

FFSH/01



# THE OLD FURNACE BUILDINGS, FURNACE FARM

## HISTORIC BUILDING RECORDING AND GROUND MONITORING

commissioned by Savills  
on behalf of Trustees of Sir RAB Mynors, Treago Settlement

DMS/102491/F

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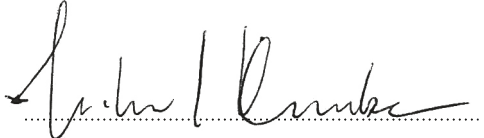
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## PROJECT SUMMARY

Herefordshire Council issued a planning requirement for the archaeological survey and recording of two buildings at Furnace Farm to a RCHME level 2 (planning application DMS/102491/F). This work was required in advance of the conversion of the buildings to residential dwellings.

The Buildings at Furnace Farm represent a small portion of a complex of buildings that were once associated with a significant historical period of industrial iron production within the largely rural county of Herefordshire.

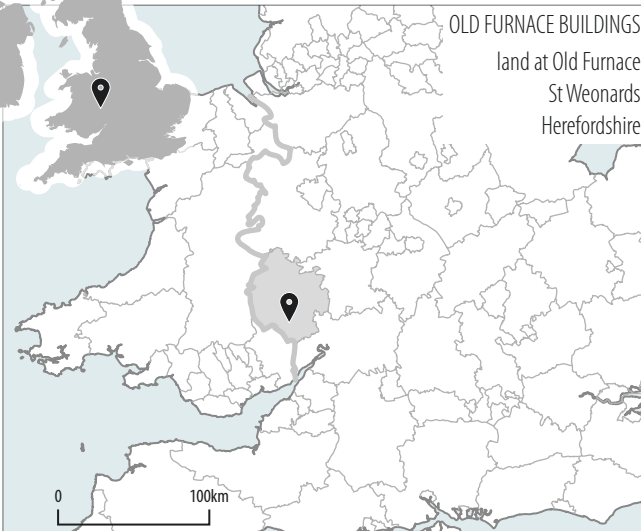
The buildings have subsequently been adapted from their original functions and now reflect their later agricultural use. From the survey results it is uncertain as to the exact function the buildings played in the manufacture of iron, but they still retain sufficient evidence to illustrate their previous use and to mark them out as different from simple agricultural buildings.

# CONTENTS

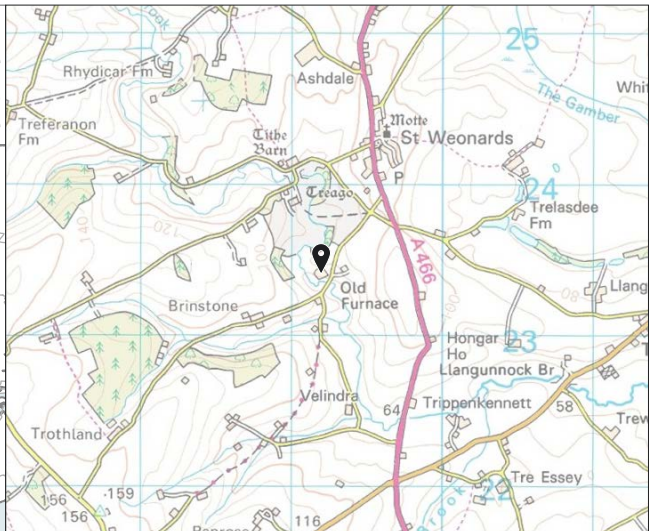
1	<b>INTRODUCTION</b>	1
2	<b>SITE LOCATION</b>	1
3	<b>OBJECTIVES</b>	1
4	<b>METHOD</b>	1
	4.1 DOCUMENTARY RESEARCH	1
	4.2 GROUND MONITORING	1
	4.3 BUILDING RECORDING	2
	Archaeological and historical background	2
5	<b>WATCHING BRIEF</b>	2
6	<b>BUILDING SURVEY</b>	2
	6.1 BUILDING 1	13
	Summary	13
	North elevation	13
	East elevation	13
	West elevation	14
	South elevation	15
	Building 1: Internal A1	17
	Building 1: Internal A2	17
	Building 1: Internal A3	18
	Building 1: Roof details	18
	6.2 BUILDING 2	19
	Summary	19
	East elevation	19
	South elevation	19
	West elevation	21
	Building 2: Roof details	21
	Building 2: Internal B1 and B2	21
	Building 2: Internal B3	22
	Building 2: Internal B4	22
	Building 2: External staircase	22
	Outbuildings	22
7	<b>DISCUSSION</b>	22
8	<b>CONCLUSION</b>	22
9	<b>BIBLIOGRAPHY</b>	22
	9.1 ONLINE REFERENCES	23
10	<b>APPENDICES</b>	24
	APPENDIX 1 PHOTOGRAPHIC REGISTER	24

# LIST OF ILLUSTRATIONS

<b>ILLUS 1</b> SITE LOCATION	VIII
<b>ILLUS 2</b> PLAN SHOWING MAIN PHASES OF CONSTRUCTION	3
<b>ILLUS 3</b> EAST ELEVATION SHOWING MAIN PHASES OF CONSTRUCTION	5
<b>ILLUS 4</b> WEST ELEVATION SHOWING MAIN PHASES OF CONSTRUCTION	7
<b>ILLUS 5</b> NORTH AND SOUTH ELEVATION SHOWING MAIN PHASES OF CONSTRUCTION	9
<b>ILLUS 6</b> PLAN SHOWING PHOTO DIRECTIONS	11
<b>ILLUS 7</b> VIEW OF ORIGINAL MORTAR (135)	13
<b>ILLUS 8</b> PROJECTING MASONRY IN THE NORTH WALL OF BUILDING 1 (049)	13
<b>ILLUS 9</b> BUTTRESS AND RETAINING WALL, INDICATING THE LOCATION OF A POSSIBLE DEMOLISHED BUILDING (128)	13
<b>ILLUS 10</b> LATER INSERTED WINDOW WITHIN AN ORIGINAL DOORWAY IN BUILDING 1 (124)	14
<b>ILLUS 11</b> BLOCKED FIRE PLACE WITHIN THE NORTH WALL OF A2, BUILDING 1 (052)	14
<b>ILLUS 12</b> LATER INSERTED DOORWAY BUILDING 1 (109)	14
<b>ILLUS 13</b> BUILDING 1, WEST ELEVATION	15
<b>ILLUS 14</b> LANCET WINDOW WITH LATER BLOCKING AND DELIBERATE WIDENING (105)	15
<b>ILLUS 15</b> BLOCKED DOOR WAY, WEST ELEVATION, BUILDING 1 (106)	15
<b>ILLUS 16</b> CHANGE IN FINISHES INDICATING LOCATION OF DEMOLISHED BUILDING AND LATER ROOF LINE, BUILDING 1, WEST ELEVATION (110)	15
<b>ILLUS 17</b> BLOCKED WINDOWS, SOUTH FACING GABLE, BUILDING 2 (056)	16
<b>ILLUS 18</b> CUT BACK RECESS, SOUTHERN FACING ELEVATION, BUILDING 1(101)	16
<b>ILLUS 19</b> ARCHED OPENINGS, BUILDING 1, A1 AND LATER BLOCKING (008)	17
<b>ILLUS 20</b> LARGE RECTANGULAR OPENING BETWEEN A1 AND A2, BUILDING 1 (010)	17
<b>ILLUS 21</b> SMALLER ARCH, BUILDING 1, A1 AND POOR BONDING OF SOUTHERN GABLE WALL (009)	17
<b>ILLUS 22</b> INSERTED DOORWAY, WEST ELEVATION , BUILDING 1, A2 (032)	18
<b>ILLUS 23</b> PROJECTING LINE OF CHIMNEY BREST A3, BUILDING 1 (045)	18
<b>ILLUS 24</b> BLOCKED WINDOWS AND CONVERTED WINDOW IN SOUTHERN ELEVATION, BUILDING 1, A3 (039)	18
<b>ILLUS 25</b> PROJECTING BUILDING LINE OF BUILDING 2 IN RELATION TO BUILDING 1 (121)	19
<b>ILLUS 26</b> CARVED INSCRIPTION, BUILDING 2 (016)	19
<b>ILLUS 27</b> BUILDING 2 EAST ELEVATION	20
<b>ILLUS 28</b> SOUTH FACING ELEVATION, BUILDING 2 (003)	20
<b>ILLUS 29</b> INTERNAL ROOF DETAILS, BUILDING 2 (034)	21
<b>ILLUS 30</b> BLOCKED DOORWAY AND INSERTED WALL, BUILDING 2, A1 (023)	21
<b>ILLUS 31</b> INTERIOR OF ROOM B2 SHOWING STRAP ROLLER	21
<b>ILLUS 32</b> ANGLED AND SEALED SKIRTING BOARDS, BUILDING 2, A4 (038)	21



OLD FURNACE BUILDINGS  
land at Old Furnace  
St Weonards  
Herefordshire



OLD FURNACE

GARREN BROOK

FURNACE  
BRIDGE

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# THE OLD FURNACE BUILDINGS, FURNACE FARM

## HISTORIC BUILDING RECORDING AND GROUND MONITORING

### 1 INTRODUCTION

A program of historic building recording and ground monitoring works was commissioned by Savills acting as Agent to the Client, Trustees of Sir RAB Mynors, Treago Settlement and conducted by Headland Archaeology (UK) Ltd. The work was required in response to a condition placed on the planning permission (Planning application DMS/102491/F) granted by Herefordshire Council for the conversion of the old furnace buildings, into separate residential accommodation within the grounds of Furnace Farm, St Weonards, Herefordshire.

