

Apprentice Store De Montalt Mill Combe Down Bath

**Historic Building Investigation
and Recording**



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The Apprentice Store, De Montalt Mill, Bath Somerset

HISTORIC BUILDING RECORDING AND INVESTIGATION

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THE APPRENTICE STORE, DE MONTALT MILL, COMBE DOWN, BATH, SOMERSET

HISTORIC BUILDING RECORDING AND INVESTIGATION

SUMMARY

Oxford Archaeology has undertaken a programme of historic building investigation and recording at the Apprentice Store at De Montalt Mill, Bath Somerset. This work is in addition to recording of the main mill buildings and below ground archaeological evaluations at the Mill and the Apprentice Shop.

The so-called Apprentice Store building comprised a 3 bay open fronted two storey block built onto the east end of a single bay extension to a primary small farm building that may date to the late 18th century.

The farm building or barn had a first floor inserted later for a hay loft with stable or animal housing below, the tops of the gable walls had been constructed in later builds which indicates this originally had a half hipped roof.

The single bay extension contained a coach or waggon house below with a loft above. The east gable of this was raised to create a parapetted gable for the higher, open fronted extension. This extension, which may have been a timber store, was constructed in the later 19th century either when the former mill was being used as a laundry or later when it had become a joinery manufactory. The open sides of the range were later enclosed and the building appears to have been used as an additional workshop.

Some evidence of former use within the eastern block include two belt-drive pulley-shafts and a saw bench.

A lean-to on the south side of the range which was probably a store initially was converted to stock pens and milking parlour in the twentieth century after the site was purchased for use as a farm in 1921. The farm business finally closed in 1987 and the site has been sold for proposed development.

1 INTRODUCTION

1.1 Background

1.1.1 Oxford Archaeology has been commissioned by Threefold Architects on behalf of Ian and Sophie Cooper to undertake a programme of historic building investigation and recording of the Apprentice Store at De Montalt Mill, Bath Somerset (Plate 1). This work is in addition to recording of the main mill buildings and below ground archaeological evaluations at the Mill and the Apprentice Store each of which projects have been described in separate reports.

1.1.2 The work relates to the proposed redevelopment and conversion of the buildings to residential use. The buildings involved comprised a 3 bay open fronted two storey range built onto a single bay extension to a primary small barn or animal house that may date to the late 18th century. The open range



was constructed in the later 19th century either when the former mill was being used as a laundry or later, a joinery workshop. The open sides of the range were later enclosed and the building appears to have been used as an additional workshop. The barn had a first floor inserted for a hay loft with stable or animal housing below. A lean-to on the south side which was probably a store initially was converted to stock pens and milking parlour in the twentieth century. Due to the historic interest of the buildings planning approval for the development has been granted with the condition that a programme of building recording be undertaken prior to the start of site works. This is in line with national planning guidance (PPG15). The buildings are listed at Grade II (see appendix 1).

1.2 **Aims and objectives**

- 1.2.1 The main aim of the work was to produce a record of the building for posterity prior to their conversion. The work particularly concentrated on the buildings' structure, construction, development and use.

1.3 **Methodology**

- 1.3.1 The recording programme was generally undertaken to Royal Commission Level I-II (RCHM 1996) and consisted of three main elements: a drawn survey, a photographic survey and a written survey. The drawn survey consisted of plans based on a pre-existing survey of the building. These were enhanced to detail the construction and phasing of the structure together with other features of interest not indicated on the base survey. The photographic survey used 35 mm film (colour slide and black and white prints) and consisted of general shots and specific details (internal and external). The written survey complemented the other surveys and consisted of descriptive notes in the form of annotations to the drawings to explain and interpret the building. The initial site work was undertaken entirely before the start of building works.

- 1.3.2 The site work was undertaken on the 2nd and 3rd of February 2006. A project archive will be ordered and deposited with Bath and North East Somerset Museum Services (or other agreed body). It will include all site drawings, photographs (contact sheets), slides, photographic negatives, a copy of this report and other site notes. A copy of this report will also be deposited with the Bath and North East Somerset Sites and Monuments Record.

1.4 **Acknowledgements**

- 1.4.1 Oxford Archaeology would like to thank Threefold Architects for commissioning the work and providing existing survey drawings which have been used as a basis for the archaeological recording.

2 HISTORICAL BACKGROUND

- 2.1.1 The historical background of the De Montalt Mill site including the Apprentice Shop was researched for a Historic Buildings Impact Assessment in 2001 (Davenport) and the following summary is largely drawn from that work.
- 2.1.2 In 1761 The site was part of the Allen estate and an estate map of that year shows no buildings on the site of the Mill and Apprentice Store (Davenport 2001, Fig. 2).
- 2.1.3 On April 5th 1805 it was announced that 'water communication' had been achieved between the Somerset Coal Canal and the Kennet and Avon Canal and it was in this year that the Mill was built on land owned by the De Montalt family.
- 2.1.4 The mill was designed as a water powered paper mill and became famous for its high quality papers such as the famous Bath Vellum paper and paperboards for artists. George Steart was the technical specialist of the company and won the RSA's Silver Medal in 1821. He numbered among his clients some of the foremost artists using watercolours at the time including Constable, Turner, Cotman and Cox.
- 2.1.5 On January 21st 1834, the mill and its contents were advertised for sale; cottages and outbuildings were said to have been added 'within a few years'. By 22nd March it had been taken by a firm intending to produce *gutta percha*, a hard rubber substance used to assist the ignition of gunpowder but it is unclear whether the *gutta percha* manufacturing ever actually began.
- 2.1.6 William Jennings Allen is listed as proprietor in 1838, manufacturing paper, millboard and pasteboard, he died the next year and in 1841, the mill was once again put up for sale, complete with its steam engines and paper making machinery. This marked the end of de Montalt as a paper manufactory.
- 2.1.7 What happened in the 1840s is unclear. By 1849, the property was leased to Edmund White of Bath. White is listed as a linen and damask manufacturer and merchant in Bath, between 1836 and 1848 and additionally an undertaker from 1849. He was also noted as one of those from whom information regarding the services of the Bath Washing Company could be obtained. It may be, therefore, that the mill had been occupied by the Bath Washing Company from the time of the sale of 1841.
- 2.1.8 Cotterell and Spackmans map of 1852 (fig. 3) shows the earliest part of the Apprentice Store range (Phase 1 and probably phase 2) in existence.
- 2.1.9 In 1855 the premises is listed as being occupied by Dr. Charles Middleton Kernot, MD, LL.D and in 1857 the mill is held by Charles Noyes Kernot, patent cloth manufacturer. By 1859 the building is in the hands of the Bath Washing Company Limited. The history from 1841 to 1859 suggests that the site was owned by landlords who leased the mill to the Washing Company.



- 2.1.10 In 1861 the premises were occupied by John Cooksley, gardener. It is interesting to note that the Cotterell map of 1852 (fig. 3) shows the area north of the mill pond as under market gardening. By 1864 the mill is listed as being occupied by Edward Ashley, market gardener who remained at the premises until 1869.
- 2.1.11 In 1869 the property is once again advertised for sale as being 'suitable for a variety of manufactures: Brewery, corn mill, cloth factory, or any other trade requiring water-power'. This suggests that the wheel was still present and functioning at this time.
- 2.1.12 In 1875 the building, now known as 'De Montalt Steam Works' was occupied by John Hector Whitaker, cabinet manufacturer, resident at 'De Montalt Villa'. In 1883 the occupiers are listed as Whitaker & Parsons, cabinet manufacturers.
- 2.1.13 The first edition Ordnance Survey map of 1886 (fig. 3) shows the fully developed Apprentice Store range with eastern extension, southern lean-to and external stair at east end.
- 2.1.14 In 1901 the cabinet making firm were known as J. H. Whitaker & Co. Ltd. with one William Clapp listed as secretary and manager between 1900 and 1905. By 1905, the location of De Montalt Mill, once so favourable now put the buildings at a disadvantage. It was situated several miles from the nearest railway sidings and freight yards and the canal had closed. The 100 year lease was not renewed and the property fell back into the hands of the successors in title.
- 2.1.15 In 1921 after a period apparently standing empty the mill and land were purchased by a Mr Mann for use as a farm. It remained in this use until 1987 when the stock raising business was abandoned. It has been largely derelict since then.

3 DESCRIPTION

3.1 Phase 1: Field barn/byre/stable

- 3.1.1 **External Description** (plates 2 & 3). The oldest part of the structure is at the west end. This is a single cell two storey structure built of snecked rubble with better finished quoins and jambs. The pitched roof is a modern replacement with softwood frame clad in corrugated sheeting. There is a door opening in the east end of the north wall and a ground floor two-light mullion window in the west end of the north wall with an empty opening into the first floor directly above it. There is a similar mullioned window in the west end wall with a ventilation slit in the gable above. In the south wall there are two ventilation slits high up above the roof of the later lean-to.
- 3.1.2 The plain two light mullion window in the north front ground floor has a rectangular stone mullion with no chamfering (in Gloucestershire this is

common in industrial buildings of the late 18th to early 19th century and similar occur in the Cattlemarket in Bath, of 1810). The window originally had wooden casements. The eastern 12 pane glazing bar casement and the western outer frame are still in place. The top and bottom rails of the frames are each cut for three wooden dowels acting as a kind of bar. The western light has holes for circular dowels, the east has stumps of diagonally set square ones. The lintel is of modern concrete inserted when the upper part of the wall was rebuilt in the later 20th century. The window in the west wall is similar with surviving outer wooden framing in both lights and some remains of the northern casement.

