

**A Staged Programme of Archaeological
Work at Mill House, Ponteland,
Northumberland**

**Including Building Recording, Earthwork
Survey and Watching Brief**



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EXECUTIVE SUMMARY

In November 2012 Archaeological Research Services Ltd were commissioned by Galliford Try to undertake an archaeological building recording of Mill House in Ponteland, Northumberland. The work was carried as part of a staged programme of archaeological work under condition of the planning permission which also includes an analytical earthwork survey and watching brief element.

The historic building recording of Mill House has provided information relating to the development of the site, as well as providing a record and assessment of the standing remains. The building recording refined the chronology of the mill buildings thus:

- *PHASE 1: Rooms C1 and C2 of Building C with a single roof, hipped on the northeast and southeast ends. The first floor level of Room C2 was originally c.0.7m higher than present, allowing for extra ceiling height on the ground floor to accommodate the large mill machinery.*
- *PHASE 1a: Addition of Room C4, a single-storey lean-to extension to the southwest of Building C prior to 1842. This most likely functioned as a wheel house and enclosed the mill wheel and wheel pit.*
- *PHASE 2: Removal of mill machinery and conversion of the mill to domestic use, possibly including the addition of a first storey over Room C4 and the addition of the first part of Room C3, between 1896 and 1916.*
- *PHASE 3: Conversion of the mill house to office accommodation and addition of Buildings F and G to the north of Building C between 1964 and 1978.*
- *PHASE 4: Final eastward extension of Building C, comprising the east end of Room C3 - modern undated*
- *PHASE 5: Addition of Building B to the south of Building C after 1993.*
- *PHASE 5a: Addition of Building A to the south of Building B after 1993.*
- *PHASE 5b: Addition of Building E to the west of Building C after 1993.*
- *PHASE 5c: Addition of Building D to the west of Building B after 1993.*

The analytical earthwork survey of Mill House has shown that the site retains the well preserved remains of water management systems associated with the post-medieval water-powered corn mill. Several of these features were known from early Ordnance Survey mapping and all date to the post-medieval and modern period. The features relate to the following three phases in the mill's development:

- *PHASE 1: The original construction of the mill, consisting of original L-Shaped portion of Building C, the mill race, mill pond, tail race and bypass sluice. Dated generally to the post-medieval period pre 1800.*
- *PHASE 2: Conversion of the mill to domestic use. Dated to between 1896 and 1916.*
- *PHASE 3: Extensions to the mill building and associated landscaping works which also included the destruction of the southern side of the mill pond which was built over by Building F. Dated to the modern period, post 1968.*

No archaeological features were identified during the grubbing-out of the floors and foundations of Mill House. It was anticipated that the remains of the tail race may have been exposed under Buildings A and B, however no remains of this feature were observed at the excavated depth beneath tarmac. Similarly, it was anticipated that the wheel pit would be preserved beneath Building C, Room C4, however no remains of this feature were observed at a depth of c.1.4m.

No further archaeological works are recommended at this site.

1. INTRODUCTION

1.1. Scope of work

1.1.1 In November 2012 Archaeological Research Services Ltd (ARS Ltd.) was commissioned by Galliford Try to undertake an archaeological building recording of Mill House, Ponteland, Northumberland (Figure 1). The work was carried as part of a staged programme of archaeological work under condition of the planning permission which also includes a topographical survey and watching brief element. The proposed development involves the demolition of Mill House and the construction of seven new dwellings.

1.1.2 Mill House is recorded in the Northumberland HER (HER No: 11031) as Ponteland Corn Mill and Mill Race of post-medieval date.

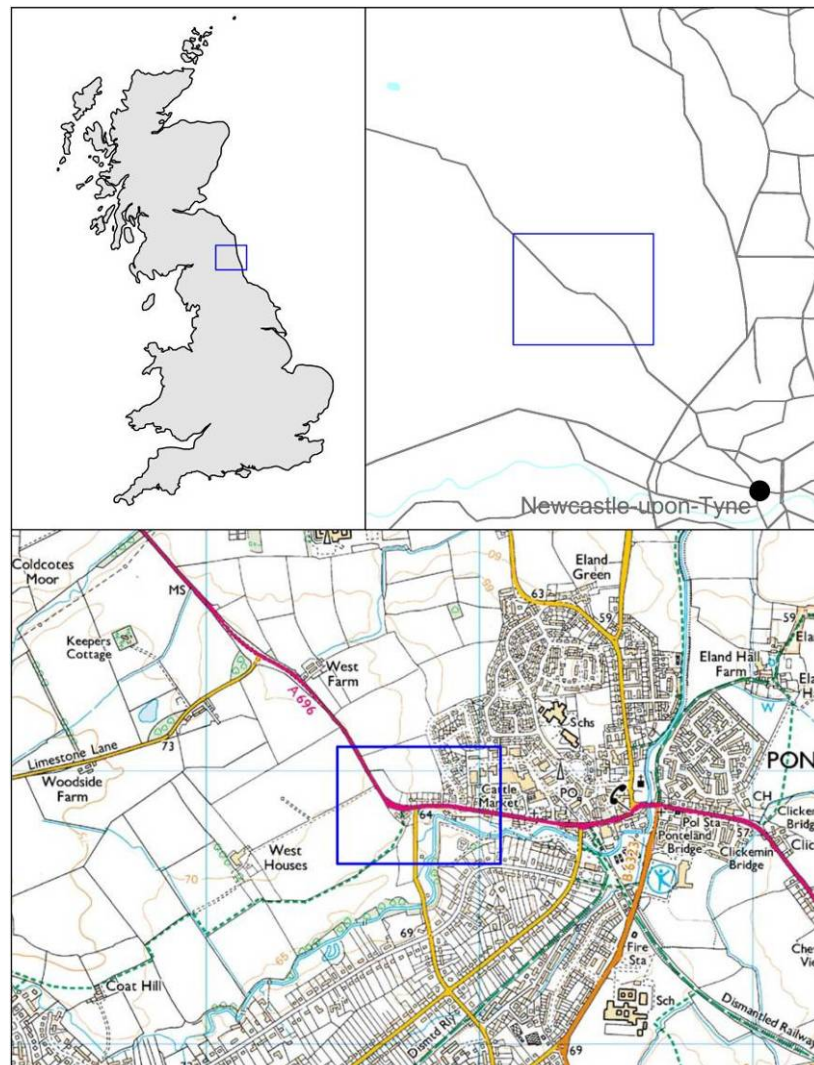


Figure 1. Site Location

1.2. Location, topography and geology

1.2.1 The site is situated in Ponteland and is centred at NZ 15896 72840. It sits approximately 50 metres from the centre of Ponteland on West Road which runs from east to west through the centre of the town. The bedrock geology of the area comprises Yoredale Group limestone, sandstone, siltstone and mudstone with overlying superficial deposits of sand and gravel (BGS 2012).

2. METHODOLOGY

2.1. Level 2 Historic Building Recording

2.1.1. An historic building survey to English Heritage Level 2 standard (English Heritage 2006) was carried out by Gillian Eadie and Chris Scott of ARS Ltd in November 2012. This level of survey provides an introductory descriptive account of the buildings together with an account of their historical development and significance. The survey consisted of a written and photographic account comprising the following;

- The written record comprises the precise location of the buildings together with any statutory and non-statutory designations, the date of the survey and the location of the archive. A descriptive account of the form, function and phasing of the buildings as well as its immediate vicinity and past setting is also included.
- The photographic record includes photographs of the buildings wider aspect together with general views of the external appearance. These will normally be oblique but right-angle photographs of elevations containing complex detail will be taken. The overall appearance of internal rooms and circulation areas was captured, together with detailed views of features of significance. The photographic archive will consist of 35mm full frame sensor (36x24mm) digital SLR colour photography at a minimum of 12 megapixels and black and white 35mm print. A variety of lenses of different focal lengths were used as well as perspective control or 'shift lenses' where appropriate. All detailed photographs contain a graduated photographic scale. A photographic register detailing (as a minimum) location and direction of each shot was compiled.
- A phased plan of the buildings has been reproduced and is included as Figure 65

2.2. Analytical Earthwork Survey

2.2.1 An analytical earthwork survey to English Heritage Level 2 standard (Ainsworth *et al* 2007) was carried out by Gillian Eadie and Philippa Cockburn of ARS Ltd in November 2012. This level of survey provides a descriptive and interpretive record as a result of field investigation. It is both metrically accurate and analytical, depicting the real landscape context of the archaeological features, together with an analysis of their development and use. The survey consisted of a measured and photographic account comprising the following;

- A systematic walkover survey to identify all archaeological features within the development area, with a particular focus on the remains of the mill race, mill pond

and tail race. This walkover survey provided key initial interpretations for features. Survey stations were then established utilising the Leica TCR 307 (TPS 300 series) Total Station Teodolite. This survey was used as the basis for the hachure survey. Tapes were run between all survey stations, allowing graphical completion of the survey drawing.

- A hachured plan of all recorded earthworks was compiled at a scale of 1:200. This noted relationships between features and included annotations to aid their interpretation.
- The photographic record includes photographs of all identified earthwork features together with related features located in the immediate vicinity of the development area. The photographic archive will consist of 35mm full frame sensor (36x24mm) digital SLR colour photography at a minimum of 12 megapixels. A variety of lenses of different focal lengths were used as well as perspective control or 'shift lenses' where appropriate. All detailed photographs contain a graduated photographic scale. A photographic register detailing (as a minimum) location and direction of each shot was compiled.
- The drawn record consists of the detailed hachured survey reproduced at 1:500 and 1:200, together with a key to alpha-numeric codes used in the text and an interpretive drawing showing the major landscape features. The survey drawing is located on an Ordnance Survey 1:2500 map of the area.

2.3. Watching Brief

2.3.1 An archaeological watching brief was conducted by Gillian Eadie of ARS Ltd in November 2012 during the grubbing-out of the building foundations of Mill House. The agreed method of excavation and examination entailed the removal of the building foundations under archaeological supervision. This was followed by an archaeological inspection of the resulting land surface, and hand cleaning of any areas of interest. All investigation and recording was undertaken in accordance with the IfA (2008) *Standards and Guidelines for Archaeological Watching Briefs*.

- The photographic record includes photographs of all identified features together with general shots of the groundworks and the final appearance of the site. The photographic archive will consist of 35mm full frame sensor (36x24mm) digital SLR colour photography at a minimum of 12 megapixels. A variety of lenses of different focal lengths were used as well as perspective control or 'shift lenses' where appropriate. All detailed photographs contain a graduated photographic scale. A photographic register detailing (as a minimum) location and direction of each shot was compiled.

3. RESULTS OF BUILDING SURVEY

For the purposes of the survey Mill House has been divided into a series of buildings based on the results of the previous Historic Building Assessment conducted by North Pennines Archaeology (Wooler 2011). These have been labelled as Buildings A-G. Internally rooms are provided with alpha-numeric labels, for example Room G1 etc. These divisions are detailed in Figure 64 which should be read in conjunction with the descriptive account.