The planning condition stated that the developer must secure the implementation of a program of archaeological survey and recording [to include recording of the standing fabric and any below ground deposits affected by works]. The building recording works conducted by Headland Archaeology represent the first phase towards satisfying the planning condition.

In accordance with the planning condition a Written Scheme of Investigation for the survey and recording works was submitted and approved in writing by the local planning authority (Mayes 2013).

During a site visit on the 17th of April 2013, Headland Archaeology carried out the initial archaeological program of works, comprising survey and recording of the old furnace buildings (see Illus 1) within the grounds of Furnace Farm (NGR SO 49190 23384).

The first phase of ground monitoring work to create a new entrance into the site was conducted on 14th of September 2013 and monitored by Headland Archaeology staff. No further work has been conducted on the site in relation to the proposed development and it is understood that the intention is to sell the site with planning permission in place.

### 2 SITE LOCATION

The Furnace Farm building complex is situated amidst the undulating countryside on the historic Treago Estate, just to the southwest of St Weonards on the border of Monmouthshire and Herefordshire with the Garren Brook bordering the site boundary approximately 20m to the south and west (see Illus 1).

The site comprises of a range of redundant stone agricultural/ industrial buildings that sit due east of the main farmhouse, within a possible man-made hollow, cut into the gently sloping south west facing side of the valley. For the purposes of this report only two of the buildings within the complex were examined.

The underlying geology is sandstone of the Brownstones Formation. This sedimentary bedrock formed approximately 398 to 416 million years ago in the Devonian Period when the local environment was dominated by rivers. No superficial deposits have been recorded at Furnace Farm, but deposits of alluvium are present within the river channels of the wider area, including the Garren Brook.

### 3 OBJECTIVES

The objective of the building survey was to produce annotated plans and a photographic record of the structure and gather primary and secondary historical information that would place the building in its architectural, social, and economic context.

### 4 METHOD

#### 4.1 DOCUMENTARY RESEARCH

The Hereford Record Office and Hereford Library were visited, and historic maps were consulted and searched for references relating to the buildings at Furnace farm. Copies of books on local history were also consulted, although given the general nature of most of the texts there was little of direct relevance that could be obtained from the sources consulted.

#### 4.2 GROUND MONITORING

As part of the planning conditions for the conversion of the buildings any below ground works associated with the development required that a programme of archaeological monitoring be conducted during the works.

### 4.3 BUILDING RECORDING

The existing building was recorded in plan, on all floors and in section by the architect; the drawings were then annotated during the building survey.

A comprehensive photographic record of the building was made, on colour transparency and black and white print, on 35 mm SLR cameras. Digital images were also taken to provide images for illustrative purposes. Appendix 1 comprises a register of all the photographs taken for the survey. Illus 6 is a plan showing the location and direction of the photos.

#### Archaeological and historical background

The history and significance of iron making in the county of Herefordshire and the role the furnaces at St Weonards played is detailed in a book written and researched by John van Laun 17th Century Iron Making in South West Herefordshire, which suggests that 'St Weonards furnace and Llancillo forge were probably established by the time of the Civil War as a Richard Kemble is reported as Clerk to the two concerns during the plundering of the Scots in 1643' (van Laun 1979: 55).

Referred to in an unpublished handout, the history and development of the furnace at St Weonards is closely related to the development of neighbouring furnaces, indicating a close economic connection in the production of iron within Herefordshire.

'Pontrilas Forge was established before 1623 and together with Peterchurch Forge, was held by the Hall family. In 1671 the Foley family entered upon the first of a series of agreements that were to continue until 1736 with one or more parts of the complex. Paul Foley acquired a one half share with William Hall, comprising the furnace and the three forges. By 1674 Paul Foley had taken his brother Philip into partnership with all his Forest of Dean undertakings including the St Weonards complex. It was intended to buy out Hall. In 1677/8, the value of bar iron sent from the three forges to Monmouth storehouse was over £3,000. The following year the brothers showed an interest in disengaging themselves from the complex and in 1683 went as far as drawing up an agreement with William Hall and his brother to hand back Llancillo and Pontrilas, Peterchurch having remained Hall property all along, but on lease to the Partnership. In 1692 an entirely new 'Ironworks in Partnership' was drawn up by the Foleys and the St Weonards complex was outside this. St Weonards furnace was blown out and Peterchurch and Llancillo forges continued to function drawing pig from Bishopswood and Redbrook furnaces' (van Laun 1979 unpublished hand-out available at [ewyaslacy.org.uk](http://ewyaslacy.org.uk))

The 'blowing out' of the furnace at St Weonards combined with the later closure of the Pontrillas forge resulted in a shortage of locally produced iron, this change in the supply and demand consequently led to the reinstatement of the furnace at St Weonards.

'About this time Pontrilas forge ceased operations. Because of the blowing out of St Weonards there was a shortage of locally produced pigs for the surviving forges and this led to the blowing

in again of the furnace in 1706, the furnace being readmitted to the Foley Partnership soon after. Llancillo forge drew pig iron from St Weonards but remained outside the Partnership. From 1717 to 1725 St Weonards was again independent. It was rebuilt in 1720 by William Rea and was carefully monitored for production after this period by the Partnership. Llancillo drew most pig iron from St Weonards and some 'cold-short' pig from Llanelly in the Clydach. In 1725 both the furnace and Llanelly forge returned to the Partnership. The furnace ceased production in 1731 and was disposed of around 1736/7' (van Laun 1979).

The history of St Weonards furnace as illustrated by John van Laun reveals that the furnace complex was part of a developing industrial landscape set within the relatively rural economy of Herefordshire, the iron works was flourishing by 1673 and was probably established at the time of the English civil war (1642), a period of decline resulted in the furnace being blown out in the late 17th century however a change in the economic outlook due to the closure of the Pontrilas forge resulted in the furnace being restarted or 'blown in' again in 1706, the furnace at St Weonards remained in use until production ceased in 1731.

## 5 WATCHING BRIEF

The proposed redevelopment of the Old Furnace buildings into residential accommodation has required the construction of a new entrance to the site with access from the main road.

Ground clearing excavation was conducted using a mechanical excavator and monitored by staff from Headland Archaeology. The complete road was not constructed at this stage of the works only the entrance from the highway was constructed.

The top surface was removed to a depth approximately 0.70m at the road edge grading to a depth of 0.30m, approximately 10m from the road edge. Within the makeup of the removed surface a large amount of vitrified slag was observed as well as the remains of a boundary wall that was apparently washed away in the floods of 1967 (pers comm). During the ground monitoring for the construction of the new highway entrance no datable finds were observed.

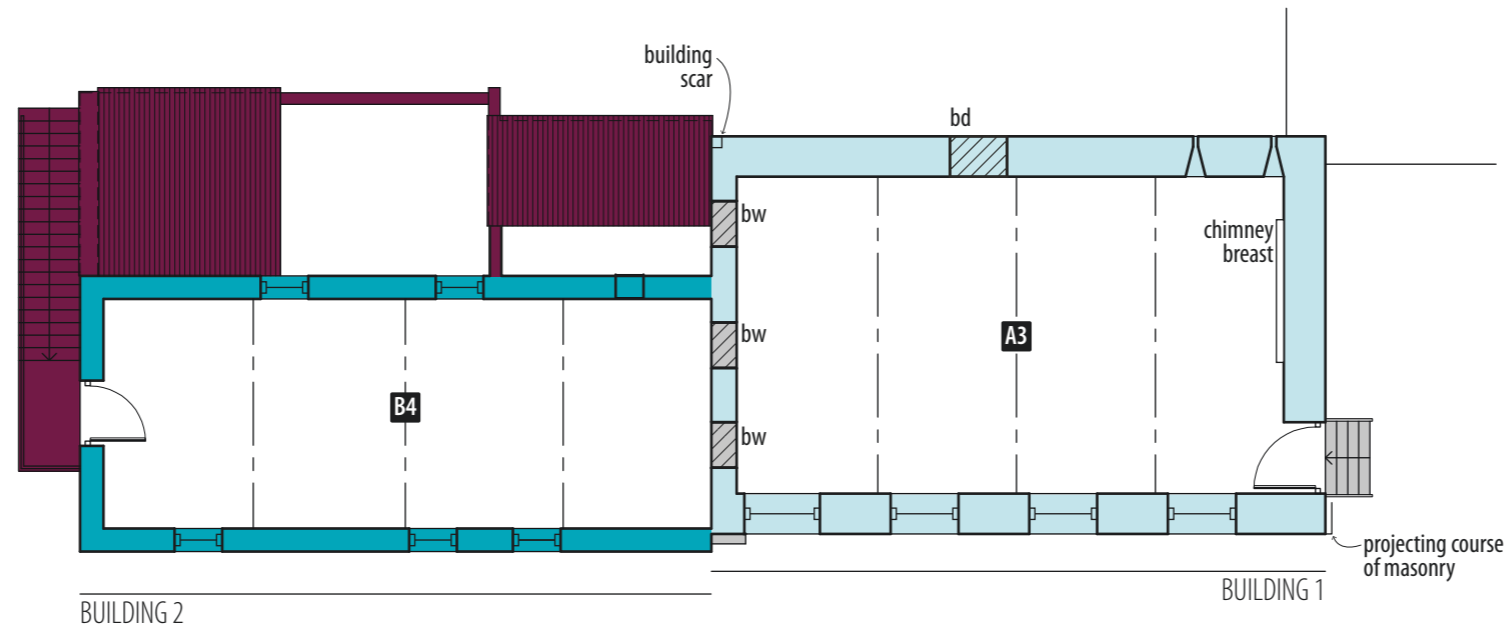
## 6 BUILDING SURVEY

The study buildings at Furnace farm form a small complex within a large hollow that is either naturally formed or has been enhanced or created by the large amounts of iron working waste products that have been dumped within the vicinity of the buildings.