- 3.1.3 Some marks which may be apotropaic are inscribed on the north wall. There is part of a circle on the western jamb of the window and two intersecting circle segments on a quoin at the west end of the wall, these appear to have been inscribed with a pair of dividers or compasses.
- 3.1.4 The upper part of the north wall at the west end has been rebuilt in the later 20th century and when this was done new concrete lintels to the door and ground floor window were incorporated. The new build is set back from the lower original build showing that the wall was rebuilt because it was leaning outwards to the north and possibly the upper courses had collapsed. This probably also explains the need for a new roof.
- 3.1.5 The top of the west gable wall has also been rebuilt suggesting that there may have been a half-hipped roof originally.
- 3.1.6 The former exterior east wall is now within the later coach house extension.
- 3.1.7 The previous owner, Heather Mann, in whose memory the rebuilding was carried out confirmed that the western gable previously had a half hip (Davenport 2001). The eastern half hip would have been replaced when the coach house extension was added at a much earlier date.
- 3.1.8 **Internal Description.** There was formerly an upper floor which has largely been removed. Two large transverse beams survive and a few short joists remain in the north east and north west corners. The beams measure 0.14 x 0.32m. They each have 13 full depth rebated mortices for joists in their upper surfaces but each beam also has one upper chamfer and 15 small joist rebates in one of their lower angles so may be reused. The beams have been inserted into the side walls and end mortices for the joists crudely cut into the stonework of the end walls. It thus appears as though the floor was probably inserted as a hay loft after the building was first constructed and that in its primary phase it was an open field barn or cow house type building without an upper floor.
- 3.1.9 If there was originally no floor then the upper opening which is probably a loading bay for the upper floor may have been inserted later. However as this



opening is completely within the rebuilt portion of wall it is not possible to determine whether or not it is primary.

- 3.1.10 The east wall wall exhibits two primary ventilation slits at head height and a blocked slit in the gable. There is a blocked doorway at the south end with a wooden lintel 'fossilised' in the stonework. The top of the gable above purlin height has also been rebuilt as at the west end which tends to confirm that this building had a half hipped roof in its primary phase (plate 5).
- 3.1.11 The ventilation slits mentioned above are internally splayed. There is a small, crude, probably secondary, niche in the east wall and a neatly constructed square, primary niche at the west side of the north ground floor window. At the west side of the door is a wooden ladder to the former upper floor fixed to the wall. There are some wooden animal feed bins with wooden hay racks above in the south east and north west corners, these probably date to the farm phase of the site, post 1921.
- 3.1.12 The ground floor windows have wooden lintels internally and that in the west wall has two internal horizontal iron bars fitted with their ends set in the stone jambs of the opening.
- 3.1.13 The beams supporting the upper floor have moved northwards out of their sockets, probably dragged by the outward movement of the north wall. This would probably have been caused by spreading of the original roof due to the failure of the tie beam or collar joints. Correcting this has resulted in the complete replacement of the roof and the rebuilding of most of the upper north wall.

3.2 Phase 2: Waggon house with hayloft over

- 3.2.1 **External Description** (see Plate 2). This is a small one bay two storey extension built onto the east end of phase 1 consisting of a waggon house with hayloft over (Plate 6). On the north wall there is a straight joint with no attempt at bonding the two phases but on the south the joint dog legs several times where phase 2 has been bonded in to some extent to the earlier structure.
- 3.2.2 The lower north wall is mostly taken up with a large opening with a timber lintel closed with double plank and rail doors. These have long iron hinges hung on iron pintles sunk into the stone jambs. The doors are 20th century replacements The stone masonry either side of the door is snecked but quite well dressed and regular. The upper north wall of the loft floor is of roughly coursed rubble with a central square loading door similar to phase 1 with more regular stone jambs.
- 3.2.3 The lower north wall is better finished because it consists mostly of door jambs and end quoins and is supporting the upper floor which does not need to be so well finished. Thus although different in appearance the builds of the two floors are probably of one main phase of building.

- 3.2.4 The formerly external south wall is now within the later lean-to. This wall exhibits a central, rectangular, blocked opening with large stone lintel, jambs and sill and a ventilation slit to either side (plate 7).
- 3.2.5 The former external east wall now is within phase 3 (see below).
- 3.2.6 The roof is pitched and is continuous with the phase 1 roof of modern construction.
- 3.2.7 **Internal Description.** Internally the east wall is of small mortared rubble with two square alcoves with timber lintels on the ground floor. These give the appearance of former windows but appear never to have been more than alcoves (plate 8).
- 3.2.8 The west wall is the former external east wall of phase 1 and the three ventilation slits, blocked door with wooden lintel and rebuilt gable described above are also visible on this side of the wall.
- 3.2.9 In the south wall three openings are visible as on the exterior. The large central one is blocked with masonry and internally has a timber lintel, the large exterior stone lintel, jambs and sill do not show on the inside face. The ventilation slits to either side are internally splayed as those of phase 1. The large window was the main light source for this room.
- 3.2.10 The upper floor of this phase is still *in situ*. The floor is of planks supported on joists running east-to-west from sockets in the walls. A trap opening, possibly minus trap but obscured by hay, exists in the north west corner but the main access is via the square loading door in the north wall. The loading door or pitch hole in the north wall still has its double wooden side hung shutters in place. These are hinged to a wooden frame not into the stone masonry. The shutters are possibly original.
- 3.3 **Phase 3: Workshop/Timber store**
- 3.3.1 **External Description** (Plates 4-6) This is a further eastward two-storey extension to the existing range consisting of three bays. The extension is the same width as the previous phases but taller. The west wall is formed by the east gable of phase 2 which has been raised and capped with a flat coping course. The east gable is plain and the pitched roof is clad in ceramic tiles.
- 3.3.2 There is a primary north east corner pier of good quality snecked limestone. The east and north sides (plates 9 & 10) were originally open; the upper floor being carried on softwood plates. The plate in the east end spanned from the south wall to the corner pier and the north plate spanned from the corner pier to the north west corner of the phase 2 gable wall with two intermediate square stone supporting piers with plain capstones. The upper floor was also originally open on the north and east and the wall plate on the north side was



supported by the corner pier and gable wall and by intermediate wooden posts above the lower stone piers.

- 3.3.3 The east gable was clad in weatherboarding attached to the end roof truss, most of this has gone leaving the east side of the king post truss largely exposed to the elements.
- 3.3.4 The ground and first floors were later enclosed. The ground floor at the east end has been infilled with fair quality coursed limestone. There is a central door with ashlar lintel and jambs with a window to the south. The door is covered with corrugated metal sheeting as is the lower half of the window. The window has a stone sill and a 2 light wooden casement with a small 4 pane pivoting upper light and a 4 pane fixed lower light and most of the glazing is missing or broken.
- 3.3.5 The eastern bay of the north ground floor has similar infill with two identical windows to that at the east end and is part of the same phase of enclosing this end bay.
- 3.3.6 The central ground floor bay has a different build in its infill of regular and equal courses of regular ashlar blocks. There is a door opening at the west end of the bay between the end of the infill and the eastern pier, this is fitted with a plank and rail door in a softwood frame. There is a shallow window with a stone sill and five pane wooden casement at the top of the bay east of the door.
- 3.3.7 The western ground floor bay has no masonry infill but has a wide double door of slatted planks and rails with a narrow section of weatherboarding at the west end.
- 3.3.8 The first floor infill at the east end and in all three bays of the north side consists of similar regular ashlar masonry to that in the central ground floor bay. In each bay there are three masonry courses resting on the timber bridging plates with windows above. The upper course of the infill at the east end is bonded into the south wall and the upper courses of the end bays in the north side are bonded into the north-east corner pier and the west gable. The windows in the east wall are covered in corrugated metal sheets. There is a door opening at the north end of the east wall infill with a panel door in place. The existing door is probably primary to the infill phase. Below the door and resting on the main plate are the stubs of three projecting floor joists which originally supported a landing for an external stair. This stair must predate the door in the ground floor of the east end as otherwise it would have prevented its use.
- 3.3.9 Each bay on the north side has different window types, separated by wooden mullions, but they are consistent within the bays. The east bay has three mullions and had four windows originally but the west one is missing. The windows have rectangular 4 pane fixed glazing bar casements. The central bay has three square 6 pane fixed glazing bar casements and two mullions. The

western bay has two rectangular casements with 4 pane fixed casements. These look reused as they are set on their long sides and leave an unequal smaller gap at the west end with currently no infill but some corrugated sheeting behind.

