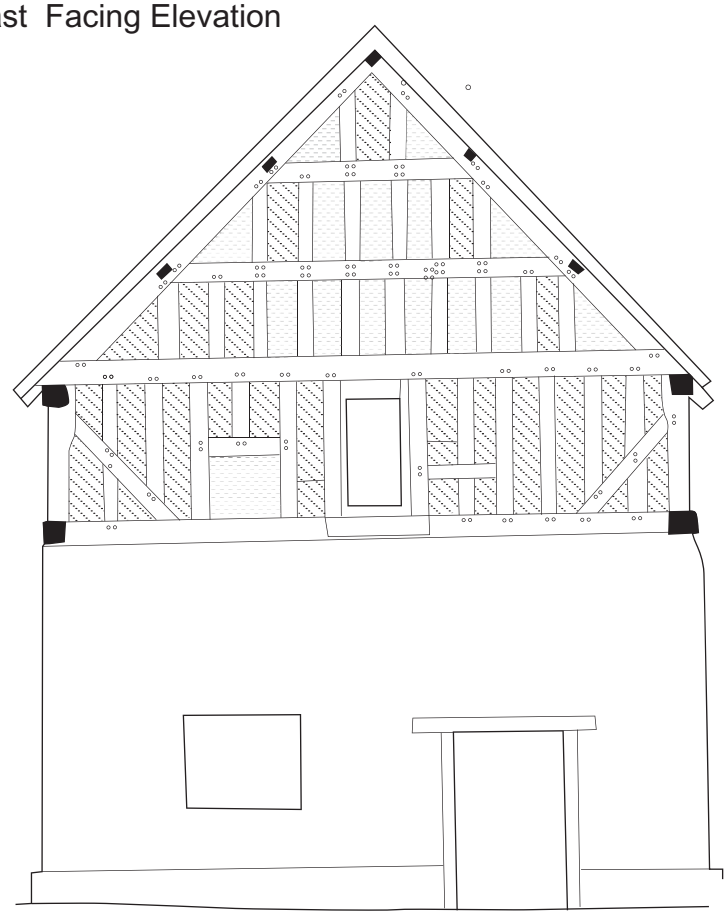
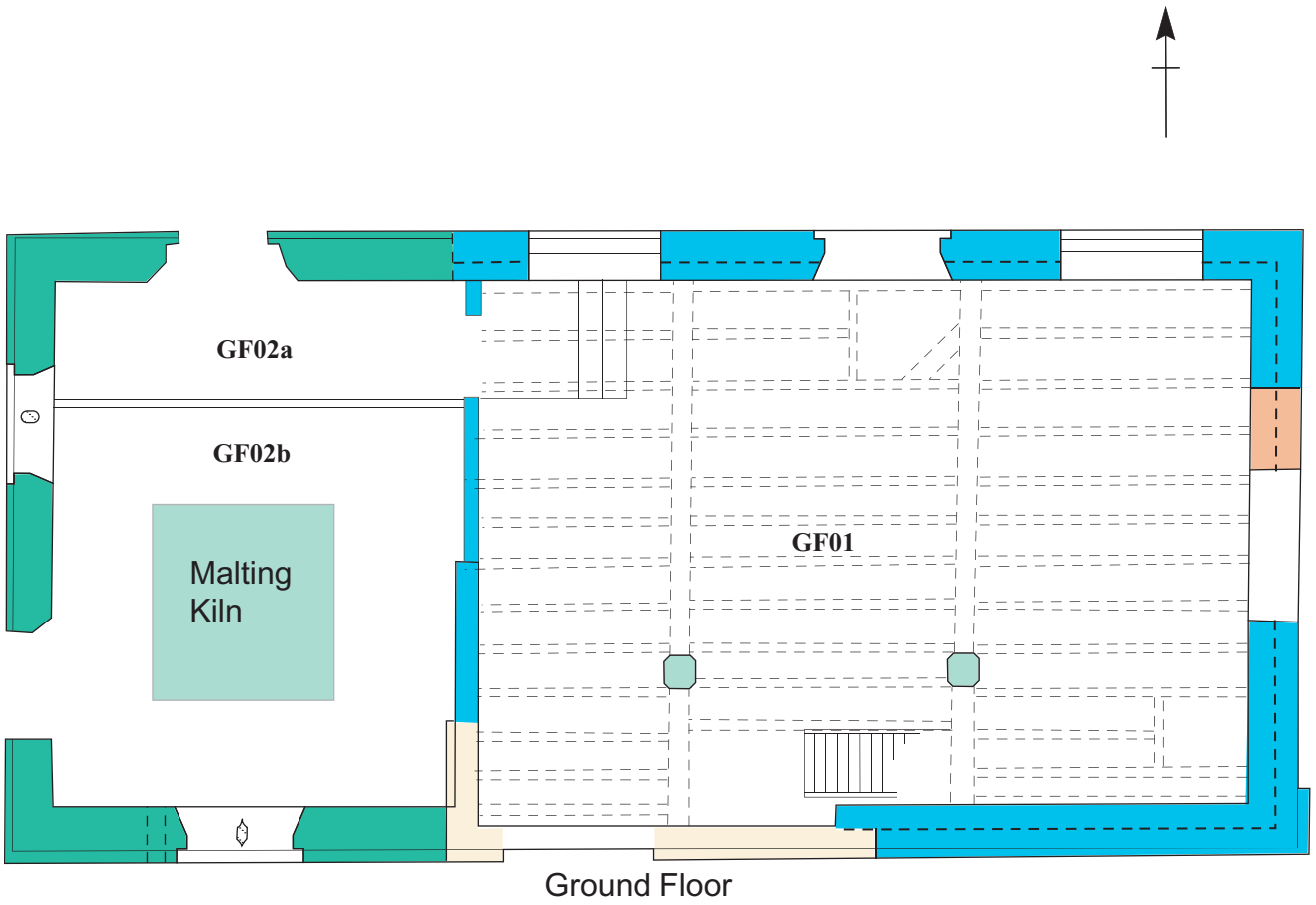