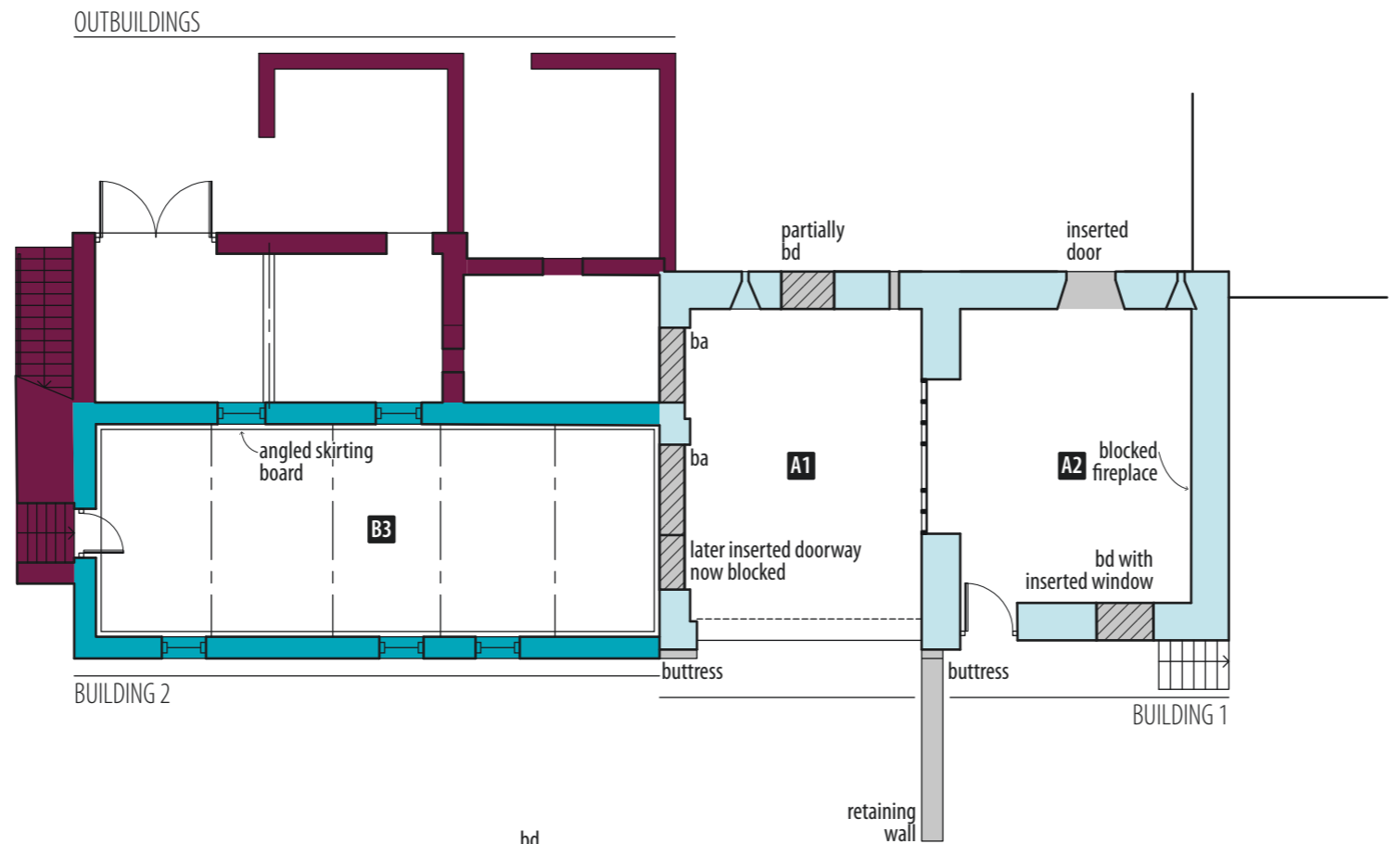
The study buildings currently form part of what was once a working farm, in 2001 the complex consisted eleven barns and sheds, but by 2014 only six remained, the change of use and subsequent development of the site has resulted in the original iron working complex being masked within and by the adaptation of the remaining buildings.

Three main phases of construction were identified (Illus 2-5), Building 1 being the earliest, with Building 2 added to its south end and later extended to the west.

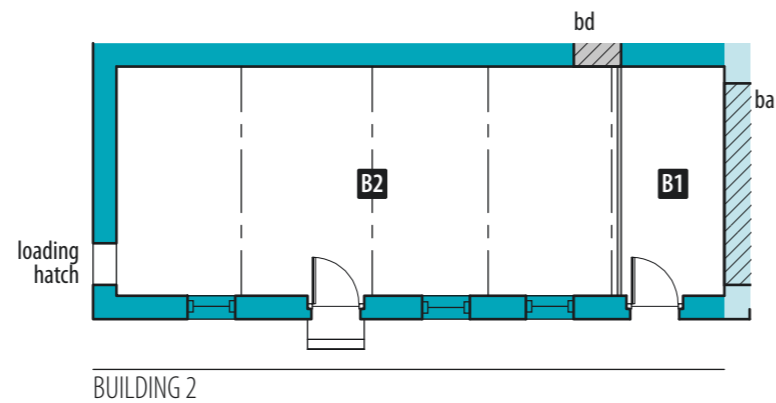
FIRST FLOOR PLAN



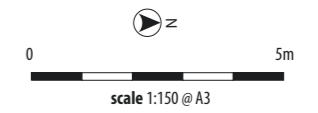
GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



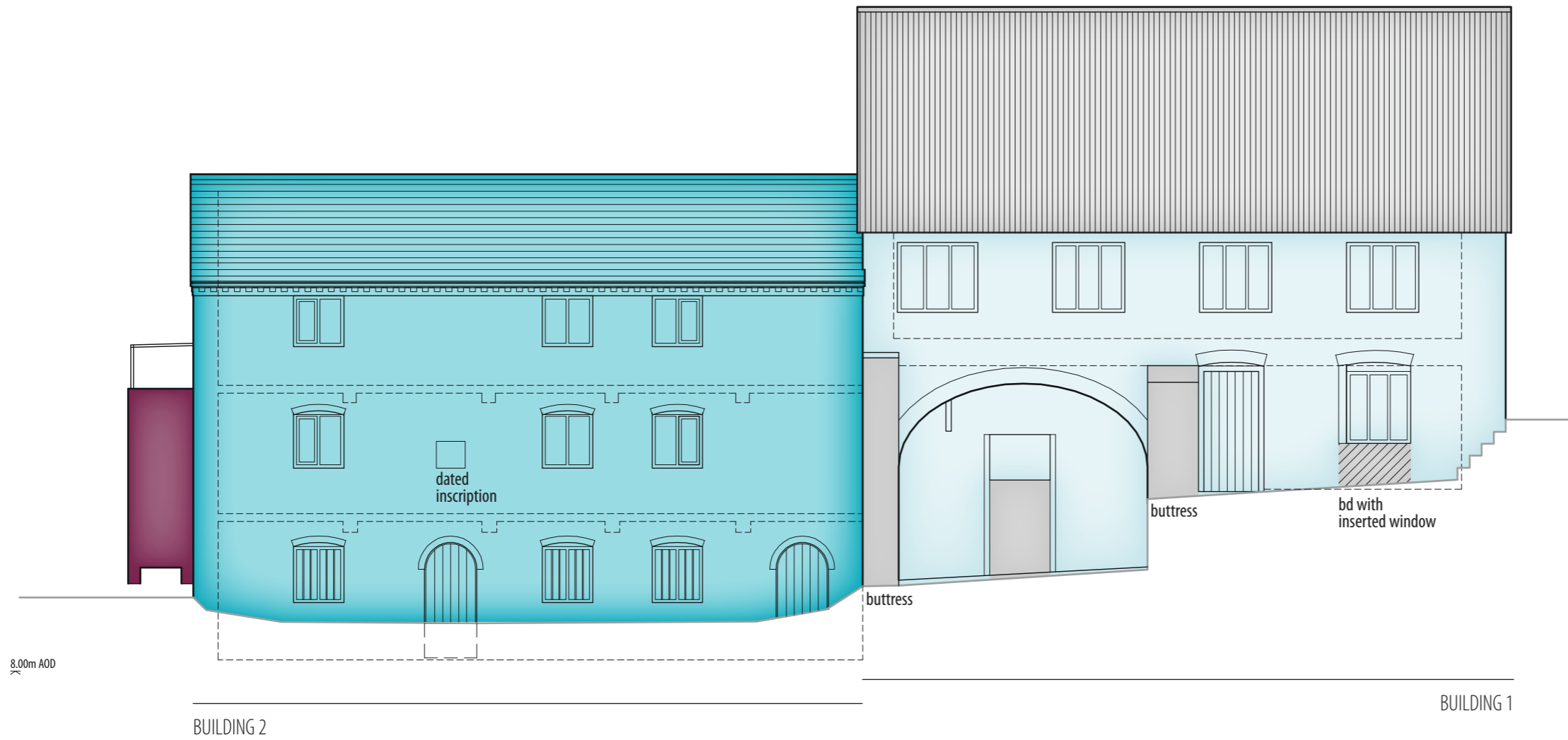
- CONSTRUCTION PHASES
- phase 1
  - phase 2
  - phase 3
  - undated alterations
  - bw** blocked window
  - bd** blocked doorway
  - ba** blocked arch