- 3.3.10 The two stone piers which each consist of three squared blocks and a cap have some incised marks on their north faces which are either masons identification marks or possibly late examples of apotropaic marks. The eastern pier has an X on the bottom block and a 'V' (on its side) with one extended side on the middle block. The western base block has a W (on its side) in the form of two intersecting Vs which in earlier contexts has been identified as an apotropaic mark referring to the Virgin Mary, because the two Vs could stand for *virge virginum* and upside down a W becomes an M for Mary. The middle block has an extended 'V' as on the east pier and the upper block has a C again on its side. The fact that the marks are set sideways shows they were incised before the piers were constructed. The blocks may therefore be reused and the marks older than the present structure.
- 3.3.11 The south wall is of snecked rubble and is partially bonded in to the south east corner of phase 2 (Plate 11). At the top of the wall immediately below the wall plate which has been clad in weatherboarding, and above the lean-to roof, are six window openings. The windows are set in three pairs and the two openings in each pair are separated by a narrow pier of ashlar masonry about 0.5 m wide. Wider sections of ashlar masonry of about 1.0 m separate the pairs and are equal in length to the two sections of masonry at each end of the wall. The pairs of windows are of different widths but the reason for this is unclear. The two eastern windows are each 1.5 m wide, they are lacking any timber frames or casements and are currently blocked with corrugated iron sheets. The central pair of openings are each 1.3 m wide, the western one contains a fully glazed six pane glazing bar casement. The eastern window contains a reused casement with four vertical glazing bars that is shorter than the opening and has boards infilling above. The western pair of openings are each 1.1 m wide and have the remnants of softwood outer frames but no casements surviving. All the windows have projecting stone sills.
- 3.3.12 A partially collapsed short section of walling extends eastwards from the lower end of the main south wall. This originally formed the west jamb of a gateway between this building and the building to the east and is probably contemporary with the initial construction of phase 3.
- 3.3.13 **Internal Description.** There are two small rooms at the east end the ground floor (G1 & G2) and the rest of the floor consists of one large rectangular room (G3). The smaller of the two eastern rooms (G1) is built into the north-east corner and its west and south walls consist of ashlar Bath stone. There is one entrance which is in the east end of the south wall. This room is probably contemporary with or just post the infilling of the east bay.



- 3.3.14 The southern small room (G2) has been created by the construction of a north-to-south cement block wall stretching from the south-west corner of the first room to the main south wall of the block and dates to the later 20th century. The room has a doorway (currently blocked) in the east end wall and another in the south wall with steps down into the east end of the lean-to. Both small rooms internally have 20th century render on the walls and concrete floors and have been modified for use as part of a milking parlour in conjunction with the east end of the lean-to (to be described later).
- 3.3.15 A doorway in the cement block wall of the southern room leads into the main ground floor space (G3). This room extends the full width of the block and west to the earlier gable wall. The room comprises approximately two and a third of the original three bays. The north wall consists of the primary piers plus infill and doors as described above and the south wall is of solid stone masonry (plate 12).
- 3.3.16 There are two main transverse bridging beams socketed into the south wall and spanning the room to the two stone piers. These beams support the floor consisting of east-to-west joists and wide floorboards above. Between the joists across the centre of the central bay is a line of herringbone strutting (Brunskill, 1985, 181) inserted to prevent the tall and narrow floor joists from falling sideways or buckling under load. The beams and joists are of machine-sawn softwood.
- 3.3.17 On the north side of the central bay a wooden stair to the first floor has been inserted. That this is a secondary insertion is shown by the fact that one floor joist has been repositioned and sections of two others removed to allow the stair access. Primary access to the upper floor was by the now missing external stair at the east end. The open treads of the stair are made from old tongue and groove boards, possibly floorboards, with the grooves still extant in the back edges.
- 3.3.18 There are studs of a former partition at the west end of the room parallel and very close to the west wall. There is also a groove in the floor from a former partition at the east end; this runs at an angle north-west from the east door and then returns north to the eastern stone pier.
- 3.3.19 There is some surviving machinery and evidence of how it was powered in this room. In the south-east corner of the room about 0.4m from the walls is a concrete base measuring 1.10m long x 0.4m wide x 0.2m high. This base has four bolts in its upper surface for securing either machinery or a power source possibly a stationary engine.
- 3.3.20 Just west of this base is a small, wooden circular saw bench with a pulley for a belt drive projecting on the south side. West of the saw bench and suspended from the south end of the western floor beam by iron brackets is a pulley line-shaft with three pulley wheels of about 0.19m diameter. There are two pulleys adjacent to each other at the south end of the shaft the most southern one being

a freewheel. The third pulley at the north end has are two small rectangular slots above it in the floorboards to take a belt drive to or from another shaft on the first floor (Plate 13).

- 3.3.21 The system may have been run by a stationary engine fixed to the concrete base which ran the saw bench directly and also ran a belt to the pulley shaft which then transferred drive to the shaft upstairs to run machinery on the first floor. The reason for the freewheel is to disengage the drive to the machinery without having to stop the engine running. The engine may also have had a freewheel to allow it to engage one or other of the drive belts. With the end wheel of the shaft being a freewheel the engine could probably not have run both the saw bench and upstairs machinery from this shaft.
- 3.3.22 **First Floor.** The first floor of Phase 3 consists of one long rectangular room reached by the wooden stairs from G3 which enter in the centre of the north side. There is simple boarded partition around the access opening in the floor above the stairs which abuts the north wall and extends up to tie beam level. There is a half glazed door at the south end of the partition with a six pane glazing bar upper half over two vertical rectangular panels. The door contains some bulls eye panes. The original access to this floor was from the external stairs at the east end and the door to these is still in situ.
- 3.3.23 The door to the external stairs at the north end of the east wall consists of a large glazed upper section of nine glazing bar lights arranged 3 over 3 above two lower square panels. The glass panes are all removed and have been blocked with boarding cut to size. The windows in the east wall were covered in corrugated iron on the outside and by heavy sacking nailed in place on the inside so were not viewed.
- 3.3.24 The fenestration and construction of the north and south walls has been discussed in the exterior descriptions above and internally there is little change, the walls are not plastered or covered and the stone construction as seen on the outside is visible within.
- 3.3.25 The west wall consists of the original external east end wall of phase 2 this is of snecked rubble and had a central square opening which has been blocked in better dressed stone masonry. This was probably either a window to light the loft of phase 2 and/or an extra pitch hole to get hay in and out of the loft. It was probably blocked when phase 3 was constructed.
- 3.3.26 The floor consists of softwood boards laid on the joists below and at the time of the visit was largely covered, in the centre of the room particularly, by all manner of old material much of it timber offcuts and old tools etc., pertaining to the earlier cabinet making business.
- 3.3.27 Adjacent to the south wall towards the west end of the room is a short iron shaft with large and small belt wheels. The shaft runs in bearings mounted on iron brackets fixed to the floor. The shaft is aligned north to south over a floor



joist and above a similar shaft and mounted on the ceiling of G3. There are slots in the floorboards either side of the larger wheel at the south end of the shaft for a drive belt to run from the lower shaft to this one, probably originally to power some machinery relating to woodworking.

- 3.3.28 The roof consists of three main softwood king post trusses and two intermediate trusses supporting one order of purlins to each slope and paired common rafters with a ridge piece. The common rafters are clad with laths from which most of the plaster has gone.
- 3.3.29 The three main trusses consist of tie beams, principal rafters and suspended king posts with raised splayed heads, splayed joggles and raking braces (terminology used as suggested by Campbell 2000). The base of the king post is attached to the tie with a screw-threaded bolt. One of these trusses is placed at the east end of the building and thus doubles as framing of the east gable. The other two span the floor dividing it into three bays and are supported by the wallplate above the timber posts in the north elevation and the wallplate over the two wider sections of masonry between the windows in the south wall.
- 3.3.30 Two intermediate trusses have been inserted in the two eastern bays. These have no principal rafters but consist simply of tie and posts inserted to support the roof. The easternmost one has a plain king post supporting the ridge and two plain queen posts, the western truss just has two plain queen posts. In the south wall these intermediate ties are supported on the wallplate over the smaller masonry piers central to the pairs of windows and in the north wall they rest on the wallplate over the window frames with no vertical supports.
- 3.3.31 There is no truss at the west end of the building and the purlins are now supported by long vertical timbers placed against the end wall and resting on the floor. There may not have been a truss here originally as there is a full gable wall but in that case the purlins would be supported in the gable wall not on inserted props.

3.4 **Phase 4: Lean-to extension**

- 3.4.1 This building consists of a six bay lean-to running the entire length of the south wall of phases 1-3. It therefore post dates phase 3 in actual construction but may have been intended as part of the same programme of expansion and built shortly after phase 3.
- 3.4.2 **Exterior description.** The building consisted originally of an open shed with seven square section stone piers supporting the wallplate and softwood tie and principal rafter trusses on the south. The north ends of the tie beams are let into in the south wall of the main range and the principal rafters are supported by timber blocks also let into the wall. The common rafters rest on the wallplate

to the south and on a longitudinal plate sitting on the principal rafters against the wall to the north and are supported by two orders of purlins. The roof is clad with clay pantiles.