Fig.7 Northwest Facing Elevation

Brick

Herring Bone Brick

0 4m



Ground Floor

Phase 1

Phase 2

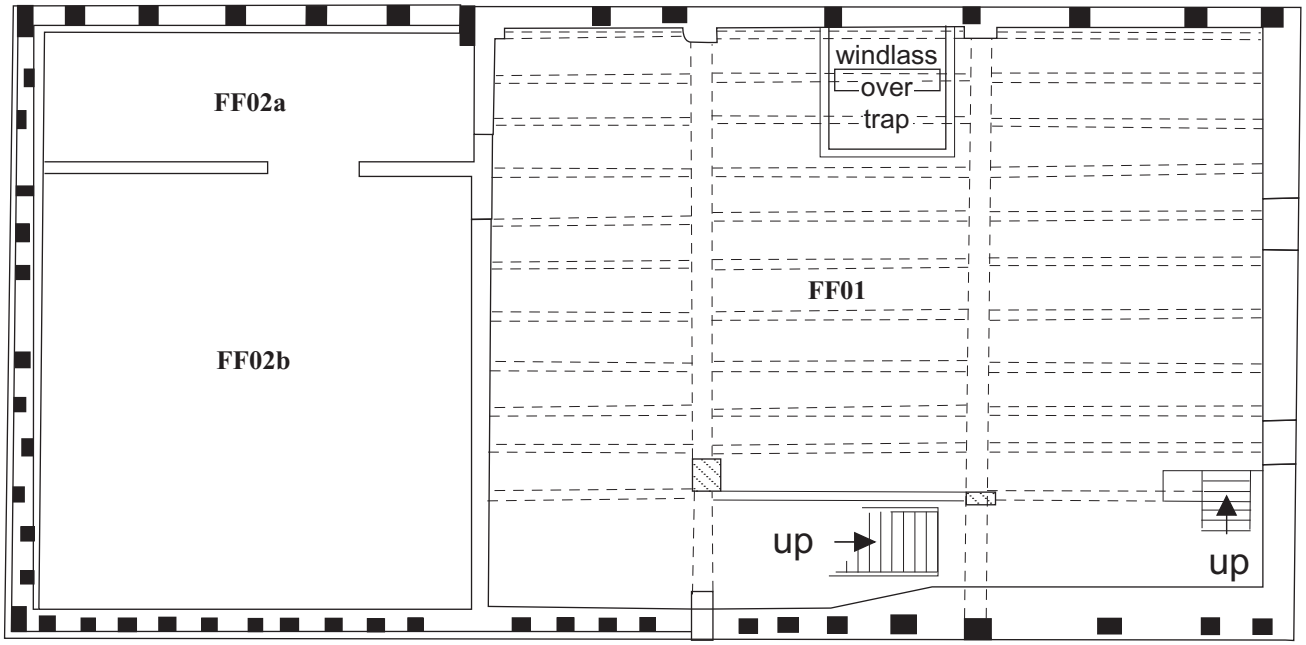
Phase 3

Phase 4

Phase 5

0 4m

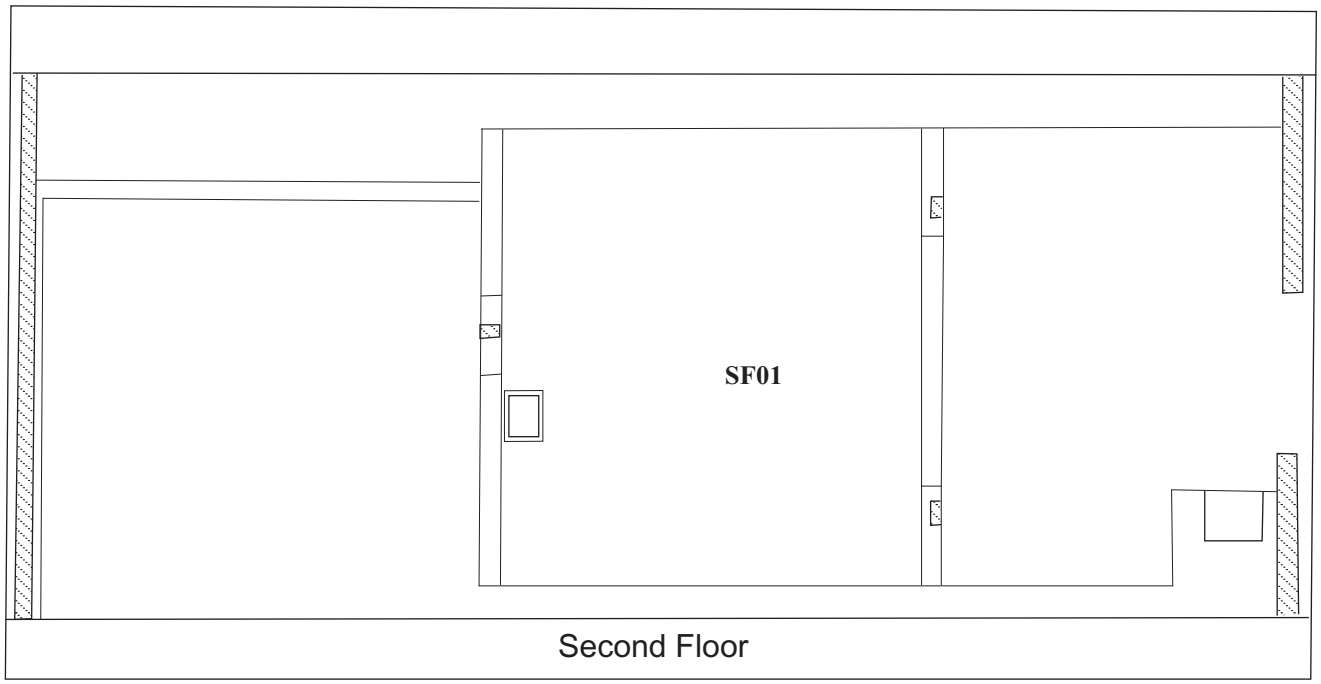
Fig.8



First Floor

Fig.9

0 4m



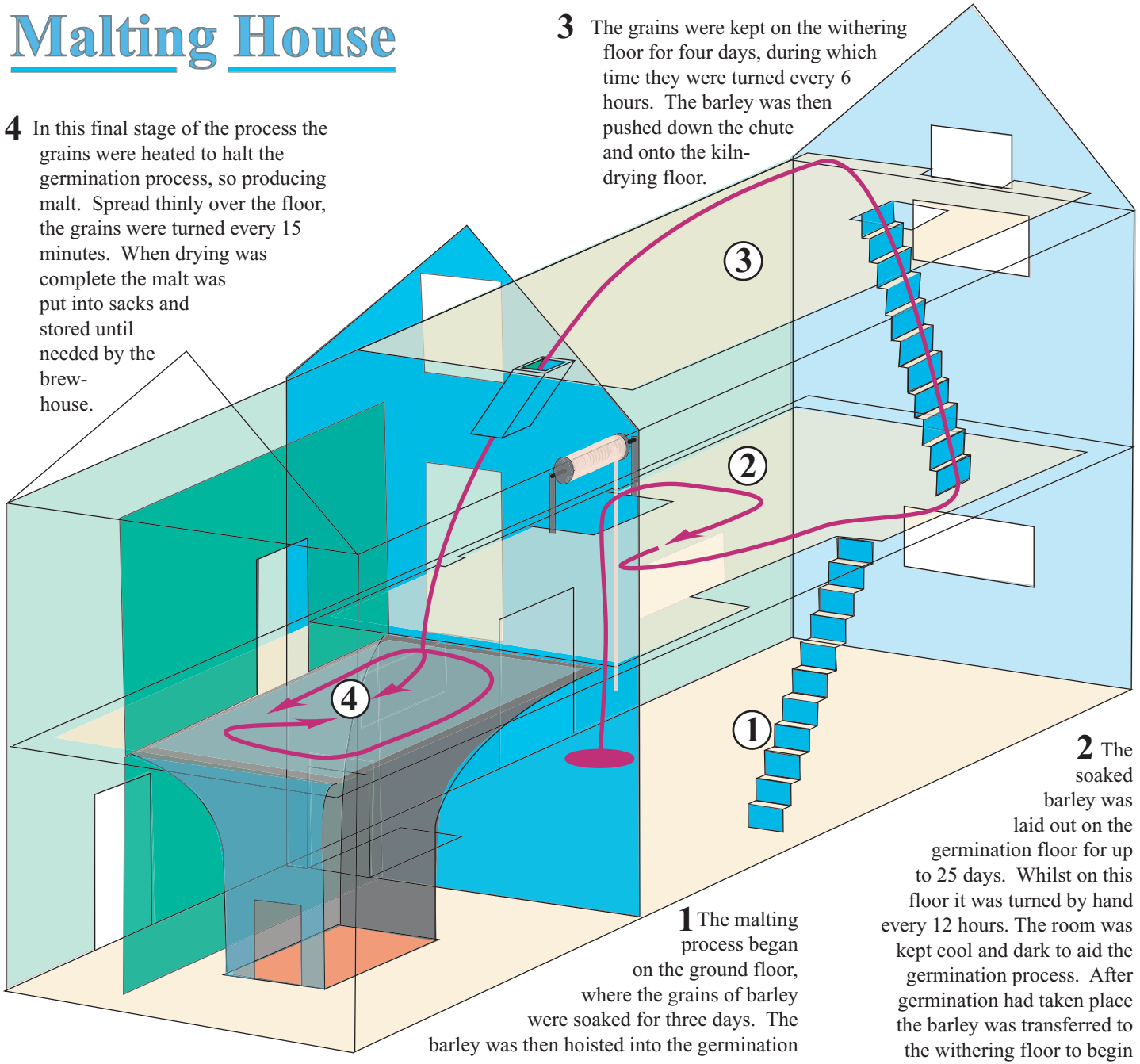
Second Floor

Fig.10

Malting House

3 The grains were kept on the withering floor for four days, during which time they were turned every 6 hours. The barley was then pushed down the chute and onto the kiln-drying floor.