The results of the photographic survey are presented for each building in turn, with exterior elevations described first, followed by interior rooms. A descriptive account of the form, function and phasing of each building then follows. A phased construction plan has also been produced (Figure 65) and this should be read in conjunction with the descriptive account.

3.1 Building A

3.1.1 Building A is aligned northwest-southeast and adjoins southern end of the Mill House building complex. It was previously in use as offices.

3.1.2 This is a two-storey structure constructed of non-coursed sandstone masonry with small dressed sandstone quoins on the southeast and southwest corners of the building. It has a pitched slate roof with a series of three ventilators along the ridge.

3.1.3 *Exterior Northeast Elevation*

The ground floor of the northeast elevation is featureless, whilst the first floor contains a pairing of two window openings with concrete lintels and sills (Figure 2).



Figure 2: Northeast elevation of Building A showing vertical joint between Building A and B, on the right of the photograph (scale=2 x 2m).

A prominent vertical join is visible in the masonry between Building A and Building B which indicates that the two structures are of different phases.

3.1.4 *Exterior Southeast Elevation*

The southeast elevation of Building A contains a fire exit with a concrete lintel at the southern end of the ground floor and single window in the centre of the first floor with a concrete lintel and sill (Figure 3).



Figure 3: Southeast elevation of Building A (scale= 2m).

3.1.5 *Exterior Southwest Elevation*

The southwest elevation of Building A contains a pairing of two windows at ground floor and first floor levels, all with PVC frames and concrete lintels and sills (Figure 4).

Two prominent vertical joins are visible in the masonry between Building A and Building B; one of which indicates a change in phase between the two structures; and the other is necessitated by the change in orientation between Building A and the rest of Mill House. This change in orientation was most likely necessitated by its proximity to the river at this point. Had Building A been constructed along the same alignment as the rest of Mill House, its foundations would have been at risk of subsidence.



Figure 4: Southwest elevation of Building A (scale=2 x 2m).

3.1.6 The northwest end of Building A is joined on to the southeast end of Building B.

3.1.7 *Interior*

Internally, the ground floor consists of a single large open space, Room A1, previously used as offices. The internal walls are faced with painted plasterboard which has been removed in places to reveal the construction of the walls (Figure 5). These are breeze-blocks with an external stone facing. The ceiling has also been removed revealing the construction of the floor above, which is carried on southwest-northeast aligned timber floor joists.

A staircase giving access to the first floor was originally located at the southeast end of the building, but has recently been removed. The ground floor is accessed via Building B through a wide opening in the northwest wall.

There was no safe access to the first floor level for the purposes of the survey.

3.1.8 *Date, function and development*

The Ordnance Survey National Grid 1:10000 map shows that Building A was constructed after 1993 and the construction breaks noted on the exterior of the building clearly indicate that it post-dates Building B. The building was most likely designed as

office accommodation and has continued in use as an office to the present day with little or no alterations.



Figure 5: Interior of Building A, showing the southeast and southwest walls with remains of the staircase along the southeast end of the building (scale= 2m).

3.2 Building B

3.2.1 Building B is aligned northwest-southeast and adjoins Building A to the southeast and Building C to the northwest. Building D adjoins the southwest elevation of Building B. It was previously in use as offices.

3.2.2. This is a two-storey structure constructed of non-coursed sandstone masonry with small quoins on the southeast corner only. The masonry contains blackened sandstone blocks giving it an almost checkerboard appearance. As these stones have clearly been affected by pollution, it is likely that they are re-used stones from elsewhere. This is the only building within the complex to contain such stones. The building has a slate roof which was clearly hipped prior to the addition of the Building A to the southeast.

3.2.3 Exterior Northeast Elevation

The northeast elevation contains a large centrally placed window with concrete lintel and sill on both the ground and first floor levels. These windows are clearly of modern construction and appear to be original to the structure (Figure 6).

Prominent vertical joints are visible in the masonry between Building B and Building A, the southeast, and Building C, to the northwest. The junction with Building C has been keyed-in with large dressed sandstone blocks. These joints indicate that Buildings A, B and C are of different phases.



Figure 6: Northeast elevation of Building B (scale=2 x 2m).

3.2.4 *Exterior Southwest Elevation*

The southwest elevation contains a large centrally placed window with concrete lintel and sill on both the ground and first floor levels. These windows with PVC frames are clearly of modern construction and appear to be original to the structure (Figure 7). Building D adjoins the northern end of this elevation

Prominent vertical joints are visible in the masonry between Building B and Building A, the southeast, and Building C, to the northwest. The junction with Building C has been keyed-in with large dressed sandstone blocks. These joints indicate that Buildings A, B and C are of different phases.

3.2.5 The southeast elevation of Building B is obscured by Building A, whilst the northwest end of the structure is joined onto the southeast end of Building C.

3.2.6 *Interior*

Internally the ground floor consists of a single large open space, Room B1, previously used as offices. It is accessed via Building C through a single-width doorway in the west end of the northwest wall. The walls are covered with painted plasterboard, however the wall construction is visible around window and door openings where is clear that this building is brick-built with an external stone facing. The ceiling has been removed revealing the construction of the floor above, which is carried on southwest-northeast aligned timber floor joists with a central brace.

There was no safe access to the first floor level for the purposes of the survey.



Figure 7: Southwest elevation of Building B (scale=2m).



Figure 8: Interior of Building B, showing the southwest and northwest walls (scale= 2m).

3.2.7 *Date, function and development*

The Ordnance Survey National Grid 1:10000 map shows that Building B was constructed after 1993 and the construction breaks noted on the exterior show that it post-dates Building C and pre-dates Buildings A and D. The building was most likely designed as office accommodation and has continued in this use to the present day.

The openings in the northwest and southeast walls are the only means of access to the structure, so at least one of these openings must be original. This is most likely to be the large opening in the southeast wall, presently giving access to Building A, as this has the appearance of a fire-exit which would be required in an office building of this date. The opening from Building C in the northwest wall was most likely also original as this would provide internal access to Room B1 from the reception area.

3.3 **Building C**

3.3.1 Building C follows the outline of a T-shaped structure identified in the previous Historic Building Assessment as the original mill and the earliest standing structure on the site (Wooler 2011, Figure 13). However, the present analysis has identified several phases of construction within this T-Shaped building. Its long axis is aligned northeast-southwest with a short projection from the southeast wall aligned northwest-southeast. It was previously in use as offices, a kitchen and bathrooms and contained the main entrance and reception area.

3.3.2 This is a two-storey structure constructed of well-coursed sandstone masonry with a slate pitched roof. The projecting northwest-southeast aligned portion of the building adjoins Building B to the southeast, whilst Buildings D and E adjoin the southwest side of the structure and Building F adjoins the northwest side.

3.3.3 *Exterior Northeast Elevation*

The northeast elevation of Building C comprises the northeast wall of the northwest-southeast aligned projection as well as the end wall of the main northeast-southwest aligned structure. Beginning with the projection, at ground floor level there is a glass-panelled porch in front of a wide opening forming the main entrance to the building (Figure 9). At first floor level there is an off-centre, small window with a sandstone lintel and sill with a narrow chamfer; this appears to be an original feature. Along the southern side of the elevation a vertical construction break is evident between this structure and Building B which post-dates it. This portion of walling has been roughly re-pointed.

The northeast elevation of the main range is constructed of well-coursed sandstone masonry with dressed sandstone quoins on the southeast and northeast corners. It contains a large centrally placed window with concrete lintel and sill on both the ground and first floor levels (Figure 10). These windows are of modern date and that on the first floor appears to be original, whilst that on the ground floor is an insertion. This is evidenced by the different style of the lintel of this window together with patching in the stonework at either side of it. This wall has not been re-pointed.

The evidence from the windows indicates that there is a difference in phase between the northeast elevation of the projection and the northeast elevation of the main range. The projection is the earliest of the two, containing an original window with sandstone lintel and sill, whilst the end wall of the main range is clearly modern in date with an original modern window at first floor level.



Figure 9: Northeast elevation of Building C Part 1 (scale=2m).



Figure 10: Northeast elevation of Building C Part 2 (scale=2m).

3.3.4 Exterior Southeast Elevation

The southeast elevation of the northwest-southeast aligned projection is obscured by the addition of Building B. The southeast elevation of the main northeast-southwest aligned range is only partially visible behind Building D on the western side, whilst the eastern side is clear of obstructions. Beginning with the visible portion of the western side, this elevation is constructed of non-coursed sandstone masonry without quoins (Figure 11). Building E adjoins Building C to the west of this elevation where a prominent vertical construction break is evident.

A diagonal line visible in the masonry of Building C at this end of the structure is the ghost of a previous roof-line (Figure 12), showing that this portion of the building was originally built as a single-storey lean-to structure. This, and the non-coursed nature of this masonry, indicates that it post-dates the rest of Building C, making Building C an L-Shaped structure originally. The lean-to structure has then been raised to two storeys, and a narrow window inserted. This was done prior to the construction of Building E, and most likely prior to the addition of Building D also.

The southeast elevation of the eastern end of Building C will be discussed in three sections as these relate to the proposed phases of development of this part of the structure. The westernmost section is the earliest; it is constructed of well-coursed sandstone masonry and has been roughly re-pointed. It contains a large half-timber, half-glazed opening at ground floor level and two windows at first floor level with sandstone lintels and sills with a narrow chamfer. The large ground floor opening does not appear to be an original feature and may have been formed when the mill machinery was removed from the building. The windows on the first floor are the same style as the window noted on the northeast elevation of the northeast-southwest aligned projection and appear to be original (Figure 13).



Figure 11: Southeast elevation of the western section of Building C (also showing Building E to the left of the photograph and Building D in the foreground) (scale=2m).



Figure 12: Detail of the ghost of a previous roof line on the southeast elevation of the western part of Building C.



Figure 13: Westernmost section of the southeast elevation of Building C (scale=2m).

The middle section of the southeast elevation comprises the first eastern extension of this structure; it is constructed of well-coursed sandstone masonry and has been roughly re-pointed (Figure 14). At ground floor level the westernmost end of this section contains a doorway with dressed sandstone surround that has been remodelled into a window, the lower portion being blocked with non-coursed sandstone blocks. A modern window with concrete lintel has been inserted directly adjacent to this blocked door and the dressed sandstone door surround has been cut to accommodate it (Figure 15). At first floor level there is a large window opening with sandstone lintel and sill. This appears to be original to the structure, although it is difficult to note any patched masonry with the level of re-pointing that has taken place. The window has clearly been designed to be in keeping with those in the westernmost section, however the sandstone lintel is narrower and the sill is not chamfered suggesting that this window is of a different phase to those on westernmost section.

Further evidence of this section being of a different phase of construction to the westernmost section is found internally and is discussed in Section 3.3.12.



Figure 14: Middle section of the southeast elevation of Building C (scale=2m).



Figure 15: Detail of blocked original doorway on the middle section of the southeast elevation of Building C (scale=1m).