- 3.4.3 The upper parts of the stone piers are starting to lean outwards and the masonry starting to open up along horizontal joints and in some places the upper plate and rafters have come away from the wall and the roof is starting to collapse. The whole building will probably be in an unsafe condition or collapse before long if left.
- 3.4.4 The east wall below the tie beam has been infilled with roughly coursed stone rubble with a door at the south end and eight pane glazing bar window at the north end. The gable is clad in lapped boarding. The east end of the roof extends considerably beyond the wall. The purlins and wallplate extend the length of this overhang and the purlins are braced to the tiebeam/wallplate.
- 3.4.5 The south wall between the piers has been infilled with later 20th century low concrete block walls. Above these in the three eastern bays, square 15 pane windows have been inserted with corrugated iron sheets on either side. The next two bays have some odd remnants of board and corrugated iron infill remaining. The west wall of the lean-to below the tiebeam has also been infilled with concrete block masonry. An exposed pier at the west end exhibits tooled vertical rebates in its upper side elevations suggesting that there was a phase secondary infill in some of the western bays prior the present block wall infill.
- 3.4.6 **Interior description.** There are dividing partitions below the tie beams separating the bays excepting at the east end where the first two bays comprise one 'room'. All the partitions stop short of the piers in the south wall leaving a linking passage to access all the bays. There is a door at either end of this passage in the east and west end walls and one internal door in the partition between the second and third bays from the east.
- 3.4.7 The eastern two bays have been fitted out as a milking parlour post the 1921 re-use of the site as a farm. The inner faces of the east wall and lower south wall have been rendered and a rendered block wall partition has been inserted at the west end of the two bays. There is a concrete floor with a step up to a row of six cattle stalls constructed from galvanised metal tubing. In the north-east corner is a set of concrete steps up to a door into room G2. The stalls and fitting out of the milking parlour probably dates to the 1950s and has not been used since the 1970s or so (Davenport 2001).
- 3.4.8 The four western bays have been divided off with stud and corrugated iron, and one stud and wire netting, partitions and mostly have dirt floors. There is flagstone flooring in the western bay though. These bays would have been used as animal pens probably for different types of livestock at different times.



They were originally for winter accommodation, and special purposes such as calving and latterly, until 1987, used for stalling steers (Davenport 2001).

4 CONCLUSION

- 4.1.1 Phase 1 of the building consisted of a small stone built, double height, half-hipped field barn or animal shelter which had an upper floor added for use as a hayloft some time after initial construction. This building dates to after 1761 and possibly predates the building of the mill in 1805.
- 4.1.2 A single bay waggon store with a hayloft above (phase 2) was added to the east end of phase 1, this may have happened in the late 18th or early to mid 19th century. When phase 2 was added the half-hip at the east end was removed, the gable was built up and the roof extended to create one continuous roof over the two phases. The west end remained half-hipped, the new east end was probably a plain gable. A door and an upper ventilation slit in the east end of phase 1 were blocked, possibly when phase 2 was added.
- 4.1.3 In 1852 there was a longer range north of Phase 1 and 2 which indicates this was a small farmstead which may have been independent of and earlier than the mill, by 1886 the longer range had gone to be replaced by two pigsties or they were a remnant of the range.
- 4.1.4 Also by 1886 phase 3 had been added to the existing building built onto the east end of phase 2. This initially comprised a two storey building open on both floors to the north and east with an external wooden stair to the first floor at the east end. The east gable of phase 2 was heightened to create the west parapetted gable of the higher extension and an opening in the gable was blocked. A large lean-to extending the whole length of the range was built on to the south wall either at the same time as phase 3 was constructed, or soon after. This was probably just an open storage shed originally.
- 4.1.5 Just south of the lean-to is a retaining wall of large rubble blocks. The archaeological evaluation has shown that the terracing north and east of the Apprentice Store range was made after phase 1 and 2 were constructed and before phase 3. It is likely that it continues under the site of the phase 3 building and is retained by this wall. It therefore seems likely that as the terrace extended across the whole site of the range the site for the lean-to was probably prepared before the construction of phase 3. The lean to itself clearly post-dates the phase 3 building as it is built against it.
- 4.1.6 The mill premises ceased as a paper mill in 1841, was occupied by cloth manufacturers in the 1850s, market gardeners in the 1860s and by a cabinet maker after 1875. Without knowing the precise date of construction it is difficult to guess which phase of use phases 3 & 4 related to. It may have been intended as a cart shed cum stable cum hayloft/storage building for the laundry which would have had a lot of carts arriving and leaving or for a large market garden or a store cum workshop for a cabinet maker.

- 4.1.7 Possibly it was built as the former and converted to the latter. The open sides were infilled and internal stairs inserted, and a small room partitioned off in the north east corner. This may have happened after 1875 to make the structure more useful as a cabinet-making workshop. A power source and machinery was installed later and evidence of this remains in the form of shafts and pulleys for belt drives on both floors and a circular saw bench on the ground floor.
- 4.1.8 The cabinet-making ceased around 1905 and the property may have been unused for a few years. In 1921 the site was purchased for use as a farm and remained so until 1987. Changes made in the later 20th century for farm use include wooden hay racks and feed bins in phase 1 and similar in the lean-to. The east end of the lean-to was fitted out as a milking parlour and an extra room was partitioned off at the east end of the ground floor of phase 3. The two small rooms were then rendered and lined out with lath and plaster ceilings to create a dairy and sterilisation room for milk production. The western bays of the lean-to were crudely partitioned off for use as livestock pens.
- 4.1.9 After closure of the farm business the site remained unused until purchased for the present conversion to residential use.



5 BIBLIOGRAPHY

Written Sources

Brunskill R.W. 1985 *Timber Building in Britain*

Campbell J. W. P. 2000 'Naming the Parts of Post-Medieval Roof Structures' in *Vernacular Architecture* **31**, 45-51

Davenport P. 2001 *De Montalt Mill, Bath: Historic Building Impact Assessment* (Bath Archaeological Trust unpublished Client Report)

Cartographic Sources

Allen estate map 1761

OS Map 1886

OS Map 1904

OS Map 1932

Other Sources

<http://www.imagesofengland.org.uk/>



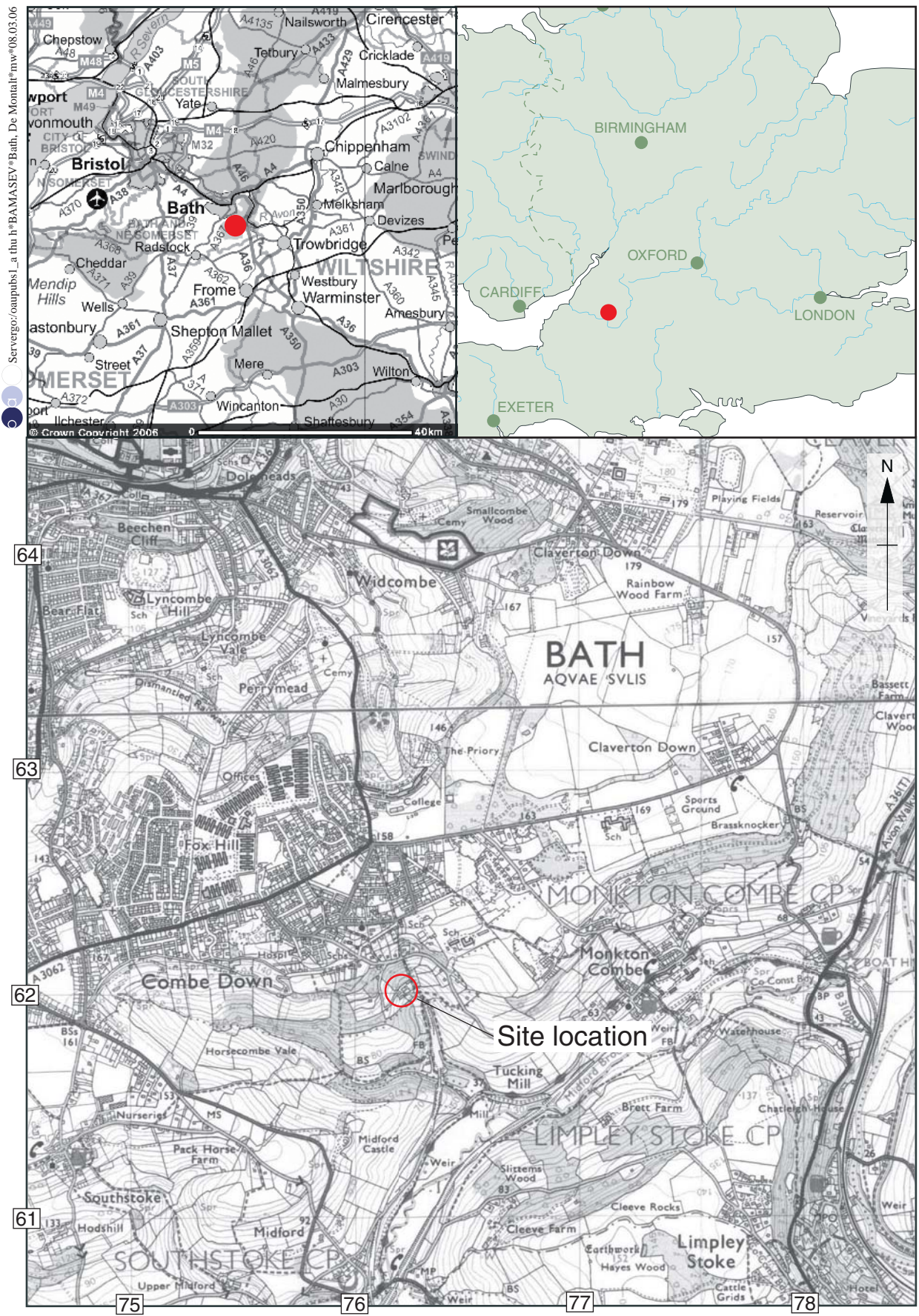
APPENDIX I LISTED BUILDING DESCRIPTION

IoE number: 447483
Location: DE MONTALT WORKS (SOUTH RANGE), SUMMER
LANE
BATH, BATH AND NORTH EAST SOMERSET,
SOMERSET
Date listed: 05 August 1975
Date of last amendment: 05 August 1975
Grade II

1. SUMMER LANE
823 COMBE DOWN
De Montalt Works
(South Range)

ST 76 SE 4/1632

1. SUMMER LANE 823 COMBE DOWN De Montalt Works (South Range) ST 76 SE 4/1632 II 2. Early C19 'prentice shop and stores. 2 storey ashlar range of workshops. 3 groups of 3 casements close set beneath eaves of slate roof. Adjoining to west is 2 storey rubble waggon/coach house block with pantile roof, 2 hatches 1st floor and plain stone mullioned window. Stable door and coach house doors.