ILLUS 2 Plan showing main phases of construction





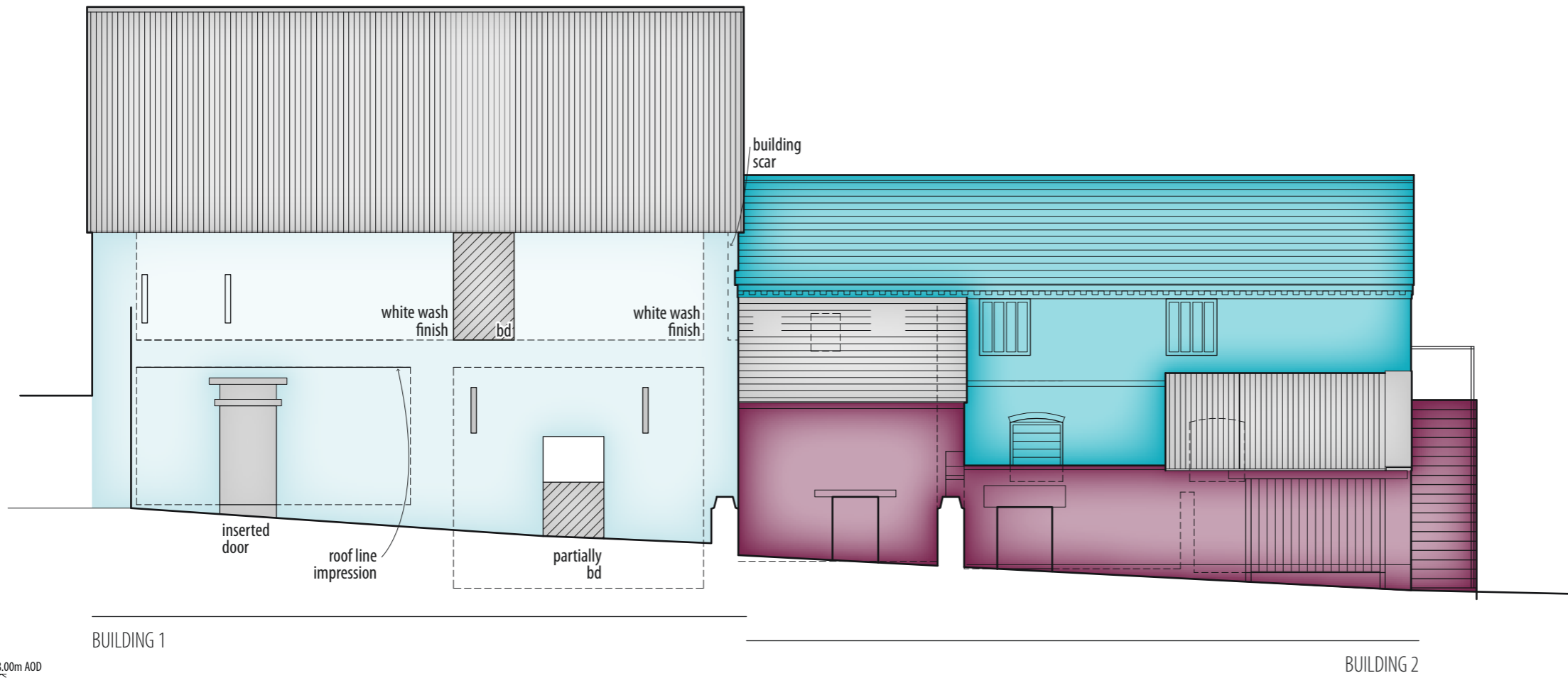


- CONSTRUCTION PHASES
- phase 1
  - phase 2
  - phase 3
  - undated alterations
  - bw blocked window
  - bd blocked doorway

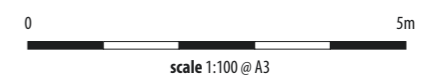
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ILLUS 3 East elevation showing main phases of construction





- CONSTRUCTION PHASES
- phase 1
  - phase 2
  - phase 3
  - undated alterations
  - bw** blocked window
  - bd** blocked doorway

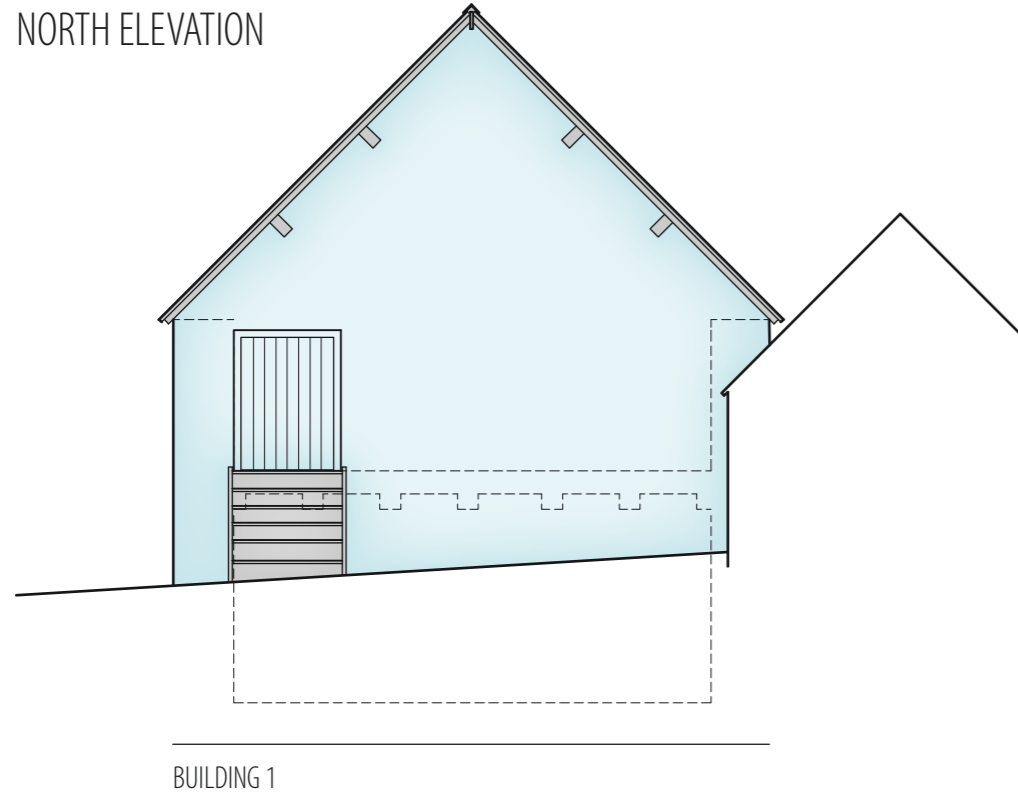


ILLUS 4 West elevation showing main phases of construction

8.00m AOD

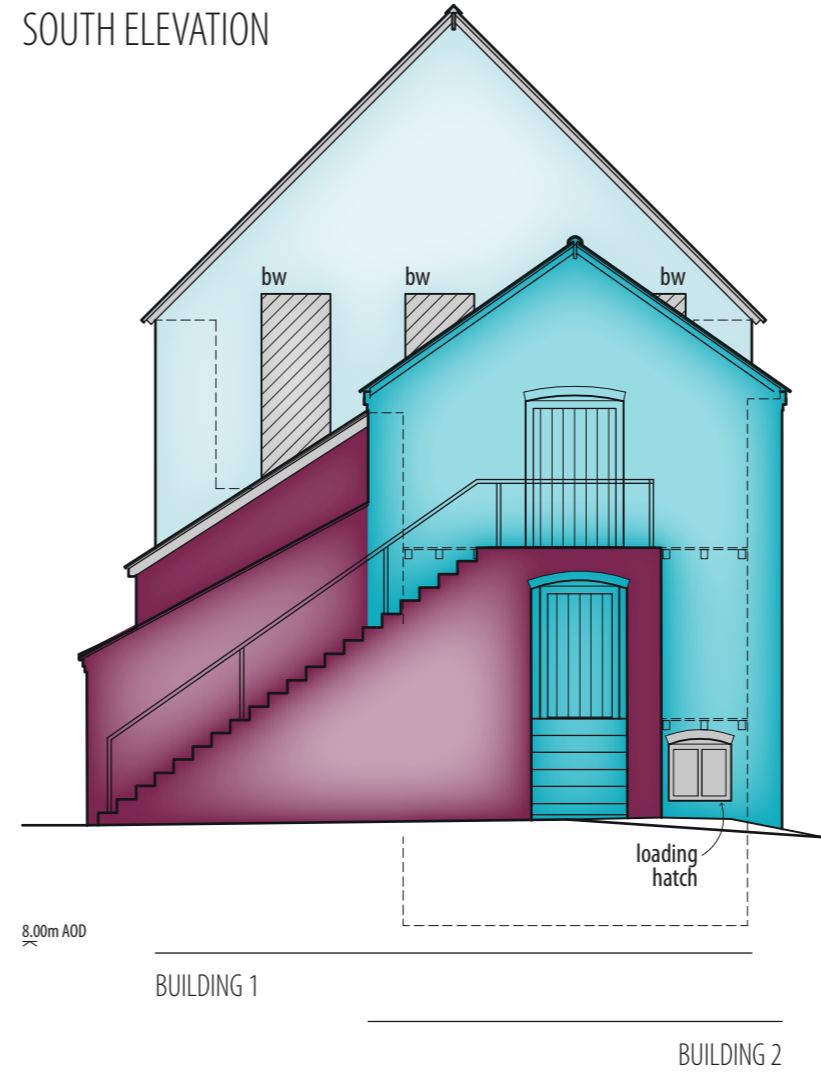


NORTH ELEVATION



8.00m AOD

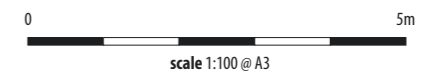
SOUTH ELEVATION



8.00m AOD

CONSTRUCTION PHASES

- phase 1
- phase 2
- phase 3
- undated alterations
- bw** blocked window
- bd** blocked doorway