The easternmost section of the southeast elevation was added last; it is constructed of well-coursed sandstone masonry which has markedly larger blocks than the previous sections to the west. It has not been re-pointed (Figure 16). At ground floor level there is a large half-timber, half-glazed opening with dressed sandstone quoins to the west side a concrete lintel. This opening also contains a fire-exit. At first floor level there is a small window with sandstone lintel and sill. This has clearly been designed to be in keeping with the windows noted in the westernmost section of the elevation, however the lintel is narrower and the sill is not chamfered.

The difference in stonework noted between this section and those to the west, together with the difference in the style of the first floor window suggests that this section is a later extension of the building and may be fairly modern. The quoins noted on the west side of the large ground floor opening may mark the end wall of the previous phase, however they do not continue up to the first floor level. They may also mark the location of a previous doorway which has been extended into to the present opening.

Further evidence of this section being of a different phase of construction to the western sections is found internally and is discussed in Sections 3.3.10 and 3.3.12.



Figure 16: Easternmost section of the southeast elevation of Building C (scale=2 x 2m).

3.3.5 *Exterior Northwest Elevation*

The northwest elevation of Building C is partially obscured by the addition of Buildings F and G on this side of the structure, however element of the northwest elevation can still be seen within Building F. As with the southeast elevation, this elevation bears evidence of differing phases of construction within Building C (Figure 17). Beginning with the eastern most section; this is the latest addition to the structure and is constructed of roughly-coursed sandstone masonry which uses larger blocks than elsewhere in the structure. At ground floor level there is large blocked opening, whilst the first floor level is featureless. The blockage on the ground floor has also necessitated the rebuilding of the northeast corner of the building at this level, where there are now no quoin stones present (Figure 18). The original purpose of this opening is unknown.

To the west of this large opening a vertical line of stained stonework marks the location of a previous down pipe (Figure 17) and may mark the location of the end of the building prior to the addition of the easternmost section and the remodelling of the roof and guttering system.

The middle section of the northwest elevation is constructed of well-coursed sandstone masonry without quoins. This section of walling has been roughly re-pointed and contains a single long window at first floor level with a sandstone lintel and sill. Directly below this window a smaller blocked window is traceable in the masonry. This had a punch dressed sandstone lintel with no evidence of the sill remaining (Figure 19). Aside from the change in masonry between this portion and the easternmost section of walling, further evidence of differences in phase are notable in the building interior, these are discussed in Section 3.3.10 and 3.3.12.



Figure 17: Northwest elevation of Building C (scale=2 x 2m).



Figure 18: Detail of blocked opening at the eastern end of the northwest elevation of Building C (scale=2m).



Figure 19: Detail of blocked opening in the ground floor of the middle portion of the northwest elevation of Building C.

The westernmost section of walling before Building F is the earliest; it is constructed of well-coursed sandstone masonry although this has been roughly re-pointed and has been patched up following the insertion or remodelling of window openings (Figure 20). At ground floor level there is a single wide window opening with a concrete lintel and timber sill, this is an inserted opening as evidenced by the patched stonework above the lintel. At first floor level there are two long window openings with sandstone lintels and sills. These do not appear to have been inserted but are longer than the original opening noted on the southeast elevation and may therefore have been lengthened at the base. Some patched stonework is evident to the east of the easternmost window which may relate to this phase of work.

Building F has been built onto the northwest elevation of Building C. In the basement of Building F there is a blocked inserted window that would have been at the ground floor level of Building C. Although this window is an insertion, it is the earliest style of window frame identified at the site and is a timber-framed, four-paned, sash window with moulded horns (Figure 21). Its style most likely dates to the second half of the 19th century. This window is not visible on the interior of Building C as it is blocked by a modern staircase.

At first floor level the northwest elevation of Building C can also be viewed from Building F. This contains two inserted doors; the westernmost door has clearly been inserted in order to give access to the new Building F, however the easternmost door does not communicate with the floor level of Building F and must therefore relate to an earlier phase in the building's history (Figure 22). The door appears to have been constructed by lengthening an existing window opening which itself appears similar to the window openings noted on the exterior immediately to the east.



Figure 20: Western section of the northwest elevation of Building C before it is obscured by Building F.



Figure 21: Inserted blocked sash window on the northwest elevation of Building C, preserved within the basement of Building F (scale=1m).



Figure 22: Inserted doorways on the northwest elevation of Building C contained within Building F (scale=2m).

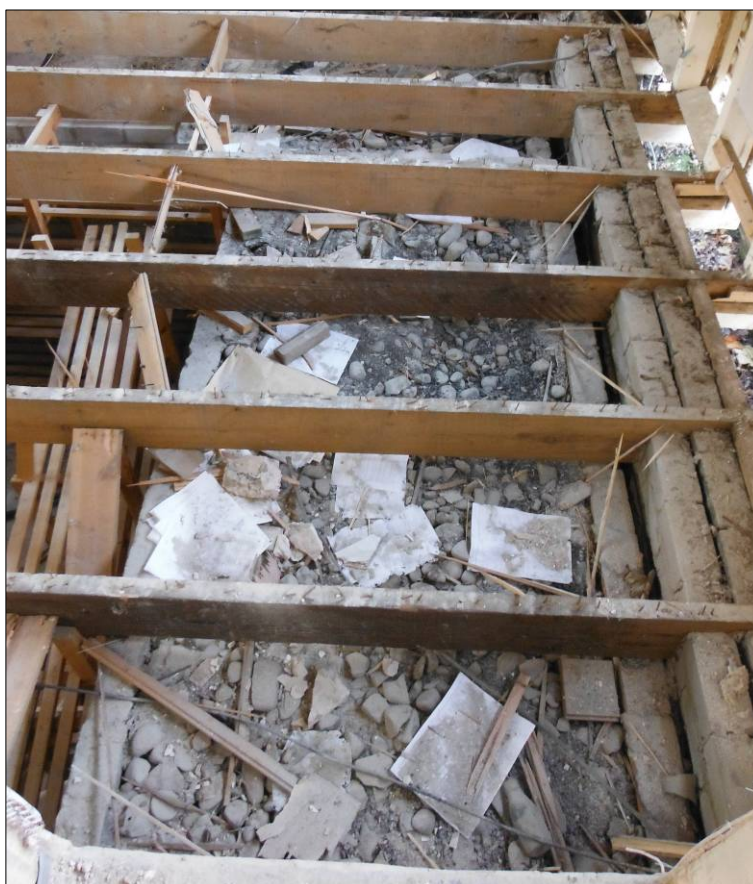


Figure 23: In-filled brick structure below the floor of Building F, viewed from the easternmost inserted doorway in the northwest elevation of Building C.

Some evidence of the original function of this door may be found beneath the floor of Building F where an in-filled brick structure was noted during the building survey (Figure 23). This was constructed of domestic 9” bricks laid stretcher and may have been a coal house or out-house added to the mill building. It is depicted on the Ordnance Survey Map of 1916 (Wooler 2011, Figure 12), although it is actually located slightly to the east of where it is depicted on the mapping. Wooler suggests that the structure is an external stair due to the manner in which it is depicted on the mapping (Wooler 2011, 18). It may have been the case that a short set of external steps were located on the roof of this structure leading from the higher ground located to the north of the building up to the inserted door on the northwest elevation of Building C. These steps may then have been removed, and the building in-filled when Building F was constructed.

The final section of the northwest elevation of Building C is visible to the west of Building F. This is constructed in well-coursed sandstone masonry. A diagonal line visible in the masonry at this end of the structure is the ghost of a previous roof-line (Figure 24), similar to that noted in the same location on the southeast elevation. This shows that this portion of Building C was originally built as a single-storey lean-to structure. The lean-to structure has then been raised to two storeys and this was clearly done prior to the addition of Building F.



Figure 24: Western end of the northwest elevation of Building C (scale=1m).

3.3.6 *Exterior Southwest Elevation*

The southwest elevation is split between the southwest end of the northeast-southwest aligned main range and the southwest elevation of the northwest-southeast aligned projection. Beginning with the projection; very little of this elevation is now visible due to the addition of Building D. The small section of walling that is visible is constructed of well-coursed sandstone masonry without quoins (Figure 25). A vertical construction break is visible between this structure and Building B to the south which has been keyed-in using large sandstone blocks. This indicates that Building B post-dates Building C. There is a single window opening at first floor level of this elevation that appears to be an insertion, bearing no resemblance in style to those located on the northwest and southeast elevations of this building.



Figure 25: Southwest elevation of the northwest-south-east aligned projection of Building C.

The southwest elevation of the main range is partially obscured by the addition of Building E (Figure 26). It was constructed in two phases, as the evidence of the original lean-to structure noted in the northwest and southeast elevations shows. The earlier ground floor level has been heavily re-pointed but appears to be constructed of roughly coursed sandstone masonry, using smaller stones than the later first floor level. The ground floor contains an original doorway with sandstone surround that has been remodelled into a window. The first floor contains a single large window with concrete lintel and sill that is modern in date and appears to be original to the structure.



Figure 26: Southwest elevation of the main range of Building C (scale=2m).

3.3.7 Interior

Internally the structure is divided into four rooms on the ground floor (Rooms C1-4) and four rooms on the first floor. The first floor was not safely accessible for the purposes of the survey; however photographs were taken of all safely accessible areas.

3.3.8 Room C1

Room C1 was used as the reception area for the Galliford Try offices, but was part of the original mill structure. It is accessed via a large modern opening with a glass fronted porch in the northeast wall (Figure 27). As this space was used as reception area, it is a central communication area. Room C1 gives access to Building B, via a single width doorway in the southeast wall, Building D, via a double-width opening in the southwest wall, and the remainder of Building C, via a single width doorway in the northwest wall (Figure 28). The doorways are the only features located in this room and all walls are covered with painted plasterboard, removed in places to reveal the wall construction.

The northwest wall of Room C1 is a brick-built partition wall, indicating that this area of the ground floor of Building C would have been an open space originally. No features or fixings relating to the original mill workings were uncovered in Room C1.



Figure 27: Northeast and southeast walls of Room C1 (scale=2m).



Figure 28: Northwest and southwest walls of Room C1 (scale=2m + 1m).

3.3.9 Room C2

Room C2 contains a modern staircase giving access to the first floor along its southwest wall (Figure 29). This is separated from the remainder of the room by a breeze-block partition wall. This staircase blocks a ground floor window on the northwest wall of Building C that was visible in the based of Building F (see Section 4.3.5).

The area contained within the remainder of Room C2 marks the original extent of the mill building prior to the addition of two extensions to its eastern end. Access is via a single-width doorway in the southwest wall. The southwest wall contains an under stair cupboard, whilst the northwest wall is featureless save for a large window opening. The northeast wall is thicker at the northern end than it is elsewhere (Figure 30) and further investigation of this area revealed that the thickening consisted of a brick skin on the inside of the sandstone wall (Figure 31). This was built to provide the flue for a fireplace at first floor level which most likely dates to the conversion of the mill to domestic purposes (Figure 32).