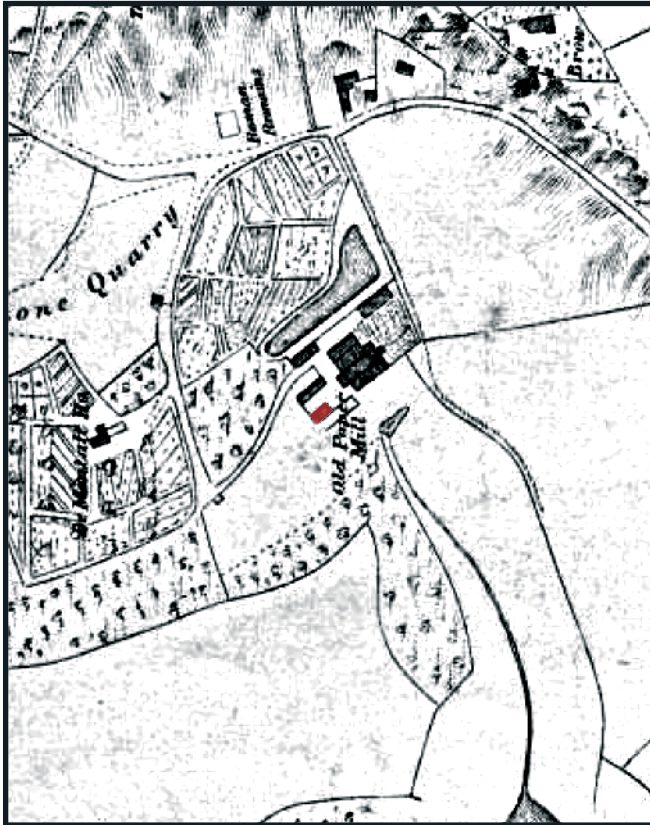
Scale 1:25,000

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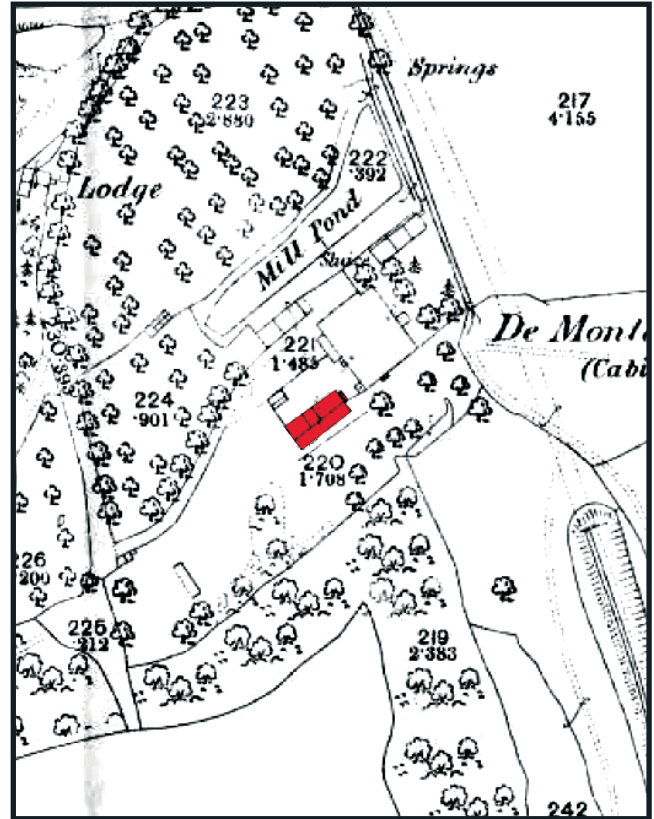
Figure 1: Site location



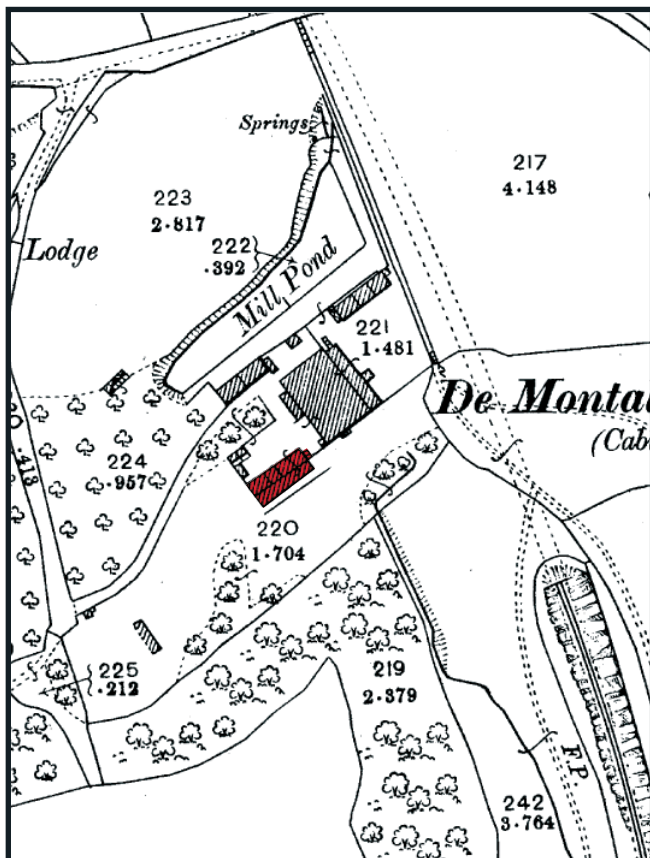
Figure 2: Site plan (based on a survey by H.J. Rees & Company Ltd, Chartered Land Surveyors)



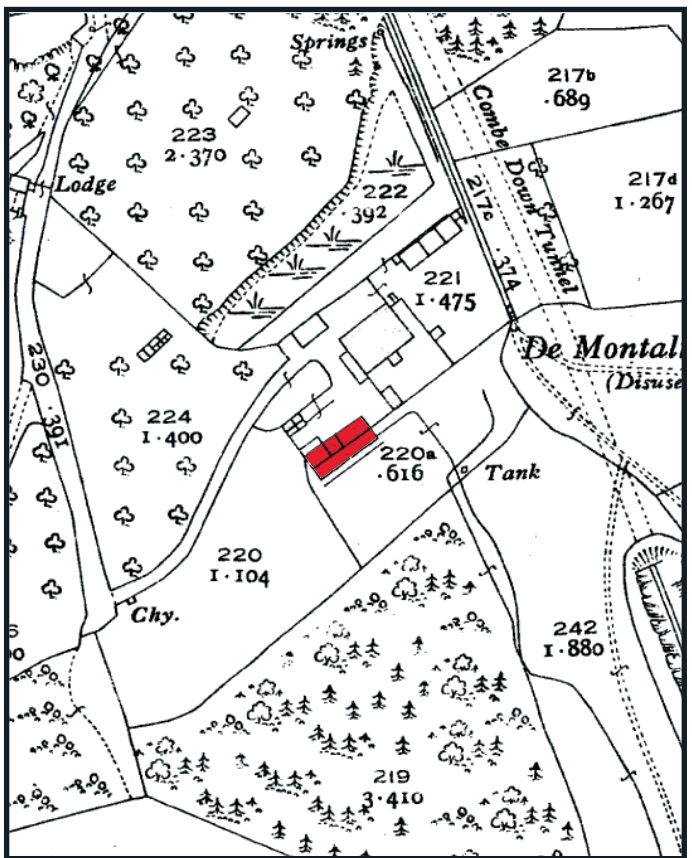
1852 map (Cotterell and Spackman)