4 In this final stage of the process the grains were heated to halt the germination process, so producing malt. Spread thinly over the floor, the grains were turned every 15 minutes. When drying was complete the malt was put into sacks and stored until needed by the brew-house.



2 The soaked barley was laid out on the germination floor for up to 25 days. Whilst on this floor it was turned by hand every 12 hours. The room was kept cool and dark to aid the germination process. After germination had taken place the barley was transferred to the withering floor to begin

1 The malting process began on the ground floor, where the grains of barley were soaked for three days. The barley was then hoisted into the germination room.

Fig.11

Plate 1

Plate 2

Plate 3

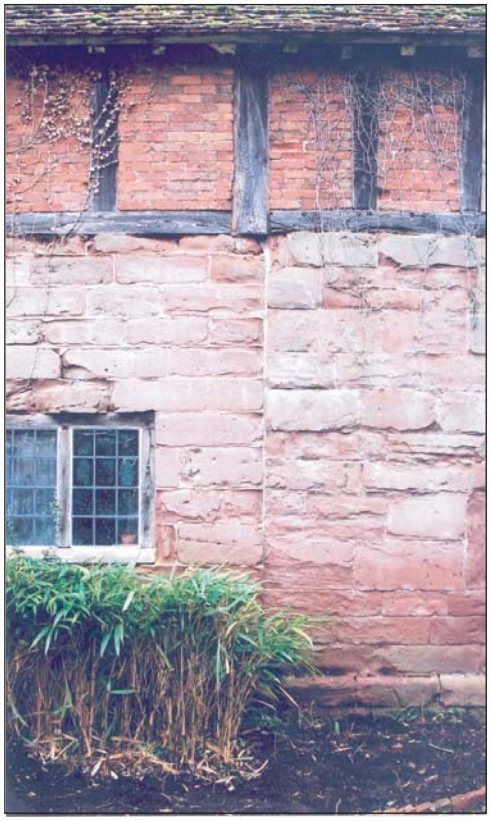


Plate 4

Plate 5

Plate 6

Plate 7

Plate 8

Plate 9

Plate 10

Plate 11

Plate 12

Plate 13

Plate 14

Plate 15

Plate 16

Plate 17

Plate 18

Plate 19

Plate 20

Plate 21

Plate 22

Plate 23

Plate 24