The northwest wall also contains an inserted cupboard constructed of timber boarding which partially blocks the wide window opening located in the southeast wall (Figure 33). No features or fixings relating to the original mill workings were uncovered in Room C2.



Figure 29: Modern staircase along the southwest wall of Room C2, also showing the brick-built partition of Rooms C1 and C2 in the foreground with the breeze-block partition of the staircase behind (scale=2m).



Figure 30: Northwest and northeast walls of Room C2 (scale=2m).



Figure 31: Northern end of the northwest wall of Room C2, showing the brick skin applied to the interior of the sandstone wall (scale=1m).



Figure 32: Northern end of the northwest wall at first floor level above Room C2, showing the flue provided in the brick skin applied to the interior of the sandstone wall (scale=1m).



Figure 33: Northeast and southeast walls of Room C2 (scale=2m).

3.3.10 Room C3

Room C3 is the easternmost room in Building C and contains two phases of construction which mark two extensions to the original mill building. The earliest phase is the westernmost end of the room and the newest phase is the easternmost end.

The room is accessed through the southwest wall via a single-width doorway from G2 (Figure 34). The southwest wall also contains a large wall cupboard. There is a brick-built platform along the northwest wall of Room C3 which also contains some concrete blocks. The purpose of this feature is not known, but it marks the extent of the first extension to the mill. This extent is also notable in the southeast wall where there is a marked change in thickness between the walls of the westernmost half of the room and those of the easternmost end (Figure 35). A Reinforced Steel Girder (RSG) has also been inserted in the ceiling at this point, most likely marking the location where the end wall of the previous extension has been removed, requiring the addition of extra reinforcement to carry the floor above at this point. From this point onwards the eastern end of the building uses aged, reused floor joists to carry the first floor, whereas those in at the western end of the room are not reused and therefore appear newer (Figure 36).

There was no safe access to the first floor above Room C3, however some observations could be made from the ground floor. At first floor level Room C3 is divided into two rooms with the partition wall located where the two phases meet. This partition wall is constructed of breeze-blocks suggesting that when the easternmost extension was added the entire end wall of the previous extension was removed. This may explain the lack of quoin stones marking a join between the two extensions on the external wall face. An aged roof truss was also visible at this point, however the rest of the roof appeared to be of modern construction, again this most likely relates to the roof structure being remodelled following the addition of the easternmost extension.



Figure 34: Southwest and northwest walls of Room C3 (scale=2m).



Figure 35: Southeast wall of Room C3 (scale=2m).



Figure 36: Change in floor structure marking a difference in phase within Room C3; note the inserted RSJ in the centre with the aged reused floor timbers of the eastern portion of the room to the right.

3.3.11 Room C4

Room C4 is located in the westernmost section of Building C and was previously in use as a kitchen. This is where the mill wheel was most likely to be located since the Ordnance Survey mapping shows the mill race running through this room. This area has already been identified as a lean-to extension during the examination of the external walls (see Sections 3.3.4 and 3.3.5) and storey lean-to wheel houses are not uncommon and were added to mills in order to protect the wheel from the elements.

Room C4 is accessed via a single-width inserted doorway in the northeast wall. The southeast wall contains a single-width doorway giving access to Building D (Figure 37). The southwest wall contains the blocked doorway remodelled into a window noted on the external elevation. Above this window it is clear that the original stone wall of the lean-to has been raised in order to carry the floor joists of the room above. The walls of the room above are notably thinner than the ground floor level, giving further evidence that this part of the building was originally single-storey (Figure 38). The northwest wall contains a blocked doorway that would originally have provided external access, but would now be contained within Building F (Figure 39).

The main evidence for the presence of a mill wheel should be located on the northeast wall of Room C4 if the Ordnance Survey mapping is accurate. The northeast wall is constructed of well-coursed sandstone masonry in marked contrast to the remaining walls of the building which are of non-coursed sandstone rubble (Figure 40). This provides further evidence that Room C4 is an extension to the original mill building. There is no evidence of a large opening in the northeast wall that would be expected if the mill wheel was located at this point, however other features suggest that the wheel may have been in location. A small blocked rectangular slot was located off centre and high up on the northeast wall, this may have been the location of a possible drive shaft (Figure 41). The stonework on the northeast wall is also calcified in a manner not seen elsewhere in the building, perhaps as a result of increased water action at this location (Figure 42). A concrete platform covers two thirds of the floor space in the northern part of this room and may mark the location of a covered over wheel pit (Figure 43).

There was no safe access to the first floor above Room C4 for the purposes of the survey, however observations from ground level appear to show that there are no features or fixing associated with the mill workings within this room. It appears to be a relatively modern addition with thin walls and an original modern window with concrete lintel in the southwest wall.



Figure 37: Southeast wall of Room C4 (scale=2m).



Figure 38: Southwest and northwest walls of Room C4 (scale=2m).



Figure 39: Insertion of the floor and addition of the first floor along the southwest wall of Room C4.



Figure 40: Northeast wall of Room C4 with location of the rectangular slot outlined in red (scale=2m).



Figure 41: Rectangular slot in the northeast wall of Room C4 marking the location of a possible drive shaft.



Figure 42: Calcification of the stone on the northeast wall possibly providing evidence of increased water action in this location.



Figure 43: Concrete platform covering the probable location of the wheel pit in Room C4 (scale 1m).

3.3.12 *First Floor*

The first floor level of building C was only partially accessible for the purposes of the survey owing to the removal of floors within the structure. The removal of the ceiling of the first floor has also provided key evidence relating the phasing of the structure.

The first floor over Room C1 contains the windows noted on the northeast and southwest elevations as well as an inserted fireplace contained within an inserted thickening of the southeast wall (Figure 44). This wall also gave access to the first floor over Building B via a single-width doorway to the left of the fireplace, however there was no safe access to Building B at this point. The insertion of the fireplace most likely marks the time when the mill building ceased to function as a mill and had been renovated into housing. This change can be noted in the Ordnance Survey mapping when the 1916 map describes the building as 'Mill Houses' as opposed to 'Ponteland Mill (corn)' (Wooler 2011, 18).

The roof structure over this room is original and shows that the southeast end of the building was originally hipped, prior to the addition of Building B to the south (Figure 45). This gives information relating to the original appearance of the structure as well as the phasing of its development.



Figure 44: First floor over Room C1, showing inserted fireplace in a brick-built chimney breast in the southeast wall.



Figure 45: Detail of the roof structure at the first floor over Room C1, showing the original hipped end of the building prior to the addition of Building B to the south.

The first floor over Room C2 shows the windows noted in the southeast and northwest elevations as well as the original end wall of the mill building at its northeast end (Figure 46). This wall also gives access via a single-width doorway to rooms over the eastern extensions to the mill, however there was no safe access to these rooms at this point.



Figure 46: First floor over Room C2.



Figure 47: Southeast wall of the first floor over Room C2 showing the original floor level of this part of the building.

The southeast and northwest walls of this room show that the present floor level is lower than the original floor level in this part of the building (Figure 47). The original floor level is located c.0.7m above the present level and the increased ceiling height that this would have provided for the ground floor room would have allowed more space to house the large mill machinery that would have been found within this structure. The first floor room would therefore have had the appearance of a loft space, lit by small windows low down in the side walls.

The roof structure over this room is original and shows that the northeast end of the building was originally hipped, in a similar manner to the roof over Room C1, prior to the addition of the two extensions to the east (Figure 48). This gives information relating to the original appearance of the structure as well as the phasing of its development



Figure 48: Detail of the roof structure at the first floor over Room C2, showing evidence of the original hipped end of the building (outlined in red) prior to the addition of extensions to the east.

It has already been argued that the first floor over Room C4 is an addition to the original structure and this is further evidenced by the roof structure at the original southwest end of the building over Room C2. Here the truss retains a small section of the original battens that would have provided fixing points for the original roof covering prior to the addition of Room C4 to the west (Figure 49). This gives information relating to the original appearance of the structure as well as the phasing of its development.

Further evidence of the conversion of the mill to domestic use is also found on the southeast wall where a timber-panelled interior has been revealed by the removal of plasterboard. This was distinctly domestic in character and most likely pre-dates the conversion of this space into office accommodation.



Figure 49: Detail of the roof structure at the first floor over the southwest end of Room C2, showing evidence of the original battens (highlighted in red) to fix the original roof covering, prior to the addition of Room C4 to the west.

3.3.13 *Date, function and development*

The complex nature of the phasing of this structure has necessitated that some of the phasing information has already been discussed within the building description; however this section will provide a useful summary of this information.

PHASE 1: A short L-Shaped building incorporating Rooms C1 and C2, possibly with a wheel pit and wheel along the exterior of the southwest wall.

PHASE 2: Addition of a single-storey lean-to wheel house incorporating Room C4, possibly containing the wheel pit and wheel.

PHASE 3: Removal of mill machinery and conversion to domestic use

PHASE 4: Addition of an extension to the east of Room C2 incorporating part of Room C3 and heightening of Room C4 into a two storey structure.

PHASE 5: Conversion to office use

PHASE 6: Addition of a further extension to the east of the building incorporating the remainder of Room C2.

3.4 **Building D**

3.4.1 Building D is aligned northwest-southeast and adjoins Buildings B, C and E along its northeast and northwest ends. It is a single-storey, stone-built PVC and glazed conservatory-type structure previously in use as a meeting room. This structure is clearly of modern construction and contains no features of architectural or historical merit (Figure 50 and 51). Its location indicates that it may overly sections of the original tail race coming from Room C4 to the north.



Figure 50: Southwest elevation of Building D, showing Buildings C and E in the background (scale=2m).



Figure 51: Southeast and southwest walls of Building D (scale=2m).

3.4.2 *Date, function and development*

This building clearly post-dates Building C, Phases 1 and 2 of Room C4, and Building E and is likely to be the most recent addition to the site.

3.5 Building E

3.5.1 Building E is aligned northeast-southwest and adjoins Building C to the east. It is used as a boiler room.

3.5.2 This building is a two-storey structure, constructed of squared-random sandstone masonry with tuck pointing. It has a flat roof covered with asphalt and a timber weatherboard. This structure is clearly of modern construction and contains no features of architectural or historical merit (Figure 52). There was no access to the interior of the ground floor as this contains the heating system for the office building. There was also no safe access to the first floor room with is accessed via a single-width doorway in the southeast wall of Building C and contained two small windows in the southwest wall.

3.5.3 Date, function and development

There is a prominent vertical construction break present on the southeast elevation of this structure where it joins Building C to the east (Figure 11). This indicates that it post-dates both phases of Building C and is therefore of relatively modern construction. It appears to have always functioned as a boiler room.



Figure 52: Northwest and southwest elevation of Building E (scale=2m).

3.6 Building F

3.6.1 Building F is aligned northwest-southeast and adjoins the northwest wall of Building C. It was previously used as offices.