1886 Ordnance Survey Map

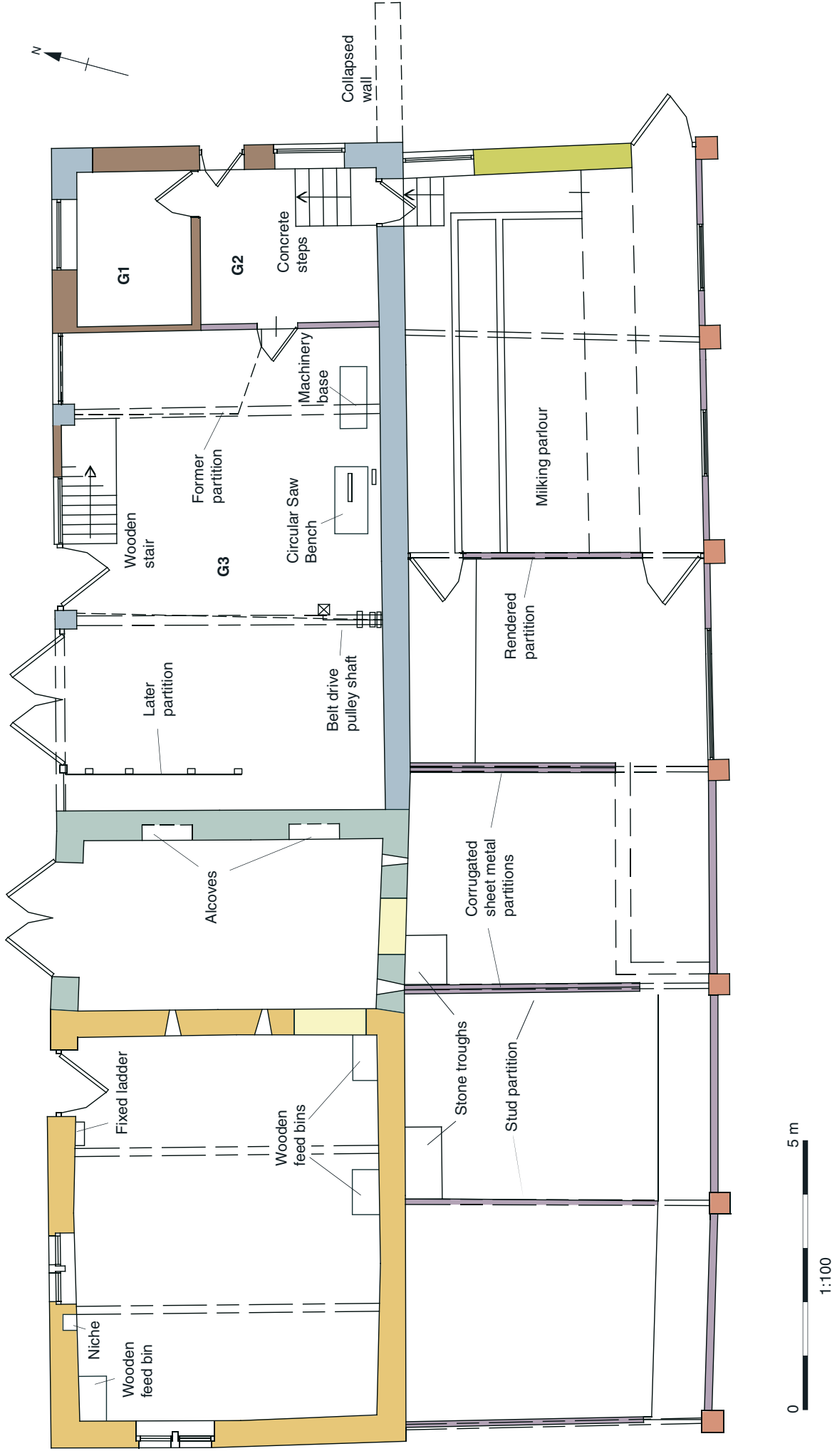


1904 Ordnance Survey Map



1932 Ordnance Survey Map

Figure 3: Historical maps.



Key

- | | | | |
|--|--------------------------|--|---|
| | Phase 1 | | Secondary infill |
| | Phase 2 | | Lean-to store |
| | Blocking of openings | | Enclosed east end of lean-to |
| | Phase 3 - probably 1870s | | 20th Century infill and partition walls |

Figure 4: Phased ground floor plan.