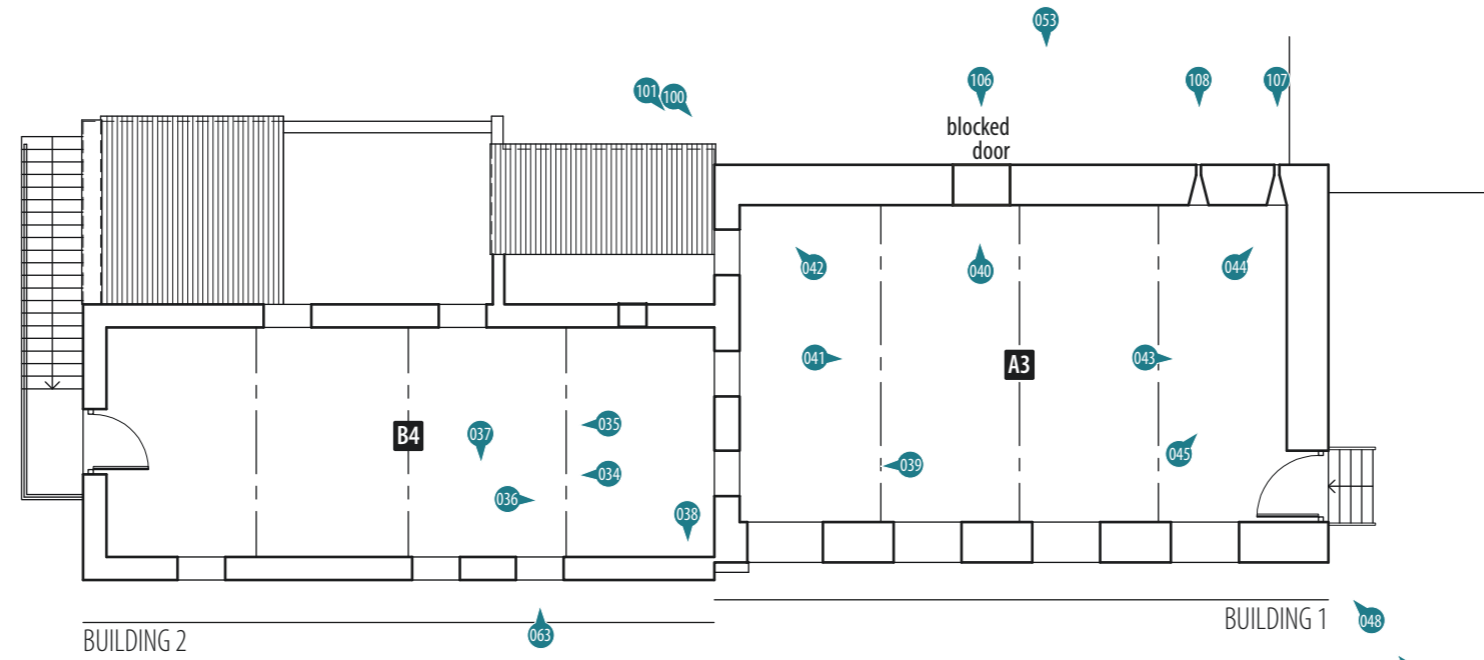


ILLUS 5 North and south elevation showing main phases of construction

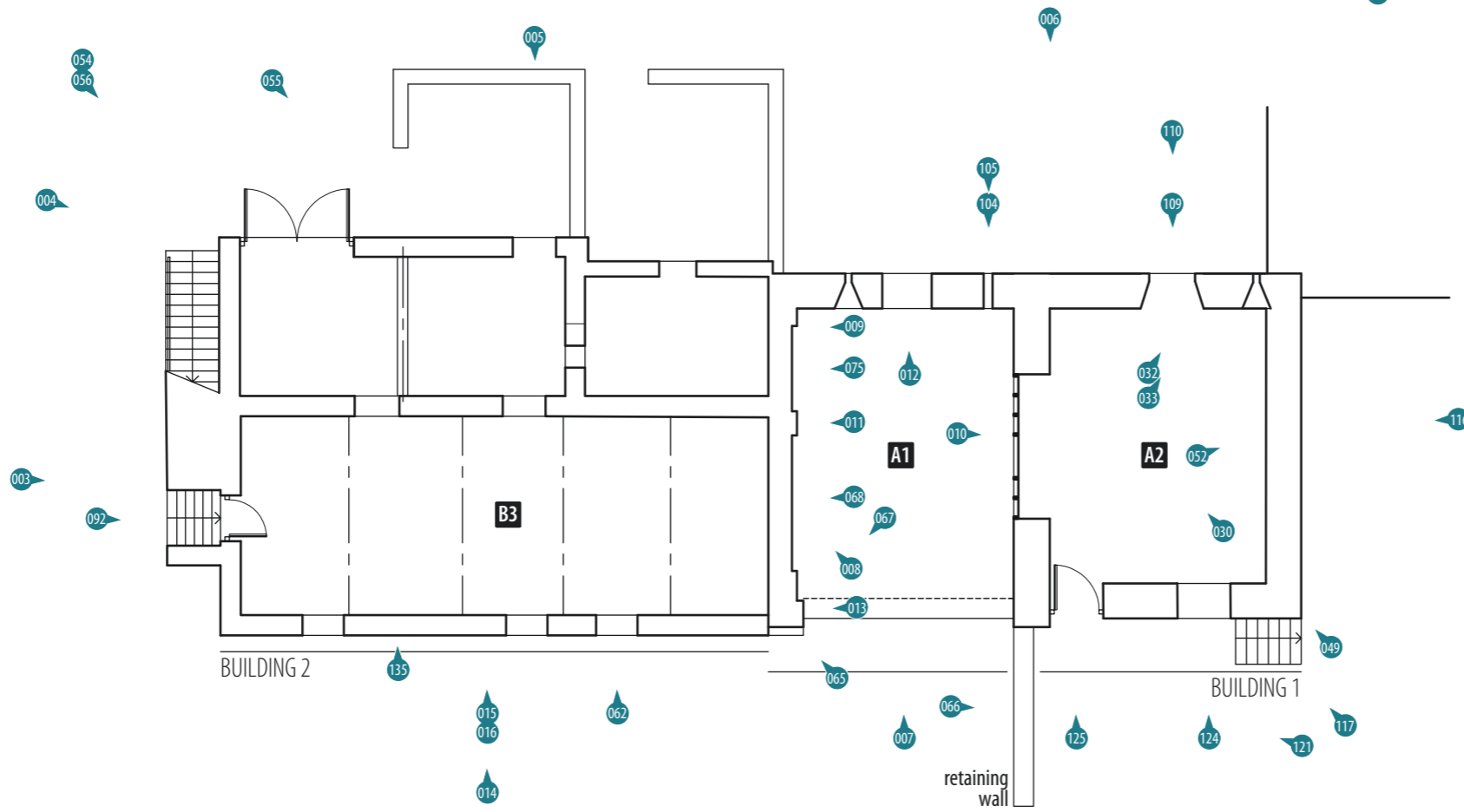




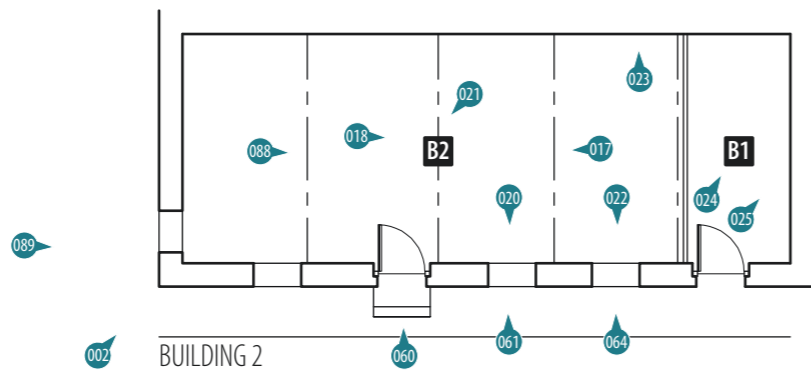
FIRST FLOOR PLAN



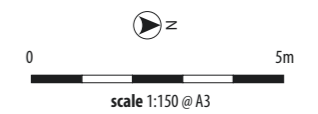
GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



KEY  
 photo directions



ILLUS 6 Plan showing photo directions





**ILLUS 7** View of original mortar (135) **ILLUS 8** Projecting masonry in the north wall of Building 1 (049) **ILLUS 9** Buttress and retaining wall, indicating the location of a possible demolished building (128)

## 6.1 BUILDING 1

### Summary

Building 1 is a two storey rectangular structure aligned north south and cut into the hill side resulting in the ground floor levels rising from 9.60m to 11.155m (site TBM) a difference of 1.55m north-south. The building has been re-roofed in black corrugated iron sheet. The building abuts Building 2 on the southern gable and is attached to another building (not part of the planning application) at the northwest corner (Illus 2).

The building is constructed in rough-hewn sand stone blocks of various dimensions and shapes, with an attempt to follow a levelled coursing albeit highly dependent on stone dimensions and shapes. Various stages of re-pointing have been undertaken, resulting in the external finish of the building being flush pointed with a mixture of cut back or weather joints. The style and abundance of flush pointing gives the building an impression of having an external render or white wash finish in places. The original mortar is red/pink colour, granular in appearance, containing inclusions of very small and small white flecks (0.01–0.04mm), where the mortar has been exposed to the elements it is relatively soft and crumbly (Illus 7).

### North elevation

Due to its positioning within the north-south slope, access to the upper floor of Building 1 was facilitated by an external wooden staircase of three flights, now in a derelict state (Illus 5).

At approximately the same height as the doorstep the north elevation steps out from the building line by approximately 0.15m, this may be an indication that a now demolished building or raised platform was once formed part of the northern elevation.