3.6.2 This building is single storey with a basement, built over the raised ground to the north of Building C. It is of half-timber, half-brick construction with the bricks laid to English Garden Bond. It has a flat roof covered with asphalt (Figure 53 and 54). This building is clearly of modern construction and bears no intrinsic architectural merit. However evidence of past landscaping works, possibly associated with the original mill building are contained beneath the floor of this structure.

3.6.3 A low single-width doorway in the southwest elevation gives access to a basement room with a very low ceiling height beneath the floor of Room G1 above (Figure 55). The basement room covers only around one third of the space under this structure, the rest being taken up by an in-filled brick structure (discussed in Section 3.3.5) and an area of previously landscaped ground preserved beneath the floor (Figure 56). This is the preserved previous ground surface prior to the erection of Building F and shows the extent of the original hollowed out area associated with the mill building and mill pond to the north. When Building F was constructed, this bare earth was blocked-up behind a wall of engineering brick, laid stretcher, creating the space now used as a basement room.



Figure 53: Southwest elevation of Building F (scale=2m).



Figure 54: Northeast elevation of Building F (scale=2m).



Figure 55: Basement room beneath the floor of Building F.



Figure 56: Preserved previous ground surface beneath the floor of Building F (scale=2m).

3.6.4 *Date, function and development*

Map evidence shows that Building F was constructed between 1964 and 1978. It appears to be contemporary with Building G to the north and was built as office accommodation. It has remained in use as office accommodation to the present with little or no alterations.

3.7 **Building G**

3.7.1 Building G is aligned northeast-southwest and sits on the north side of Building F. It was previously used as offices.

3.7.2 This building is single storey and it is constructed of a variety of materials. The southeast elevation is constructed of bricks laid to English Garden Bond, whilst the southwest and northwest elevations are faced in sandstone, masking a brick-built construction. The northwest elevation is half-timber, half glazed. It has a single-pitch slate roof. Internally the space is divided into two rooms, Rooms G1 and G2. This building is clearly of modern construction and is of no architectural or historical merit (Figure 57-59).

3.7.3 *Date, function and development*

Map evidence shows that Building G was constructed between 1964 and 1978. It appears to be contemporary with Building F to the south and was built as office accommodation. It has remained in use as office accommodation to the present with little or no alterations.



Figure 57: Southeast elevation of Building G (scale=2m).



Figure 58: Northeast and northwest elevation of Building G (scale=2 x 2m).



Figure 59: Southwest and Northwest walls of Room G1 (scale=2m).

3.8 Setting

3.8.1 Mill House sits within a sheltered site on the north bank of the River Pont, and is accessed by a driveway from the A696 at its northeastern side. It seems apparent that this is the original and unchanged access route into the site.

3.8.2 Part of the hillside has been cut away in the past, presumably at the time, and to accommodate the construction of, the original mill building. The mill itself is therefore only partly visible from the main road. As well as the clear levelling of the site achieved by cutting away part of the bank side, further landscaping is also extant, in the form of surviving graded sections of the mill head race (Figure 60), tail race and pond (Figure 61), as well as a run-off channel or sluice for draining the mill pond or allowing it to overflow back into the river (Figure 62). The mill pond, overflow and head race survive only as graded features, overgrown within the mature woodland to the northwest side of the mill, whilst the tail race survives as a property boundary ditch to the east of the current car park (Figure 63). The line of the tail race was confirmed by archaeological evaluation in the current car park, and aligns with this feature (Cockburn 2012). Part of the mill pond appears to have been latterly filled in and flattened or cut away to allow the construction of the modern extensions (Buildings F and G) to the northern side of the original mill building (Building C).

3.8.3 These features will be analysed further as part of the analytical earthwork survey (see Section 5).



Figure 60: Length of surviving head race to the northwest of the building (highlighted in red), surviving as a slight depression at the centre of the picture on a landscaped terrace cut into the side of the hill. The earthwork is greatly obscured by foliage.



Figure 61: Area of the original mill pond, filled in and cut away to allow the modern extension of the building at this side.



Figure 62: Length of surviving overflow channel to the northwest of the building (highlighted in red), surviving as a slight depression at the centre of the picture cut into the side of the river bank. The earthwork is greatly obscured by foliage.



Figure 63: Length of surviving tail race to the east of the building (highlighted in red), surviving in use as a property boundary ditch at the centre of the picture. The earthwork is greatly obscured by foliage.

Figure 64:

Key to Building and Room labels used in the text

Key:



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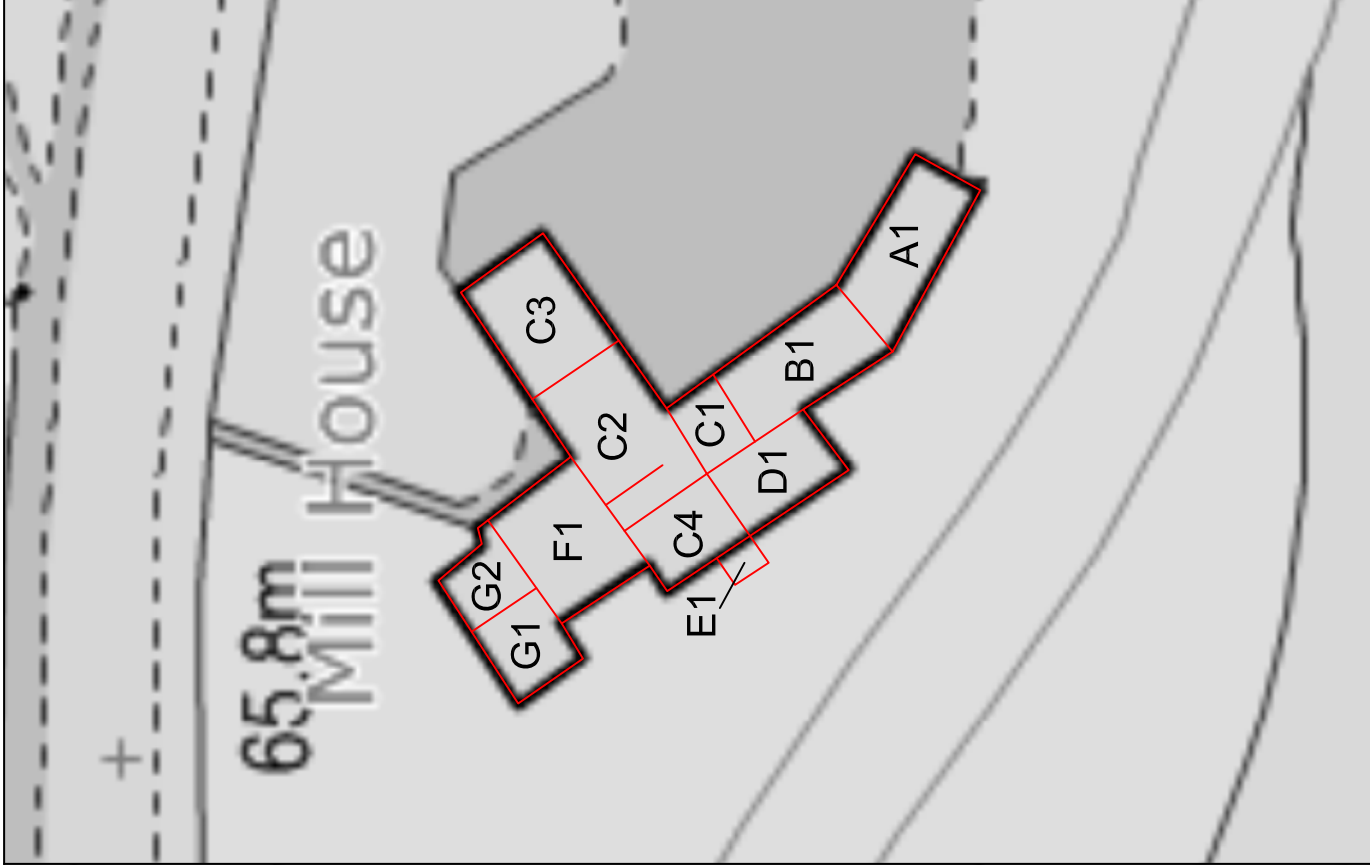
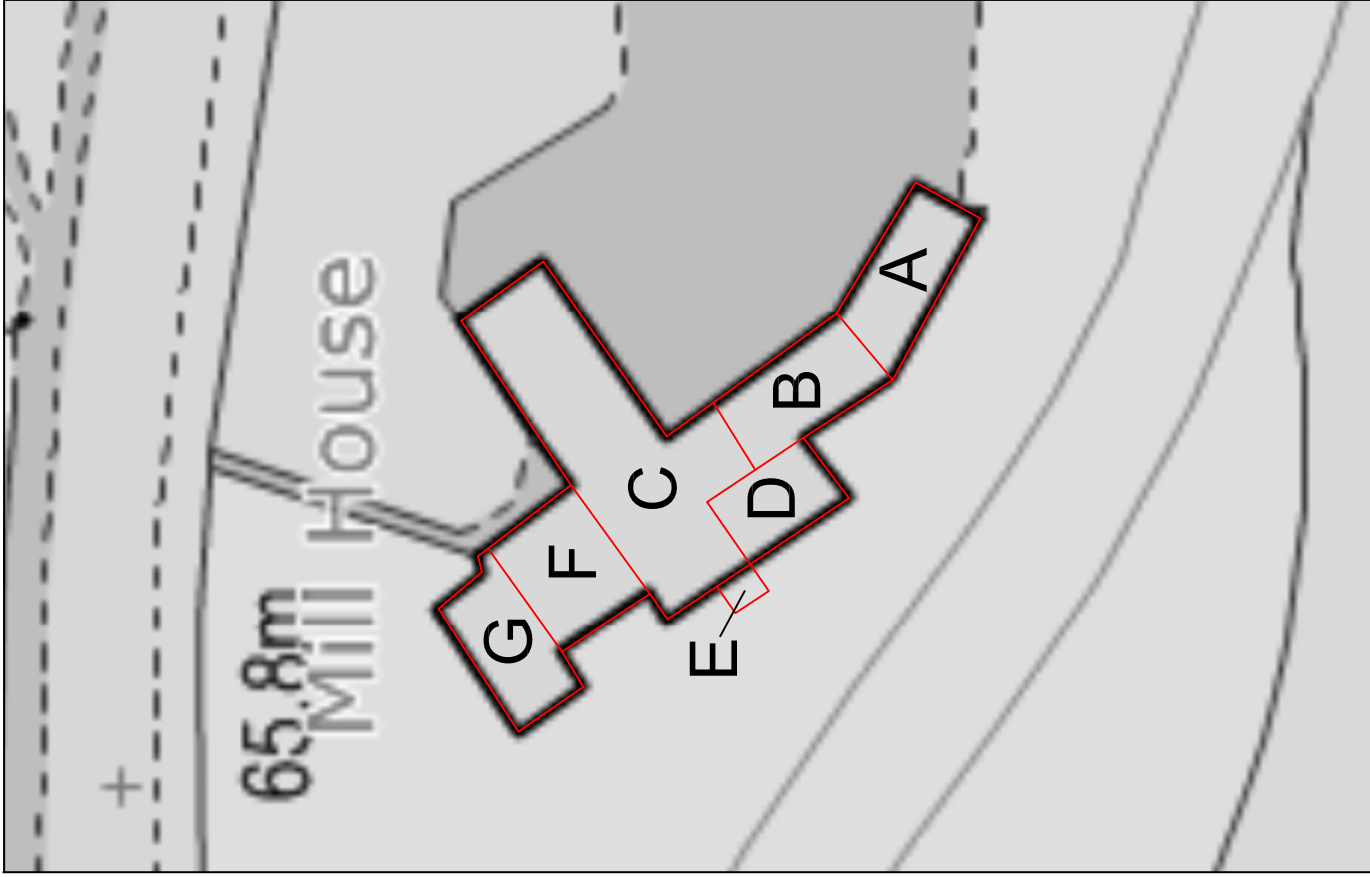