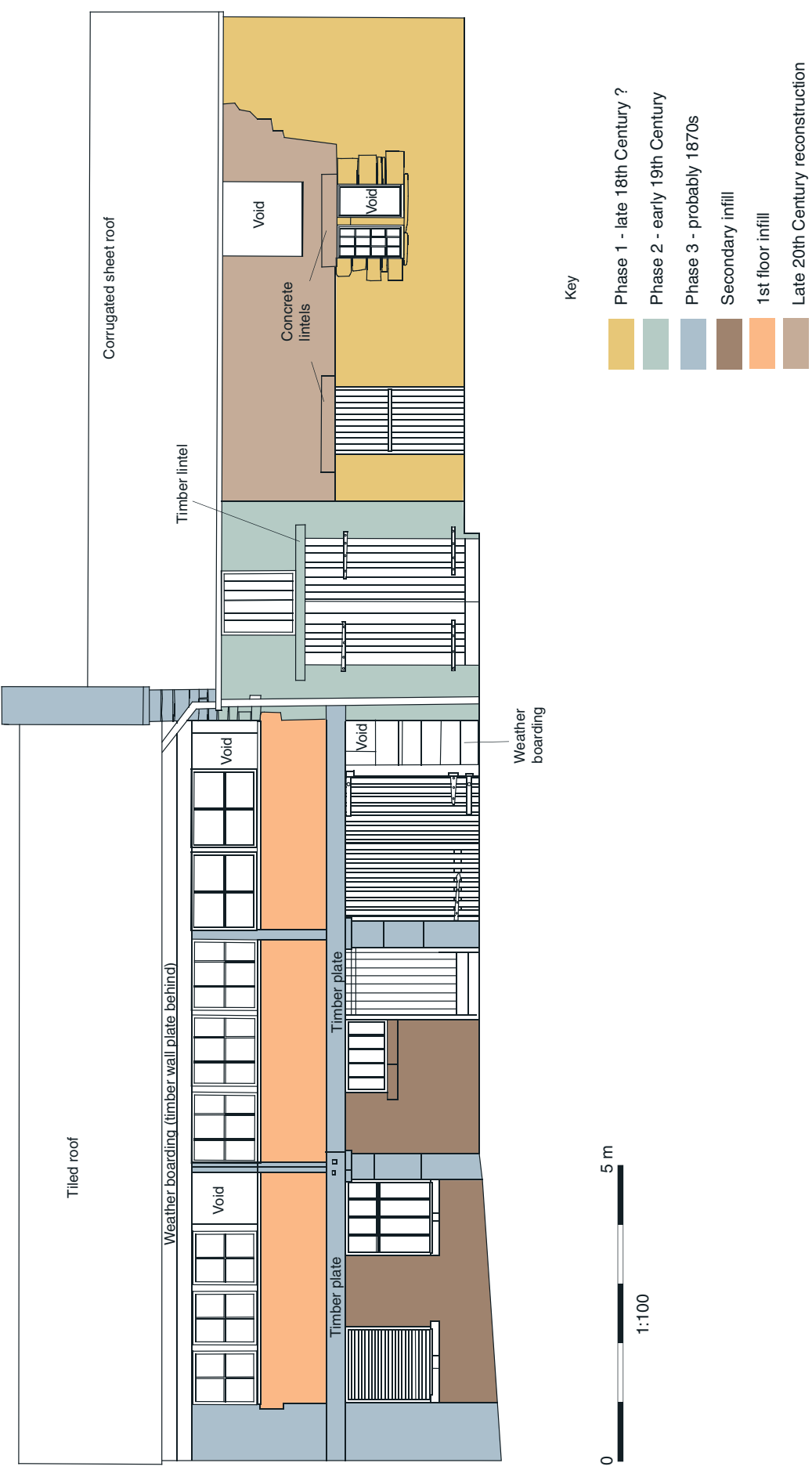


Figure 5: North elevation

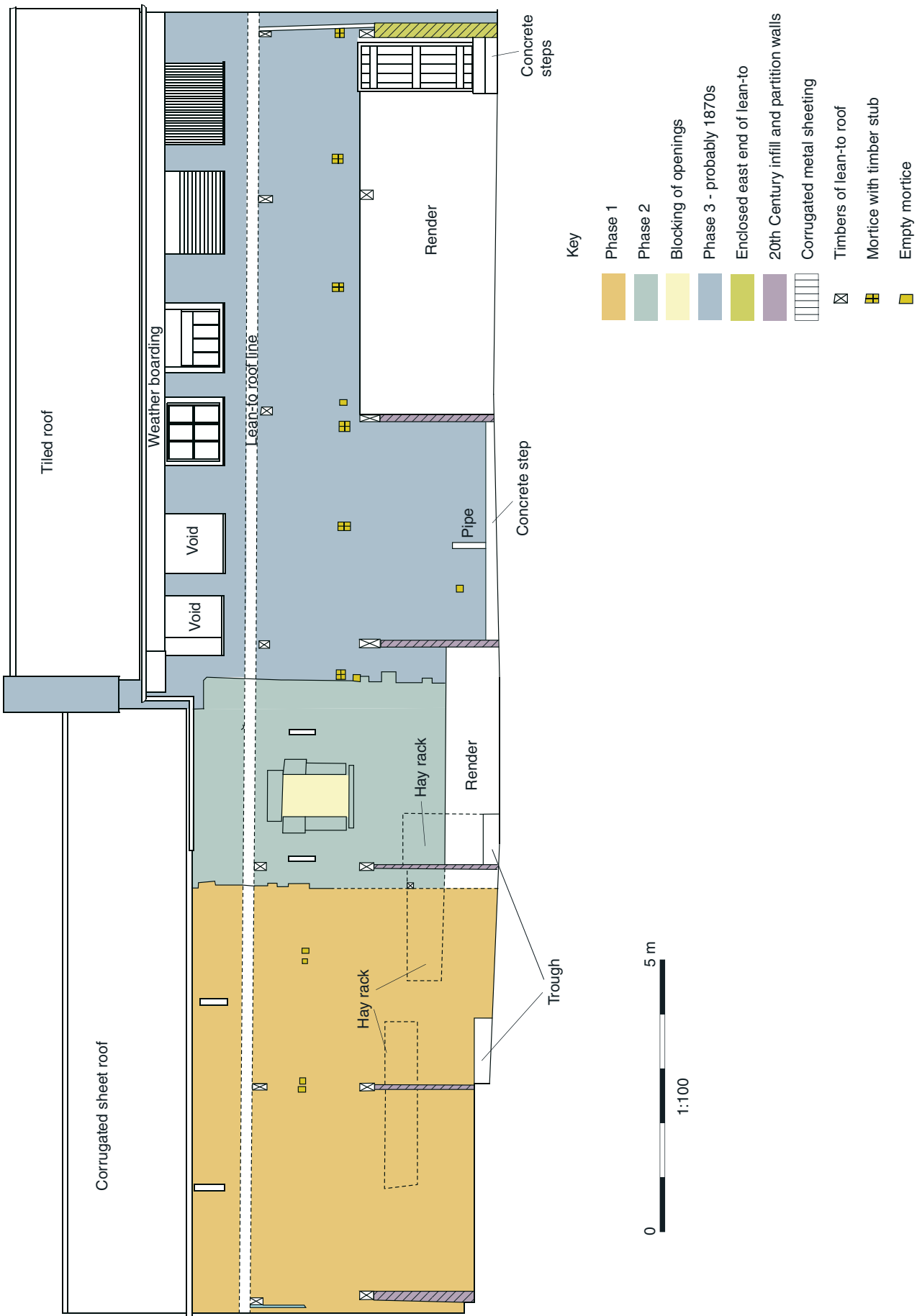


Figure 6: South spine wall elevation.

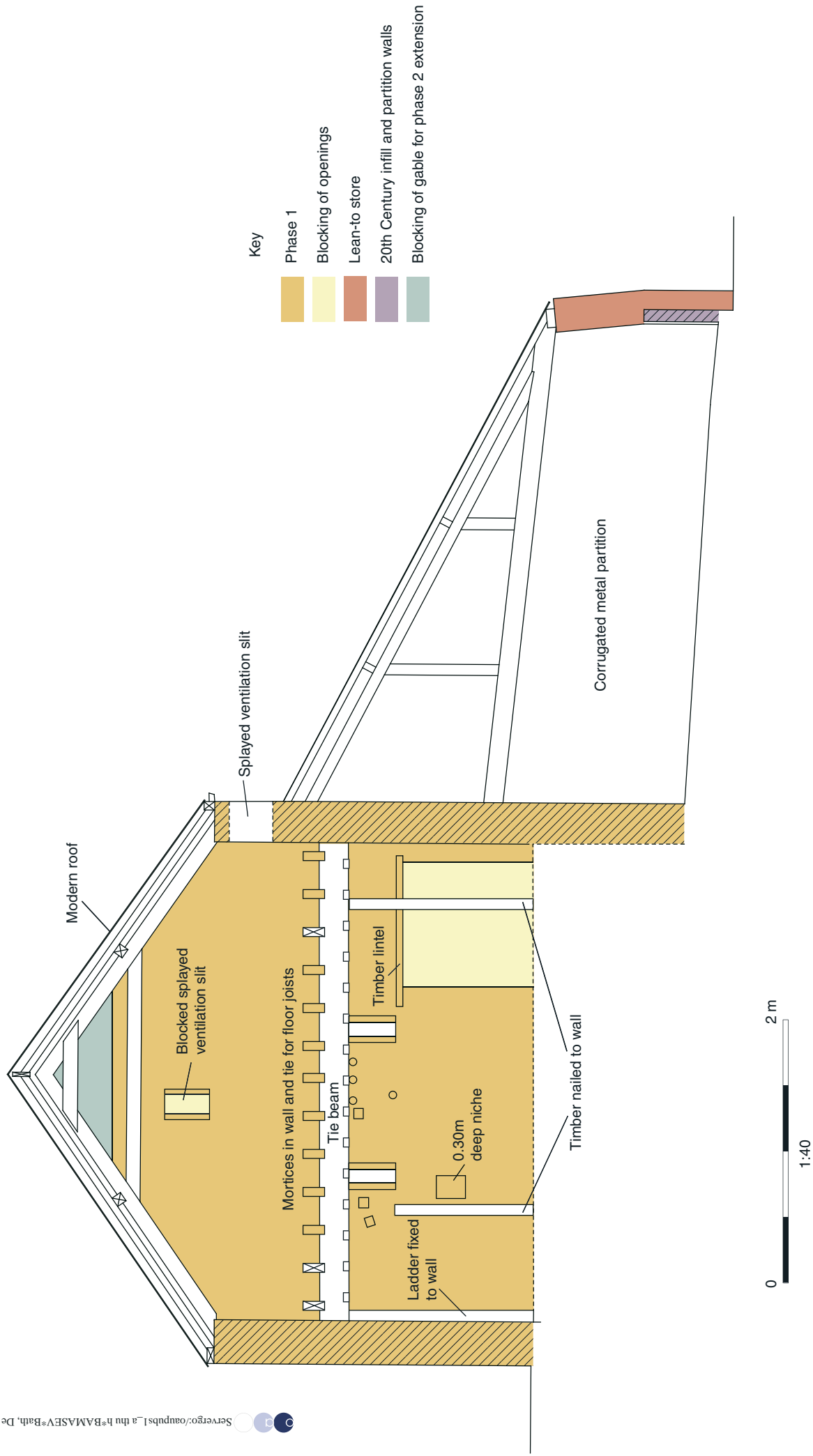


Figure 7: West facing section and elevation of Byre.

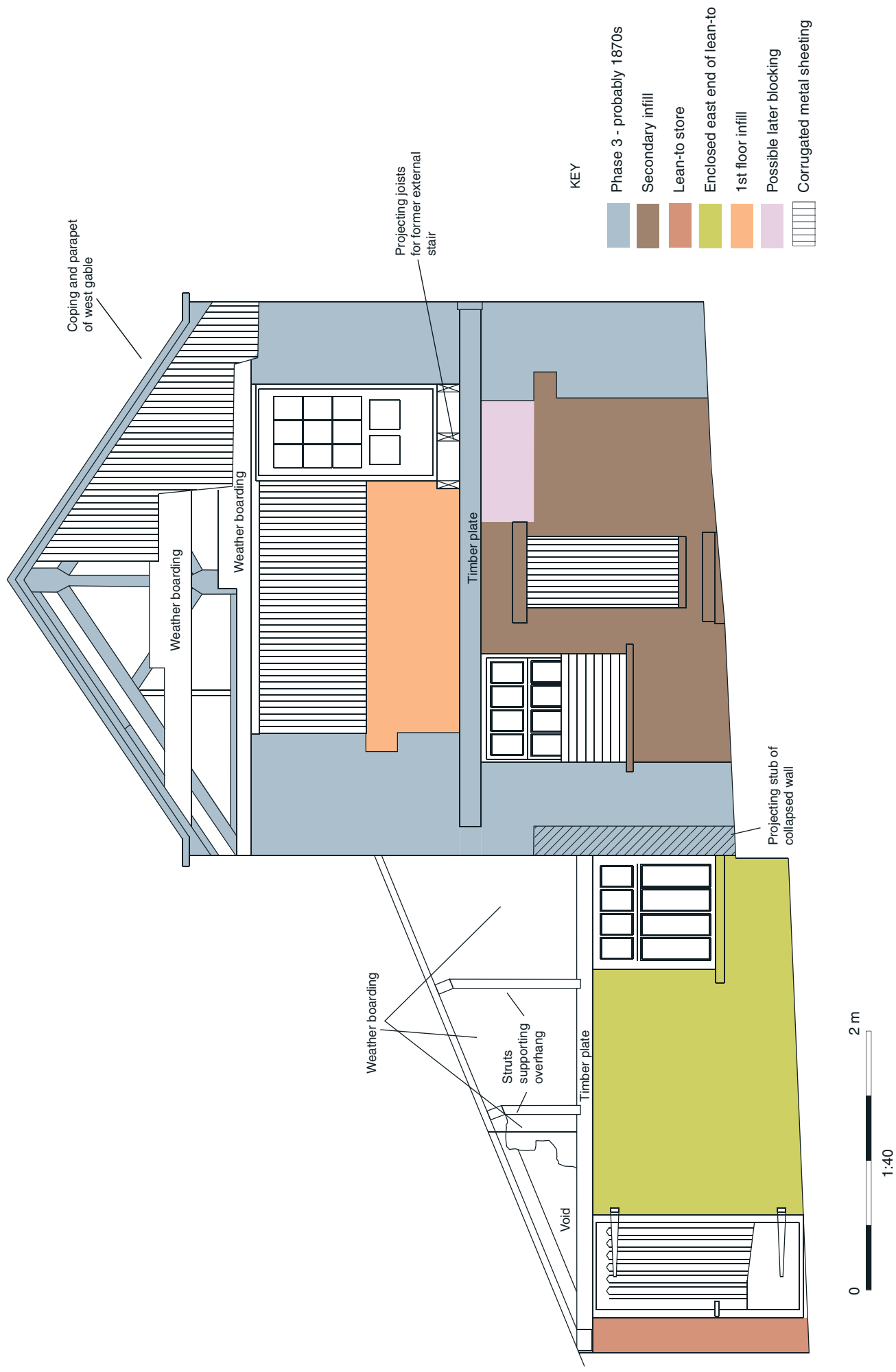


Figure 8: East elevation.