### East elevation

The east elevation of Building 1 contains a large open arched entrance which allows access into the ground floor, the slope of the hillside allows this part of the building to have a double height ceiling (Illus 3). To the north of the elevation a straight cut segmental arch window and doorway provide light and access to the ground floor room, respectively.

The main arch and doorway are divided at ground level by the construction of a buttress rising to the height of the segmental arch of the doorway. The buttress is located on the line of a stone built retaining wall that runs east from Building 1 (Illus 9).

A second buttress has also been constructed to support the southern half of the springer for the main ground floor arch. Combined with the projecting alignment in front of Building 1 with the eastern façade of Building 2 (see illus 2), it is probable that the buttresses were constructed to replace a now demolished building that projected eastward from Building 1. The existing low-level wall retaining wall may in fact be the surviving remains of the northern wall of a now demolished building.

Within the eastern elevation it is evident that further alteration has taken place, the ground floor window, for instance is a later alteration,





**ILLUS 10** Later inserted window within an original doorway in Building 1 (124)

**ILLUS 12** Later inserted doorway Building 1 (109)



**ILLUS 11** Blocked fire place within the north wall of A2, Building 1 (052)



12

replacing what was originally a second doorway to the north of the existing doorway (Illus 10). The height of the doors suggests this area was used as stabling and a series of later internal divisions confirm that this area was once used to house animals. However, a blocked fire place within the internal area A2 (Illus 2 and 11) indicates that this space was not originally intended to be used for this purpose.

A line of four large rectangular window openings provide illumination to the upper floor. Set just below the eaves, the majority of the windows have been modernised. The two windows located towards the south of the elevation consist of three large upright rectangular panes in a wooden frame glazed with modern security glass. The window to the north of the elevation has been planked up externally with over lapping wavy larch boarding and to a certain extent the remaining window has been boarded over, however this window retains its original window frame and glazed panels (Illus 25). This window would have originally comprised 13 rectangular panes set in a beaded wooden frame, a later opening has resulted in the north set of glazed panels being removed and a rectangular opening being constructed, the function of this later modification is unclear.

### West elevation

The west elevation of Building 1 has undergone much alteration and contains some unusual features that are out of place on a possible industrial building and more akin to agricultural buildings (Illus 4).

The lower half of the west elevation contains a single-width full-height doorway that provides access to the upper room within

the ground floor. The frame is crudely constructed of reused and mismatched timbers, a wooden spreading lintel has been inserted above the opening and the door head is constructed in red brick, possibly replacing a now removed stone segmental arch (Illus 12). Currently the door is half timbered with an open top, indicative of animal stalls. The use of brick and multiple wooden lintels would suggest that this doorway is a later alteration to the original design of the building.

Located within the southern half of the lower elevation a rectangular opening reveals the location of full height single width doorway that once provided access to the lower ground floor room, the doorway has been blocked with similar stone to the fabric of the building (Illus 13).

Flanking the blocked doorway are two lancet windows, the south one with has an internal splay unlike the northern one which is straight cut and has been partially blocked with stone and at some time widened, perhaps to accommodate a drive belt for some powered farm machinery (Illus 14).

Three more lancet windows with internal splays are positioned to the north of the elevation, one serving the upper ground floor and two serving the first floor. The position of the north most lancet windows and splays is unusual as a small portion of the splay cuts the return wall of the northern gable.

Centrally located within the west facing elevation a stone blocked doorway once provided access from the first floor to a now removed





13



14



15



16

**ILLUS 13** Building 1, west elevation Building 1 (106) **ILLUS 14** Lancet window with later blocking and deliberate widening (105) **ILLUS 15** Blocked door way, west elevation, Building 1 (106) **ILLUS 16** Change in finishes indicating location of demolished building and later roof line, Building 1, west elevation (110)

building, the doorway is a later insertion and possibly reflects a period of expansion and adaption to the original building (Illus 15).

The external finish of the west elevation at the level of the first floor has been subject to half struck flush pointing and a coating of white wash which may suggests that the removed building was not purely agricultural. Sometime after the removal of the west building a later lean-to structure was constructed against the west elevation, evidence of which is visible in a diagonal mortar scar running across the elevation at the northern edge (Illus 16).

### South elevation

The southern elevation of Building 1 is partly obscured by the presence of Building 2 (Illus 5); however the gable end at first floor level contains evidence of three large perpendicular window openings, two now blocked with red brick and one converted into a doorway to provide access to the upper floor of building 2 (Illus 17).

Located at the first floor level on the west side of Building 1, a vertical cut recess and small portion of projecting stone work possibly indicates the point where a now demolished building once butted up to Building 1 (Illus 18).





**ILLUS 17** Blocked windows, south facing gable, Building 2 (056)

**ILLUS 18** Cut back recess, southern facing elevation, Building 1(101)





**ILLUS 19** Arched openings, Building 1, A1 and later blocking (008)

**ILLUS 20** Large rectangular opening between A1 and A2, Building 1 (010)

**ILLUS 21** Smaller arch, Building 1, A1 and poor bonding of southern gable wall (009)

### Building 1: Internal A1

The internal space of building 1 (A1) is open to the elements on the eastern elevation, the large segmental span of the arch provided double height access to the space, suitable for large carts.

The southern internal elevation of this space poses questions for the identification and assessment of the building's function. Currently two blocked arches of different dimensions dominate the southern elevation. Both openings are blocked in a mixture of stone and brick. The eastern and larger of the two has two phases of blocking, the later brick blocking indicating that a doorway once allowed access to Building 2 (Illus 19).

The smaller arch is completely blocked in stone, the stone blocking of the smaller arch being set back from the face of the wall. Above the larger arched opening a long wooden spreading or levelling lintel has been inserted, possibly to constrain some cracking and movement of the wall. The whole of the southern gable wall of Building 2 has pulled away from the fabric of the west wall, the tying of the two walls being non-existent and generally not reflecting the attention to detail seen in the overall construction of the building (Illus 20).

The north elevation contains a large rectangular opening at waist height, now blocked with a mixture of wood, stone and red brick, which would have, when open provided a loading bay within A1 with access to the upper ground floor (A2) (Illus 21).

The floor joists of the room above, which form the ceiling of A1, comprise straight cut timbers with bark and wavy edges, the joists are cut from round timbers and possess a sequence of heartwood with outer bark.

### Building 1: Internal A2

The internal area of A2 in its present state reflects the agricultural uses that the buildings have been most recently been subject to. The room has been subdivided into stabling, the haphazard construction of the internal divisions combined with reused materials demonstrates the room was adapted rather than designed for this purpose.

Within the northern elevation and hidden behind panelling for the stabling, a blocked fireplace is visible only at ground level where the blocking stones have collapsed. The construction of the chimney stack is unusual in the sense that the chimney stack is constructed within the thickness of the lower wall cavity, hence the chimney stack is only visible protruding from the thickness of the wall in the room directly above as the overall wall thickness of the building reduces with height.

Within the west elevation a doorway provides external access to the west of the building, the doorway is a later addition, this is emphasised through the use of a substantial reused wooden lintel, the use of which was necessary to support the floor joists of room A3 above, which were truncated by insertion of the doorway (Illus 22).





**ILLUS 22** Inserted doorway, west elevation, Building 1, A2 (032) **ILLUS 23** Projecting line of chimney breast A3, Building 1 (045) **ILLUS 24** Blocked windows and converted window in southern elevation, Building 1, A3 (039)

The most unusual feature of A2 is the large rectangular floor-to-ceiling aperture within the south elevation (Illus 20). The opening would have provided a large through passage into room A1, the difference between floor levels forming a raised loading platform within room A1. The opening has been blocked with a mixture of wood, brick and then plastered over, perhaps at the time room A2 was adapted for the use of stabling.

### Building 1: Internal A3

Access to the upper room of Building 1 is provided through a raised doorway cut into the northern elevation (Illus 5) and in the southern elevation through a converted window that connects with the upper floor of Building 2. The room has been subdivided across the centre by a panel constructed from reused timber, forming two areas. The northern elevation contains a slightly projecting chimney stack (Illus 23) but no indication that a fire place existed at this level. The chimney stack is not visible on the external elevation and the stack has been levelled at roof height.

Within the southern elevation there are three large perpendicular window openings, two of which are blocked with red brick, one of which has been converted into a doorway by having the sill lowered (Illus 24).

A row of four rectangular windows on the eastern elevation are supplemented by two splayed lancet windows on the west elevation. The combination of these windows once provided illumination for the upper room. Within the west elevation a now blocked doorway once provided access to the upper floor of a now demolished building.

### Building 1: Roof details

The roof construction of building 1 is formed from a mixture of reused timbers and machine cut timbers. Three simple trusses with cut in purlins and lap jointed top joints are braced by a large tie beam and a straight cut top chord, with iron fixings, the overall condition and the corrugated iron sheet used as roofing material suggest that this roof is not original but is a relatively modern replacement perhaps reusing some original timbers.





**ILLUS 25** Projecting building line of Building 2 in relation to Building 1 (121) **ILLUS 26** Carved inscription, Building 2 (016)



## 6.2 BUILDING 2

### Summary

Building 2 comprises a large narrow rectangular structure of three storeys, built to the south of Building 1 and utilising its southern gable wall. The building is narrower than the footprint of Building 1 and the building line projects slightly forward of Building 1 on the eastern face (Illus 25).

Predominately constructed in sandstone blocks with red brick, door and window details and a brick dentiled course below the eaves, the building is roofed in blue grey slate tiles with a clay tile ridge. It carries a slightly weathered but readable inscription within the east elevation depicting that 'this furnace rebilt by William Rea Gen in 1720' (Illus 26). The building in its present guise has little to do with the production of iron and no evidence remains to indicate that the building actually played a direct role in its production.