Figure 65

Phased Plan of Mill House

Key:

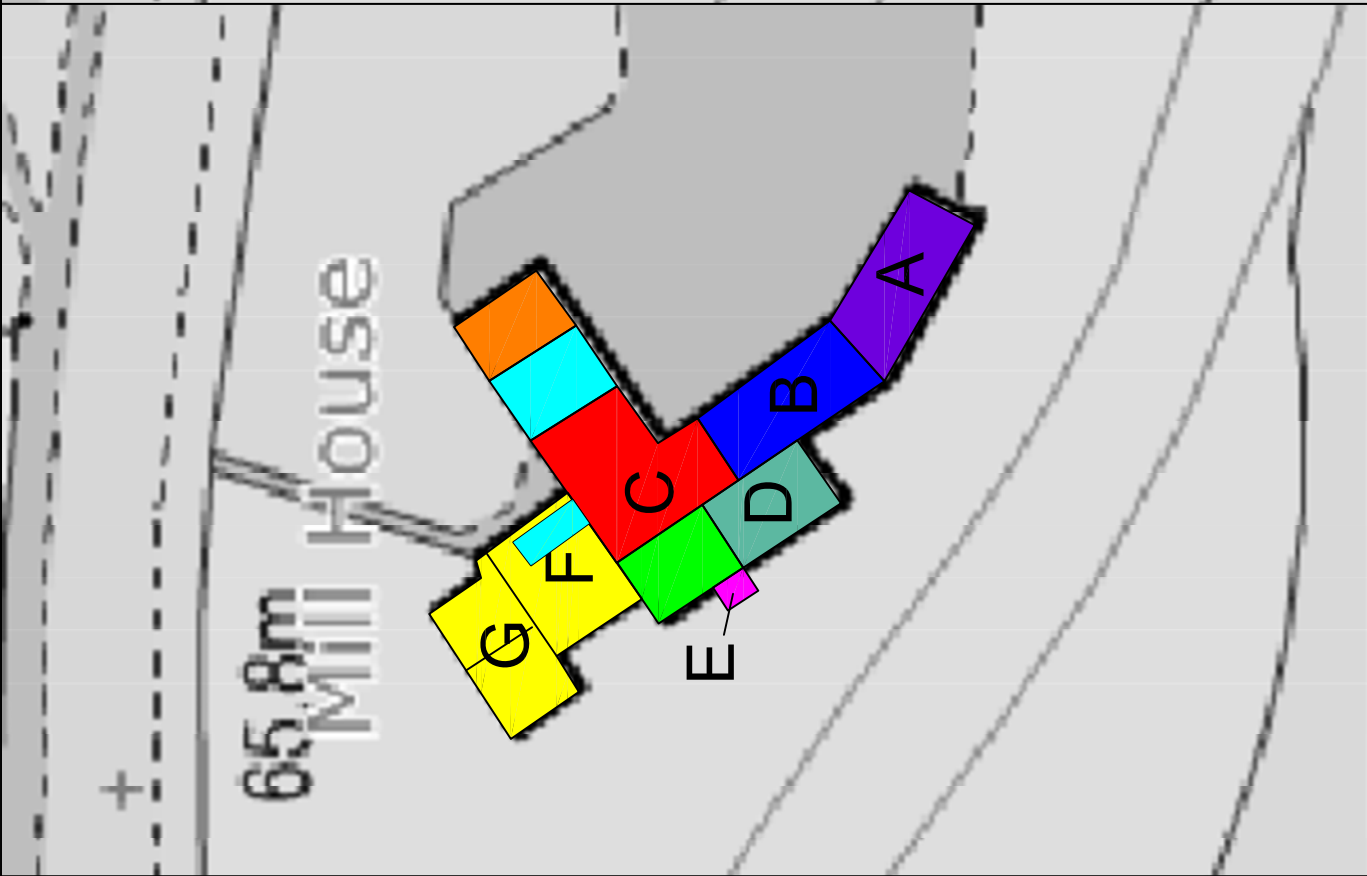
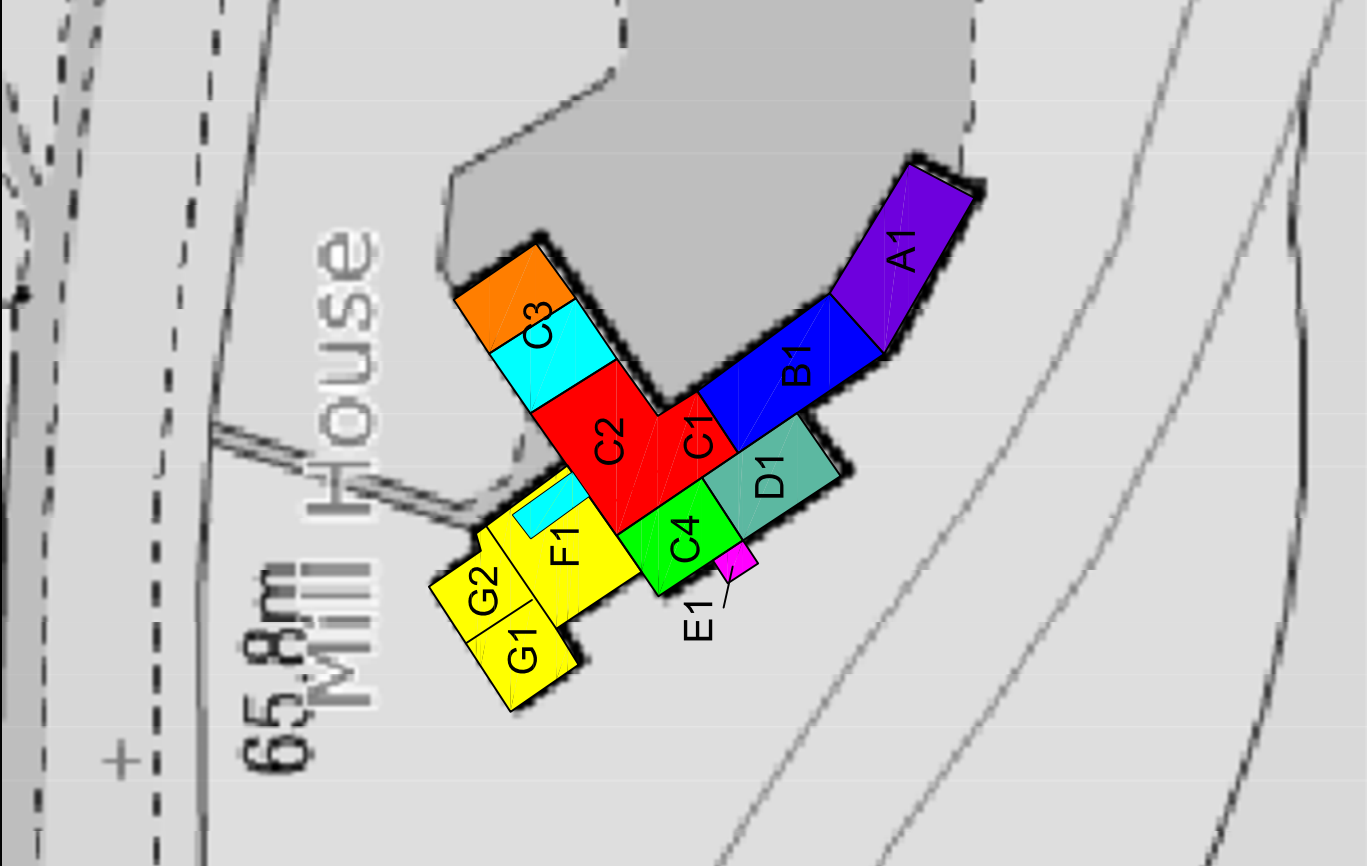


-  PHASE 1: Original mill pre 1800
-  PHASE 1a: Addition of lean-to wheel house pre 1800
-  PHASE 2: Extensions between 1986 and 1916
-  PHASE 3: Extensions between 1964 and 1978
-  PHASE 4: Extension modern-undated
-  PHASE 5: Extension after 1993
-  PHASE 5a: Extension after Building B
-  PHASE 5b: Extension after 1993
-  PHASE 5c: Extension after Building E

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4. RESULTS OF ANALYTICAL EARTHWORK SURVEY

4.1 Earthwork Description

4.1.1 The survey examined all extant earthworks within the proposed development area in the vicinity of Mill House. The features related to two main periods; post-medieval and modern. The earthworks are discussed below and are broadly characterised by feature type. All features described in the following sections are labelled on Figures 79 and 80 using an alpha-numeric identifier.

4.2 Mill Race (MR1)

4.2.1 This feature is marked on the Ordnance Survey First and Second Edition maps of 1865 and 1896 (Wooler 2011, Figures 10 and 11).

4.2.2 The survey recorded a c.25m section of mill race (MR1) to the northwest of Mill House. This was observed to be a very distinct earthwork, particularly to the northwestern end of the survey area, furthest away from Mill House. The northern bank of the mill race was formed by a large steeply sloping artificial scarp, cut into the north side of the naturally sloping hillside. This scarp created an artificially flat area into which the mill race was cut. The southern bank of the mill race consisted of a low degraded linear bank, c.0.5m in width, running along the top edge of the naturally sloping river bank (Figure 66).

4.2.3 At its eastern extent the mill race would originally have fed into the mill pond (MP1), however this area is much now much degraded and has been flattened out and cut by later landscaping (L1). Only the northern end of the mill race appears to follow its original course in this eastern area.



Figure 66: Earthwork remains of the mill race (MR1 highlighted in red), looking west (scale = 1m).

4.3 Mill Pond (MP1)

4.3.1 This feature is marked on the Ordnance Survey First and Second Edition maps of 1865 and 1896 (Wooler 2011, Figures 10 and 11).