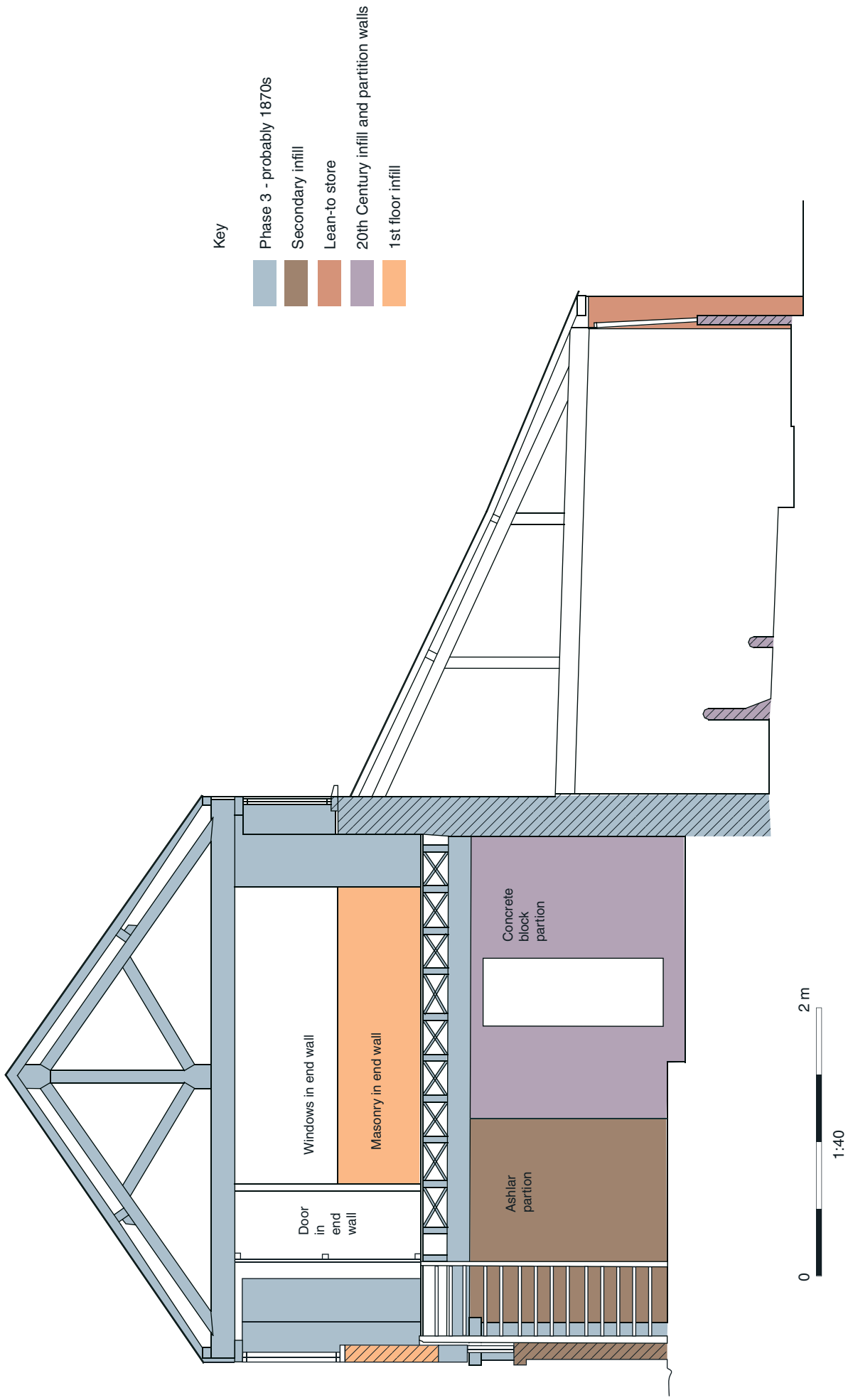


Figure 9: West facing section and elevation of Timber Store.

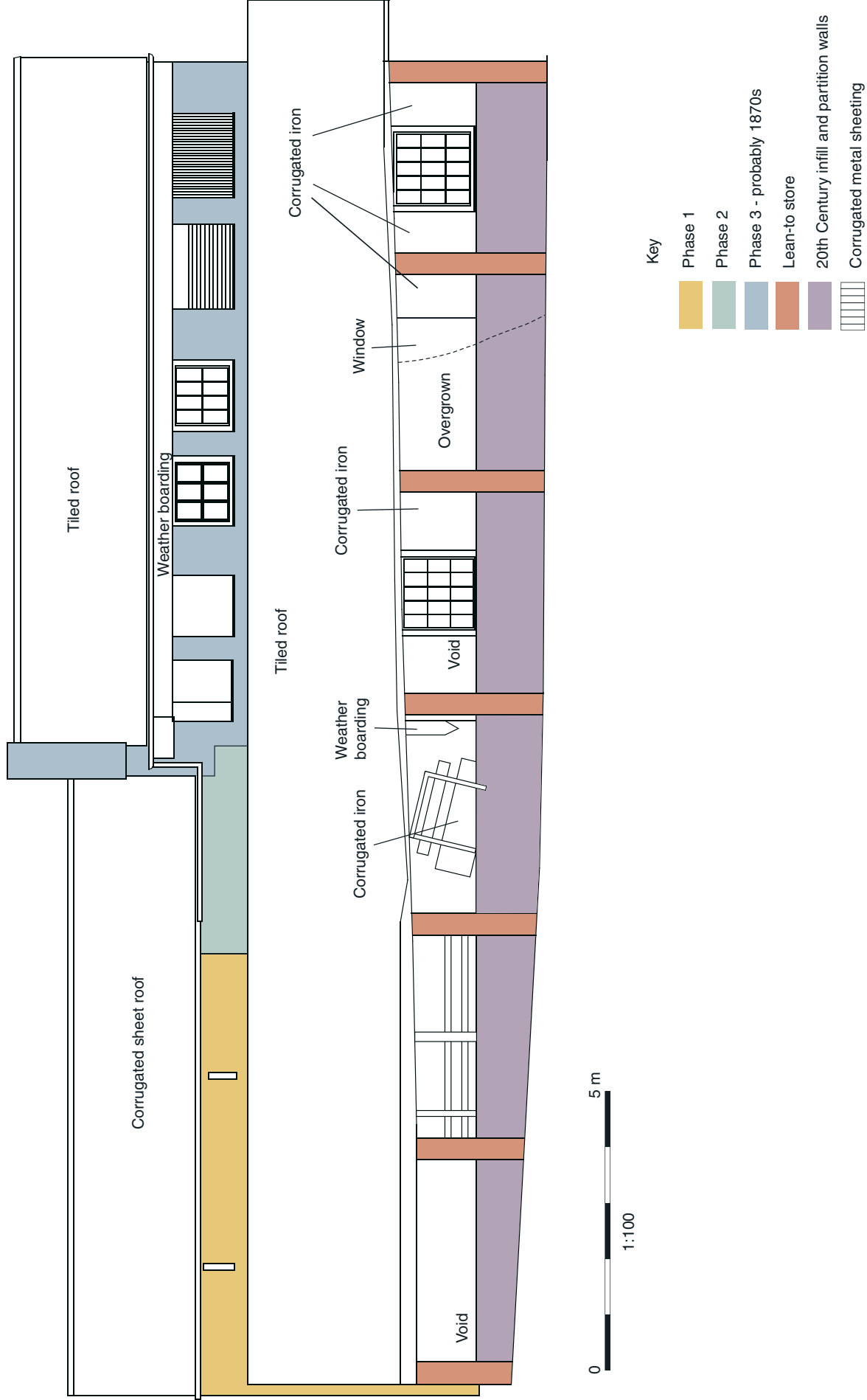


Figure 10: South elevation.



Plate 1: North front looking south-west.



Plate 2: Phases 1 and 2 looking north, phase 1 on right.



Plate 3: West end gable wall.



Plate 4: Phase 3 looking south east.



Plate 5: East end gable wall looking north-west.



Plate 6: South elevation looking north-east.