### East elevation

The east elevation (Illus 3 and 27) is the working face of the building. It offers an offset appearance with the location of the doors and the majority of the windows being positioned to the north of the

elevation forming a set of paired windows on the ground, first and second floors with a single line of matching windows to the south of the elevation.

The ground floor of the building is partially buried giving a squat appearance to the lower level; two round headed doorways with brick details provide access to the ground floor. Within the eastern elevation is the inscribed stone referred to above.

### South elevation

The southern gable elevation of the building (Illus 5 and 28) is partially obscured by an external stair case. The elevation contains two doorways with brick segmental arched heads, similar to the eastern elevation, providing access to the first and second floors. A





ILLUS 27 Building 2 east elevation



ILLUS 28 South facing elevation, Building 2 (003)





**ILLUS 29** Internal roof details, Building 2 (034)    **ILLUS 30** Blocked doorway and inserted wall, Building 2, A1 (023)  
**ILLUS 31** Interior of room B2 showing strap roller    **ILLUS 32** Angled and sealed skirting boards, Building 2, A4 (038)

small loading hatch is provided to supply the ground floor, this too benefits from a segmental arch formed from red brick. Although the construction of the doorways is similar to that of the east elevation the overall appearance of the brick detailing is somewhat lacking in finesse when compared to the eastern elevation brick details and may reflect a later phase of works possible associated with the construction of the external staircase.

### West elevation

The majority of the western elevation of Building 2 is obscured by the later addition of a range of out-buildings and animal stalls abutting the building (Illus 17). The same dentiled brick course seen on the eastern elevation is seen beneath the eaves. The window locations are not repeated from the eastern elevation; the upper floor contains two central located and casement openings that possible represent a later phase of insertion above a pair of openings with matching segmental brick arched heads, sharing the same construction detail as on the eastern elevation.

### Building 2: Roof details

Three king post trusses with cut purlins, constructed from machine cut, wavy edge timbers with wooden pegged upper joints form the roof of Building 2. The overall fit of the timbers within the roof and building suggest that the roof is contemporary with the construction of Building 2 (Illus 29).

Owing to the nature of construction of Building 2, where it abuts Building 1 the purlins of the roof are set into cut sockets within the

southern gable of Building 1. This has resulted in the purlins requiring extra bracing, at some time, in the form of a series of upright timbers, due to the location of the cut sockets, one being in the blocking of a window and one located with the jamb of the doorway from Building 1.

### Building 2: Internal B1 and B2

The ground floor has been subdivided by the insertion of an east-west red brick built wall, the southern room being used as animal stabling and the north room for the storage of grain. Access was unavailable to the northern room (B1) due to the build-up of grain behind the door.

The west elevation of B1 contains evidence of a stone blocked doorway with brick detailed segmental arch, partially obscured by the insertion of the later dividing wall (Illus 30). Within the southern elevation a small loading hatch with stone jambs and wooden lintels represents a later inserted feature, possibly associated with a change of use of the building from industrial to agricultural.

Attached to the floor joists of the room above B2 by an iron strap, a small cylindrical roller similar to those used with belt driven machinery may represent the last evidence of past industrial activities that have taken place within the building (Illus 31). It is not in its original location as the worn groove in the centre of the roller indicates that it has been reused as a rope hoist rather than a machine pulley.

### Building 2: Internal B3

At the time of the building survey access to this area was unavailable for inspection; the room is accessed through a doorway within the southern gable, via an arched opening, constructed within the external staircase.

### Building 2: Internal B4

The room is accessed from both the external stair-case and the converted window of Building 1. Rectangular in plan the area is devoid of any fitting that may indicated past industrial activities, however the room has at some time been used for the storage of grain or some other type of cereal, as a run of angled skirting boards sealed with plaster have been used to bridge the gap between the floor and walls (Illus 32).

### Building 2: External staircase

The external staircase is located on the southern gable of Building 2 (Illus 28) and provides a second point of access to the building. Constructed in rough shaped sand stone blocks, the height of Building 2 has necessitated in the staircase being considerably wider than its footprint, extending west of the building and attached outbuildings, possibly suggesting that the staircase is a later addition.

The staircase is supported against the southern wall of the range of outbuildings, attached to the west wall of Building 2, but is not directly bonded to the masonry, resulting in the staircase pulling away from the building's fabric. Within the body of the staircase provision was made to allow access to the first floor of the building, an arched opening was formed in the body of the staircase in line with the doorway.

### Outbuildings

To the west of Building 2 and the south of Building 1 a series of later stone and brick built lean-to type out buildings fill the angle between the two structures. At the time of the survey the outbuildings were in a perilous state of repair, with collapsed roof timbers so only an external inspection was conducted. The outbuildings represent a phase of expansion or alteration to the complex; they appear to have functioned as animal stabling and storage, constructed from a variety of material, stone brick, wood and repairs with corrugated iron and re-used timbers. The buildings represent the last phase of alterations to the original buildings and reflect the agricultural purposes for which they were adapted.

## 7 DISCUSSION

The buildings at Furnace Farm represent the surviving elements of what was once a documented centre of iron production within the county of Herefordshire. Although little remains to indicate how the buildings functioned within that process, the survey has demonstrated that the buildings can be split into two distinct phases of construction and from this division it must be assumed that Building 1 relates directly to the production of iron but has been heavily altered and adapted throughout its history.

The building retains a large arched opening on the east elevation that leads into a chamber with two arches of diverging dimension

on the southern elevation. These arches may have been associated with the stoking or tapping points of a furnace located to the south of the building, however it is equally plausible that the building was not directly involved in the production of iron and may represent an engine house associated with driving the bellows with either accommodation or office space above. The blocked fireplace within the lower portion of the northern wall would seem an unnecessary luxury should the building have been in close proximity to a blast furnace and would suggest that the building although probably contemporary with the manufacture of iron played a supplementary role within the former industrial complex.

The identification plaque with the fabric of Building 2 depicts that the furnace was rebuilt in 1720 but it is clear from examination of the building that it never played a direct role in the production of iron. The building directly butts up to and uses the southern gable of Building 1 as its northern gable, resulting in the blocking of the archways and three large perpendicular window openings within the elevation of Building 1, meaning that this structure could not have retained its original function.

The lower floor of Building 2 appears to have been designed for storage of goods or housing of animals while the upper floors retain the internal appearance and layout of production areas. Over time the building has been adapted, with access being provided into Building 1. Later internal alterations including the application of angled skirting boards to the upper floors, may indicate that the building was once used for the storage of grain, although it is clear from the consideration given to the construction of the building that this was not its original use. Despite the inscription suggesting otherwise, it is considered that the building was not constructed for the manufacture of iron, the date plaque being reused as a curiosity or in recognition to the past history of the area. Despite not being directly associated with the manufacture of iron the construction of building 2 may reflect a later phase of industrial activity at St Weonards.

## 8 CONCLUSION

The building survey has produced annotated plans and a photographic record of the two buildings and has fulfilled the requirements of the WSI. The documentary research and the archaeological building survey have confirmed that the buildings at Furnace Farm have a documented place in the production of iron within the county of Herefordshire. Few original industrial features survive within the buildings and the use and adaptation that they have been subject to over the years has masked evidence of their role in iron making. The buildings exhibit much in the way of alteration and adaptation and this has been recorded prior to any alterations that may be required when the buildings are adapted for residential use.

## 9 BIBLIOGRAPHY

Mike Kimber: Mayes, S 2013 *Proposed Dwellings at Furnace Farm, St Weonards, Herefordshire, HR2 8NZ Planning Ref: S102491/F: Written Scheme of Investigation for Historic Building Recording and Archaeological Watching Brief* Unpublished document

van Laun, J 1979 '17th Century Iron Making in South West Herefordshire' *Journal of the Historic Metallurgy Society*

Ordnance Survey 1887 *First Edition*

## 9.1 ONLINE REFERENCES

NERC 2012 'Geology of Britain viewer' in *British Geological Survey* [online] Accessed 14th May 2013 from [mapapps.bgs.ac.uk/geologyofbritain/home.html](http://mapapps.bgs.ac.uk/geologyofbritain/home.html)

University of London 2014 'St Weonards', an Inventory of the Historical Monuments in Herefordshire, Volume 1: South West (1931), pp227-34 [online] Accessed 15 April 2014 from [british-history.ac.uk/rchme/heref/vol1/pp227-234](http://british-history.ac.uk/rchme/heref/vol1/pp227-234)

Ewyas Lacy Study Group 2007 [online] Accessed from [ewyaslacy.org.uk/-/17th-Century-Iron-Making-in-South-West-Herefordshire-by-John-van-Laun/1600-s-amp-1700-s/gc\\_ewy\\_2024](http://ewyaslacy.org.uk/-/17th-Century-Iron-Making-in-South-West-Herefordshire-by-John-van-Laun/1600-s-amp-1700-s/gc_ewy_2024)

The Historical Metallurgy Society [online] 'Archaeology Datasheet No 3' Downloaded from [hist-met.org](http://hist-met.org)