4.3.2 The survey recorded the truncated remains of the mill pond, immediately to the northwest of Mill House. This was observed to be a very distinct earthwork which was further defined by the presence of established trees around its edge. Only the northern and part of the eastern banks survive and are formed by a large steeply sloping artificial scarp, cut into the naturally sloping hillside in a similar manner to the construction of the mill race. This scarp created an artificially flat area which was likely to have been scooped out to form the mill pond. The mill pond is now a flat, dry area containing young tree growth (Figure 67). The southern and western sides of the mill pond are no longer extant, as these areas have been subject to later landscaping (L1 and L2).

4.3.3 The mill pond would have been fed from the mill race (MR1) immediately to the west, however this relationship is only discernable along the northern side of the mill race and pond, where a short projecting toe marks the point where the earthwork bank on the mill pond was cut join the mill race.

4.3.4 The remains of a previous ground surface were encountered during the course of the building recording under the floor of Building F (see Section 3.6.3). The southern side of this previous ground surface had been cut away in a steeply sloping scarp and this may represent the original extent of the mill pond, prior to the conversion and extension of the mill buildings. This would have given the mill pond a diameter of *c.*15m.



Figure 67: Earthwork remains of the mill pond (MP1), looking northwest (scale = 1m).

4.3.5 There were no surviving earthwork remains of a mill race leading from the mill pond towards the mill. However, this feature is marked on the Ordnance Survey First and Second edition maps of 1865 and 1896 (Wooler 2011, Figures 10 and 11) and ran in a southeasterly direction from the mill pond and through Building C, Room C4. Owing to the topography of the land in this location it is almost certainly the case that the map represents the mill race at this point being carried in a timber or cast iron flume towards the wheel, rather than existing as an earthwork ditch. The wheel was therefore also likely to have been either overshot or breast-shot (C. Scott *pers. comm.*).

4.4 Bypass Sluice (SL1)

4.4.1 This feature is marked as a sluice on the Ordnance Survey First and Second Edition maps of 1865 and 1896 (Wooler 2011, Figures 10 and 11).

4.4.2 The survey recorded the remains of a bypass sluice (SL1) on the southern side of the mill race (MR1), to the west of Mill House. This was observed to be a distinct earthwork channel formed by a sharp northwest to southeast aligned cut into the naturally sloping river bank (Figure 68). Only the top of the channel was safely accessible to record as part of the earthwork survey.

4.4.3 The relationship between this feature and the mill pond (MP1) and mill race (MR1) is obscured by later landscaping (L1); however the Ordnance Survey First Edition map shows it connecting with the western side of the mill pond (MP1) at the point where it is fed by the mill race (MR1). The channel would have run from the mill pond down into the river and presumably acted as a bypass channel, for use when water levels within the mill pond were too high.



Figure 68: Earthwork remains of the bypass channel (SL1), looking east (scale = 1m).

4.5 Landscaping (L1, L2, L3)

4.5.1 Three areas of landscaping were recorded during the course of the earthwork survey (L1, L2 and L3), none of which are shown on Ordnance Survey Mapping.

4.5.2 Landscaping L1 is located to the west of the bypass sluice (SL1) and consists of a degraded channel cut into the naturally sloping sides of the river bank (Figure 69). This runs parallel to the bypass sluice, from the mill pond (MP1) down to the river. The creation of this channel also involved the destruction of the southern bank of the mill race (MR1) and the western side of the mill pond (MP1). This destruction indicates that the channel was constructed either the same time as, or after, the mill went out of use and was converted to domestic purposes. The purpose of the channel, therefore, was to drain the mill race and pond of water, so that it would not flood Mill House to the south. The Ordnance Survey Second and Third Edition maps show that this conversion occurred between 1896 and 1916, when the remains of the mill race are labelled as 'old mill race' (Wooler 2011, Figures 11 and 12). This most likely also dates Landscaping L1.



Figure 69: Earthwork remains of Landscaping (L1), looking southwest (scale = 1m).

4.5.3 Landscaping L2 is located immediately to the north of Mill House and cuts the southern side of the mill pond (MP1). It was observed to be a distinct earthwork consisting of a steeply sloping linear scarp running alongside the north and east walls of Building G (Figure 70). This earthwork is very well defined and has suffered very little subsidence, suggesting that it is of modern date. It is most likely associated with the construction of Building G and the associated destruction of the southern side of the mill pond. The Ordnance Survey National Grid 1:2500 maps show that Building G was constructed between 1964 and 1978 and this most likely dates landscaping L2.



Figure 70: Earthwork remains of Landscaping (L2), looking west (scale = 1m).



Figure 71: Earthwork remains of Landscaping (L3), looking west.

4.5.4 Landscaping L3 is located immediately to the north of Mill House and east of the mill pond (MP1). It was observed to be a distinct earthwork consisting of a steeply sloping curvilinear scarp running alongside the north and east walls of Building C and cut

into the naturally sloping hillside (Figure 71). It has a concrete retaining wall at the base allowing space for a footpath around Mill House. This earthwork is very well defined and has suffered little subsidence, suggesting that it is of modern date. It is most likely associated with the final eastward extension of Building C, which is difficult to discern on available Ordnance Survey mapping. The building recording noted that this extension was constructed of brick walling with an exterior sandstone skin and was therefore a modern addition. The associated landscaping L3 is therefore most likely a modern feature also.

4.6 Tail Race (TR1, TR2, TR3, TR4)

4.6.1 This feature is marked on the Ordnance Survey First Edition map of 1865 (Wooler 2011, Figures 10) and continues to be marked as a definitive feature until the Ordnance Survey 1:2500 County Series map of 1932. Subsequent Ordnance Survey mapping depicts the line of the tail race as a boundary and drain until the present day.

4.6.2 A c.70m truncated section of tail race was recorded within the development area in four sections to the east of Mill House (TR1, TR2, TR3, TR4). The sections were separated by areas of overgrown vegetation and a patch of Japanese Knotweed mid way along the Scout Hut. All four sections essentially form part of the same feature, but are discussed separately below as each had slightly different morphological characteristics.



Figure 72: Earthwork remains of Tail Race (TR1), looking east.

4.6.3 Tail race TR1 marked the westernmost visible section of the tail race and ran for a length of c.15m. This was observed to be a much degraded earthwork, particularly the southern bank. The northern bank of the tail race was formed by a large steeply sloping

artificial scarp, cut into the north side of the naturally sloping hillside in a similar fashion to the construction of the mill race to the northwest. This scarp created an artificially flat area into which the tail race was cut. The southern bank of this section of the tail race has been removed and a boundary fence now marks its previous location (Figure 72).

4.6.4 Tail race TR2 consisted of a $\approx 17\text{m}$ section of tail race running alongside the north wall of the Scout Hut. In a similar fashion to tail race TR1, the northern bank was formed by a large artificial scarp cutting into the naturally sloping hillside, and the southern bank had been removed and a boundary fence put in its place. It appears that this section of the tail race has recently been re-cut, most likely as a drainage ditch. A raised area has been created at the western gable of the Scout Hut and from there, as a sharp, almost-vertical sided cut marks the previous location of the tail race. This has a width of $\approx 1.5\text{m}$ and appears to have been machine cut to its present state (Figure 73).



Figure 73: Earthwork remains of Tail Race (TR2), looking east (scale=1m).

4.6.5 Tail race TR3 consisted of a $\approx 11\text{m}$ section of tail race running alongside the north wall of the Scout Hut up to its eastern gable. Only a $\approx 2.5\text{m}$ section of the original tail race survives in this area and the base lies $\approx 1\text{m}$ to the north of its present location immediately to the east and west (Figure 74). In this surviving section the northern bank is formed by a large artificial scarp in the naturally sloping hillside. This created an artificially flat area into which the tail race was cut. The south bank consisted of a gradually sloping bank, the rear side of which has been removed to make way for the Scout Hut. The tail race in this section had a width of $\approx 1.5\text{m}$. Immediately to the west of this surviving section, a further machine-cut section was observed running to the east gable of the Scout Hut. At the east gable a further machine cut was observed in the northern bank of the tail race, presumably marking the machine's turning circle (Figure 75). A gently sloping earthen pathway leads from this area southwards into the park.



Figure 74: Earthwork remains of Tail Race (TR3), showing the short surviving section, looking west (scale=1m).



Figure 75: Earthwork remains of Tail Race (TR3), showing the machine cut into the northern bank, looking north (scale=1m).

4.6.7 Tail race TR4 consisted of a c.12m section of tail race running eastwards from the eastern gable of the Scout Hut. This section of the tail race has not been re-cut and survives as a partially degraded earthwork with a northern and southern bank. The

northern bank is formed by a large artificial scarp in the naturally sloping hillside. This created an artificially flat area onto which a ditch and northern bank were constructed. The northern bank has a width of c.4m and survives a low flat-topped mound. The south bank is of similar construction and survives has a width of c.1.5m. The tail race in this section has a width of c.1m (Figure 76). Local evidence states that this area floods in wet weather.



Figure 76: Earthwork remains of Tail Race (TR4), looking west (scale= 1m).

4.7 Wider Landscape Features

4.7.1 A cursory walkover of the area surrounding the proposed development revealed further features associated with the mill's water management system that will not be impacted upon by the present development.

4.7.2 The first feature is located across the river to the west of Mill House. This consisted of a linear ditch that is marked on the First Edition Ordnance Survey map of 1865 (Wooler 2011, Figure 10) and continues to be depicted as a drainage ditch to the present day. This feature would have originally functioned as a further bypass for the mill race (MR1), cutting off its supply some distance before the identified bypass sluice (SL1). The earthwork consists of a narrow linear ditch feature and presently functions as a surface water drain into the river (Figure 77).



Figure 77: Earthwork remains of bypass channel for the mill race, looking west (scale= 1m).

4.7.3 The second identified landscape feature is the continuation of the tail race beyond the scope of the development. This continues eastwards from the development area as a drainage channel. It is culverted under a small bridge providing pedestrian access to the park, before travelling a short distance and meeting the river (Figure 78).