## 10 APPENDICES

### APPENDIX 1 PHOTOGRAPHIC REGISTER

PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
001	36	37	100-0001	—	Film ID B/W 785 / C/S 794
002	35	36	100-0002	NW	General View of the buildings East facing elevation
003	34	35	100-0003	NW	South Facing elevation
004	33	34	100-0004	NE	General view of West facing elevation - angled shot
005	32	33	100-0005	E	View of Building 2 West facing elevation - into sun
006	31	32	100-0006	E	View of Building 2 West facing elevation - into sun
007	30	31	100-0007	W	View into open arch on East elevation of Building 1
008	29	30	100-0008	SW	Internal view of blocked arch's in Building 1
009	28	29	100-0009	S	Detail showing inserted wall of arch's - pulling away from build
010	27	28	100-0010	N	Blocked opening, Building 1 - brick, stone and
011	26	27	100-0011	S	Wooden floor beam under a ch's in Building 1
012	25	26	100-0012	W	Internal wall detail - concrete fire place / door
013	24	25	100-0013	S	Inserted Springer detail and blocking - brick and stone, Building 1
014	23	24	100-0014	W	East facing elevation of Building 2
015	22	23	100-0015	W	Detail of inscription plaque - Building 2
016	—	—	100-0016	W	Detail of inscription plaque - Building 3
017	21	22	100-0017	S	General view of floor in Building 2 - baked cow muck
018	20	21	100-0018	N	General view of floor in Building 2 - baked cow muck
019	19	20	100-0019		Detail of very large glue pot within Building 2
020	18	19	100-0020	E	Internal window detail - Building 2
021	—	—	100-0021		Machine roller detail - Building 2
022	—	—	100-0022	E	Lintel detail - Building 2, reused
023	17	18	100-0023	W	Blocked opening - Building 2 - brick wall
024	—	—	100-0024	W	Series of digital images through blocked door - Building 2
025	—	—	100-0025	W	Series of digital images through blocked door - Building 2

PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
026	—	—	100-0026	W	Series of digital images through blocked door - Building 2
027	—	—	100-0027	W	Series of digital images through blocked door - Building 2
028	—	—	100-0028	W	Series of digital images through blocked door - Building 2
029	—	—	100-0029	W	Series of digital images through blocked door - Building 2
030	16	17	100-0030	SW	Internal - Building 2 - blocking seen in arch openings
031	15	16	100-0031	NE	North wall, Building 1, internal, two small openings and stalls
032	14	15	100-0032	NW	West wall Building 1, ground floor, opening into animal stalls
033	13	14	100-0033	—	Stop end detail and reused lintel Building 1 Ground floor
034	—	—	100-0034	—	Roof details, Building 2, third floor
035	12	13	100-0035	—	Roof details, Building 2, third floor
036	11	12	100-0036	N	Blocking windows, inserted, Building 3
037	10	11	100-0037	E	Window internal detail Building 2 Floor 3 - no lintel/wall plate instead
038	09	10	100-0038	E	Floor detail/skirting - change for grain store, Building 2
039	08	09	100-0039	S	Building 1 - blocked windows in gable and door into Building 2
040	—	—	100-0040	W	Blocked window / door, West wall, Building 1
041	07	08	100-0041	N	Roof details, Building 1
042	06	07	100-0042	W	detail showing poorly tied in West wall with gable
043	05	06	100-0043	NW	Window and Gable with Fire Stack
044	04	05	100-0044	NW	Window and Gable with Fire Stack
045	—	—	100-0045	NW	Window and Gable with Fire Stack
046	—	—	100-0046	S	Internal roof details, Building 1
047	03	04	100-0047	SW	External view of Building 1
048	—	—	100-0048	W	Projecting masonry on the NE corner of Building 1
049	—	—	100-0049	SW	Projecting masonry on the NE corner of Building 2



PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
050	--	--	100-0050	--	Opening within north wall of lower-Building 1
051	--	--	100-0051	--	Waste
052	02	03	100-0052	N	Detail of fireplace opening within north wall of Building 1-lower floor
053	01	02	100-0053	E	General view of the external west facing elevation of Building 1
054	0	01	100-0054	NE	External stairs to upper floor of Building 2
055	--	--	100-0059	NE	External view of Building 1 and 2 west facing elevations
056	--	--	100-0056	NE	External view of Building 1 and 2 west facing elevations
057	--	--	100-0057	NE	External view of Building 1 and 2 west facing elevations
058	--	--	100-0058	NE	External view of Building 1 and 2 west facing elevations
059	--	--	100-0059	NE	External view of Building 1 and 2 west facing elevations
060	--	--	100-0060	W	Brick arch opening within the east facing elevation of Building 2
061	--	--	100-0061	W	Window detail Building 2
062	--	--	100-0062	W	Window detail Building 2
063	--	--	100-0063	W	Window details Building 2
064	--	--	100-0064	W	Doorway detail Building 2
065	--	--	100-0065	W	Detail showing projecting building line Building 2,1
066	--	--	100-0066	NW	Retaining wall and buttress, Building 2
067	--	--	100-0067	NW	Retaining wall and buttress, Building 2
068	--	--	100-0068	S	Springer detail, Building 2, with projecting masonry
069	--	--	100-0069	S	Wooden spreading lintel, Building 2
070	--	--	100-0070	S	Brick in-filled arch within Building 2, later doorway blocking in stone filled arch
071	--	--	100-0071	W	Internal view showing openings within west wall
072	--	--	100-0072	W	Floor joists, rough cut timbers with bark
073	--	--	100-0073	S	Floor joists, rough cut timbers with bark
074	--	--	100-0074	S	Detail showing southern wall Building 2 pulling away from structure
075	--	--	100-0075	S	Detail showing small blocked arch within southern wall, internal, Building 2
076	--	--	100-0076	S	Detail showing floor joists, Building 2 and detached gable wall

PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
077	--	--	100-0077	NW	Internal detail, Building 2, showing blocked doorway and brick dividing wall
078	--	--	100-0078	NW	interesting build up within Building 2
079	--	--	100-0079	S	Internal detail of Building 2 ground floor
080	--	--	100-0080	S	Internal detail of Building 2 ground floor
081	--	--	100-0081	S	Internal detail of Building 2 ground floor
082	--	--	100-0082	S	Detail showing abandoned joints within floor timber, Building 2 ground floor
083	--	--	100-0083	S	Building 2 -- detail showing large glue pot
084	--	--	100-0084	S	Internal detail, Building 2 showing loading door, ground floor
085	--	--	100-0085	W	Internal detail, Building 2, ground floor showing joist details
086	--	--	100-0086	W	Internal detail, Building 2, ground floor showing joist details
087	--	--	100-0087	SW	Internal detail showing wall finish, Building 2 ground floor
088	--	--	100-0088	N	Internal detail, Building 2 showing brick dividing wall, ground floor
089	--	--	100-0089	N	Internal detail, Building 2 showing door, ground floor
090	--	--	100-0090	NW	External detail, Building 2, showing loading door, ground floor
091	--	--	100-0091	NW	External detail, Building 2, showing loading door and external staircase, ground floor
092	--	--	100-0092	N	External
093	--	--	100-0093	N	Detail showing attachment of outside buildings, Building 2
094	--	--	100-0094	N	Construction details
095	--	--	100-	NE	Internal view of outside buildings, associated with Building 2
096	--	--	100-0096	NE	Internal view of outside buildings, associated with Building 2
097	--	--	100-0097	E	Window detail, Building 2
098	--	--	100-0098	E	Window detail, Building 2
099	--	--	100-0099	E	Wooden spreading lintel and opening, Building 2
100	--	--	100-0100	NE	Projecting masonry and blocked windows, Building 1
101	--	--	100-0101	NE	Projecting masonry and blocked windows, building 1
102	--	--	100-0102	E	Block opening, Building 2, ground floor
103	--	--	100-0103	E	Block opening, Building 2, ground floor

**THE OLD FURNACE BUILDINGS, FURNACE FARM** FFSH/01

PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
104	-	-	100-0104	E	Window detail, Building 2, ground floor, lancet
105	-	-	100-0105	E	Window detail, Building 2, ground floor, lancet
106	-	-	100-0106	E	Building 2, external, blocked doorway first floor
107	-	-	100-0107	NE	Building 2, lancet window detail, first floor
108	-	-	100-0108	E	Building 2, lancet window detail, first floor, with roof line scar
109	-	-	100-0109	E	Building 2, inserted doorway, ground floor
110	-	-	100-0110	E	Building 2, lancet window detail and roof scar
111	-	-	100-0111	E	View from within Building 2 looking out towards farm house
112	-	-	100-0112	S	Outbuildings associated with Building 2
113	-	-	100-0113	S	Outbuildings associated with Building 2
114	-	-	100-0114	W	Waste
115	-	-	100-0115	NW	Barn, iron and stone construction, near study buildings
116	-	-	100-0116	S	North, external elevation of Building 1, obscured by vegetation
117	-	-	100-0117	SW	External view of Building 1
118	-	-	100-0118	SW	External view of Building 1
119	-	-	100-0119	SW	External view of Building 1 showing wall plate and iron work
120	-	-	100-0120	W	External view of Building 1 showing windows and power point

PHOTO	C/S	B/W	DIGITAL	DIRECTION FACING	DESCRIPTION
121	-	-	100-0121	SW	External view of Buildings 1 and 2
122	-	-	100-0122	SW	External view of Buildings 1 and 2
123	-	-	100-0123	SW	External view of steps
124	-	-	100-0124	W	Insert widow, Building 1 in blocked doorway
125	-	-	100-0125	W	Doorway, Building 1
126	-	-	100-0126	W	Window detail, Building 1
127	-	-	100-0127	SW	Detail showing arches in southern gable, Building 1
128	-	-	100-0128	NW	Main arch, Building 1 and retaining wall detail
129	-	-	100-0129	W	Main arch, Building 1
130	-	-	100-0130	W	Cut buttress and Springer, Building 1
131	-	-	100-0131	W	General view of Building 2 external
132	-	-	100-0132	W	General view of Building 2 external
133	-	-	100-0133	W	Detail showing mortar finish, Building 1
134	-	-	100-0134	W	Detail showing mortar finish, Building 1
135	-	-	100-0135	W	Detail showing mortar finish, Building 1
136	-	-	100-0136	W	Detail showing mortar finish, Building 2
137	-	-	100-0137	W	Detail showing mortar finish, Building 2
138	-	-	100-0138	W	Detail showing flush and stuck mortar finish Building 2
139	-	-	100-0139	W	Detail showing later attached staircase, Building 2





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