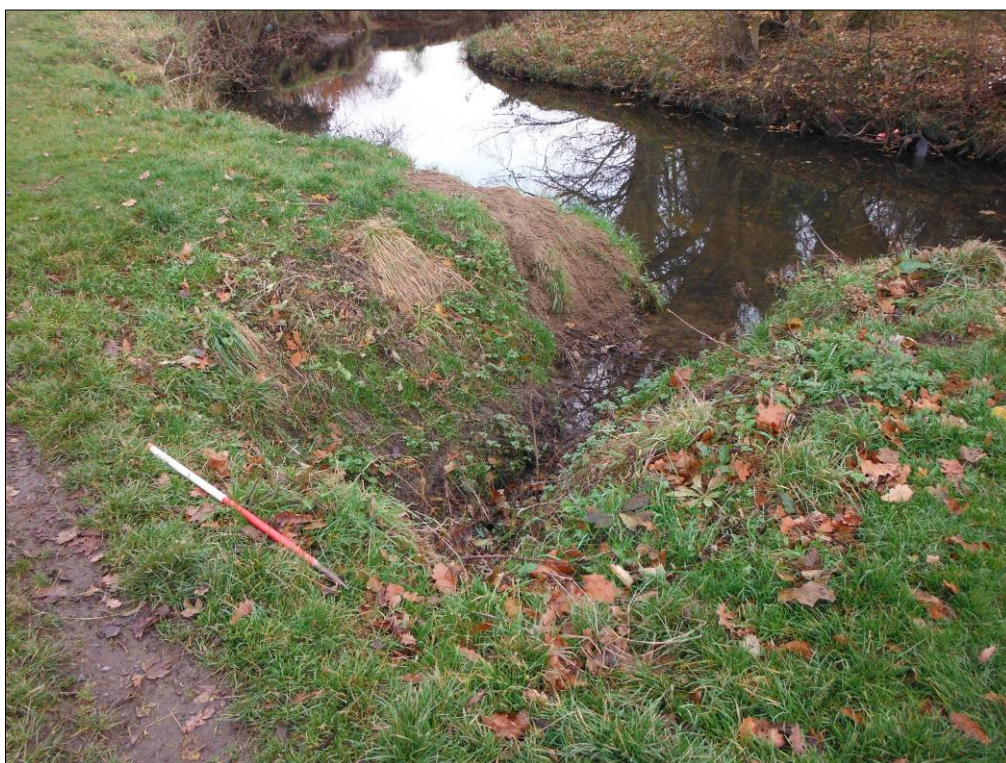


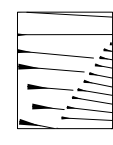
Figure 78: Earthwork remains of the continuation of the tail race into the river, looking east (scale= 1m).

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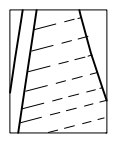
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Drawing Ref:
Date: 23/11/2012
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Figure 79: Hachured plan
of earthwork survey @
1:500 (Part 1)

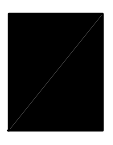
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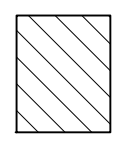
Archaeological Slopes



Natural Slopes



Original Mill Building



Lean-to Wheel House

Projected Line of Mill
Race



MR1

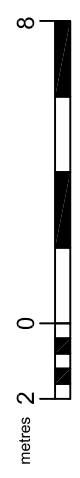
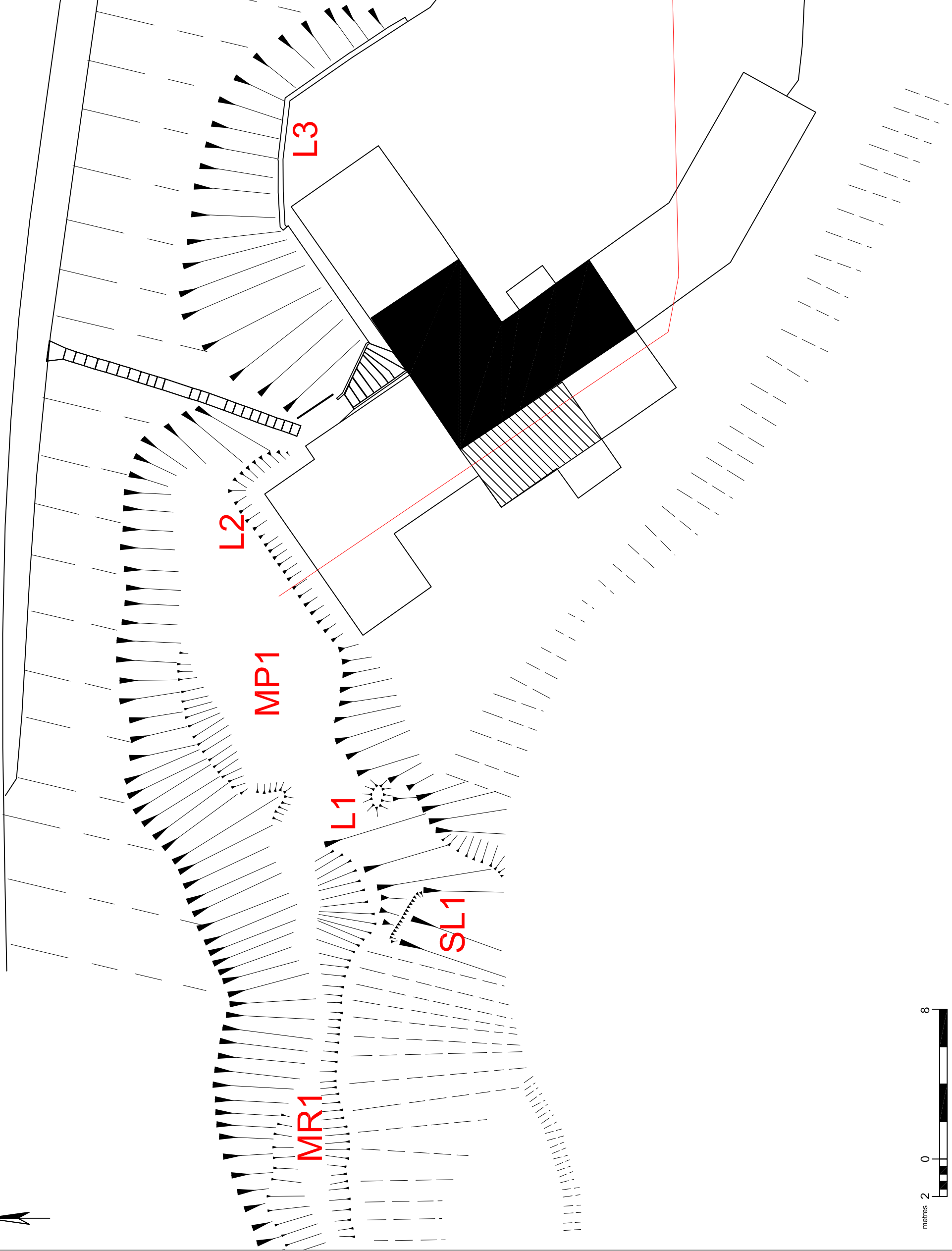
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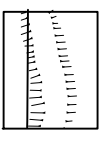


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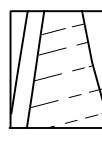
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Figure 80: Hachured plan
of earthwork survey at
1:500 (part 2)

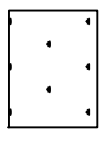
Key:



Archaeological Slopes



Natural Slopes



Overgrown Areas

Projected Line of Mill
Race



Alpha-numeric Codes
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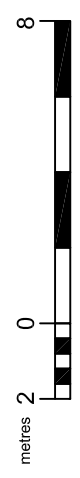
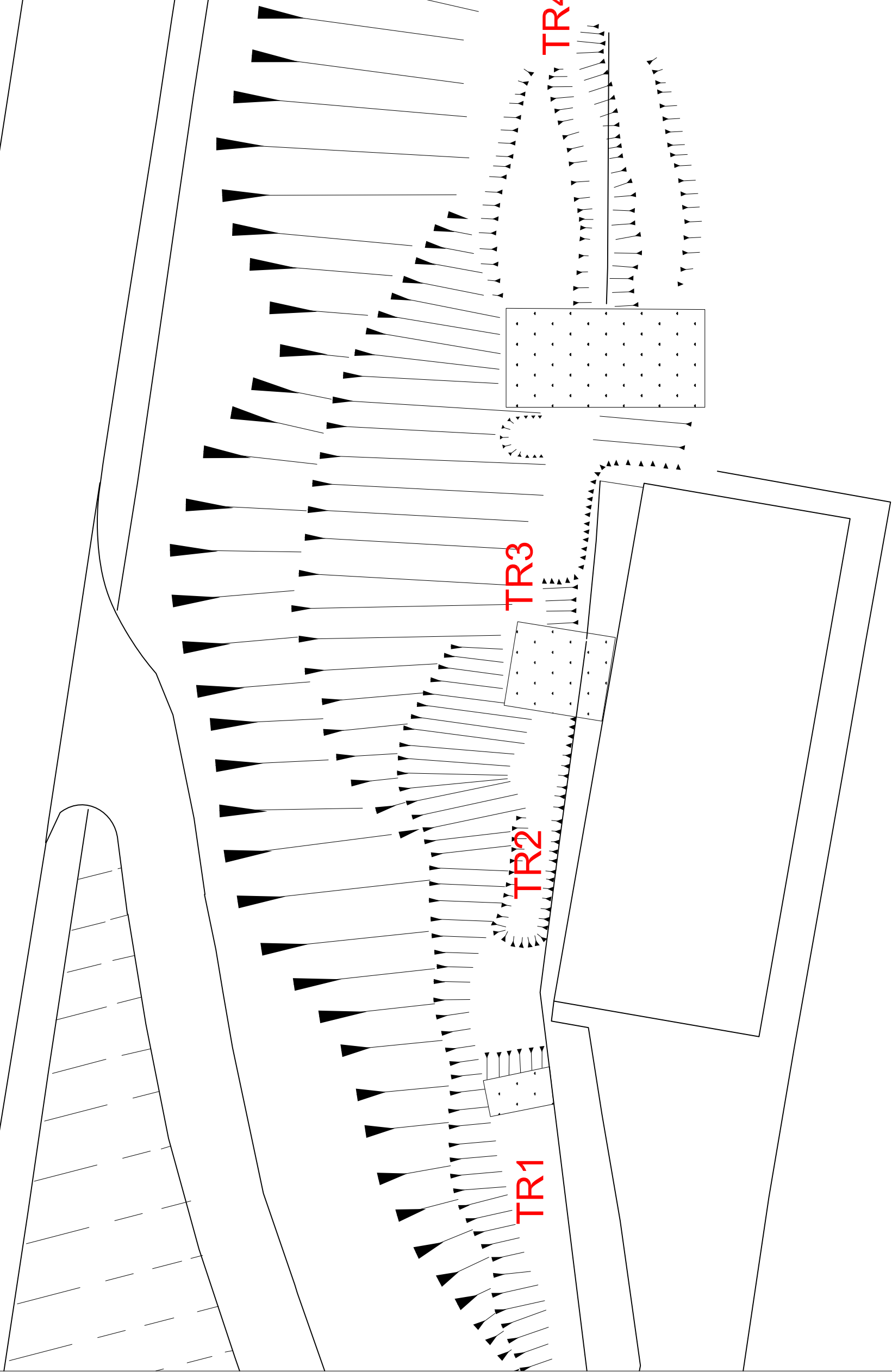
MR1

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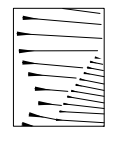


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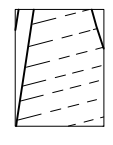
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Figure 81: Earthwork
survey overlain on
Ordnance Survey 1:2500
map

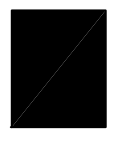
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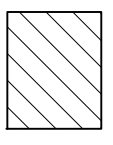
Archaeological Slopes



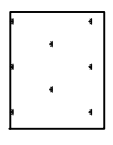
Natural Slopes



Original Mill Building



Lean-to Wheel House



Overgrown Areas



Projected Line of Mill
Race

MR1

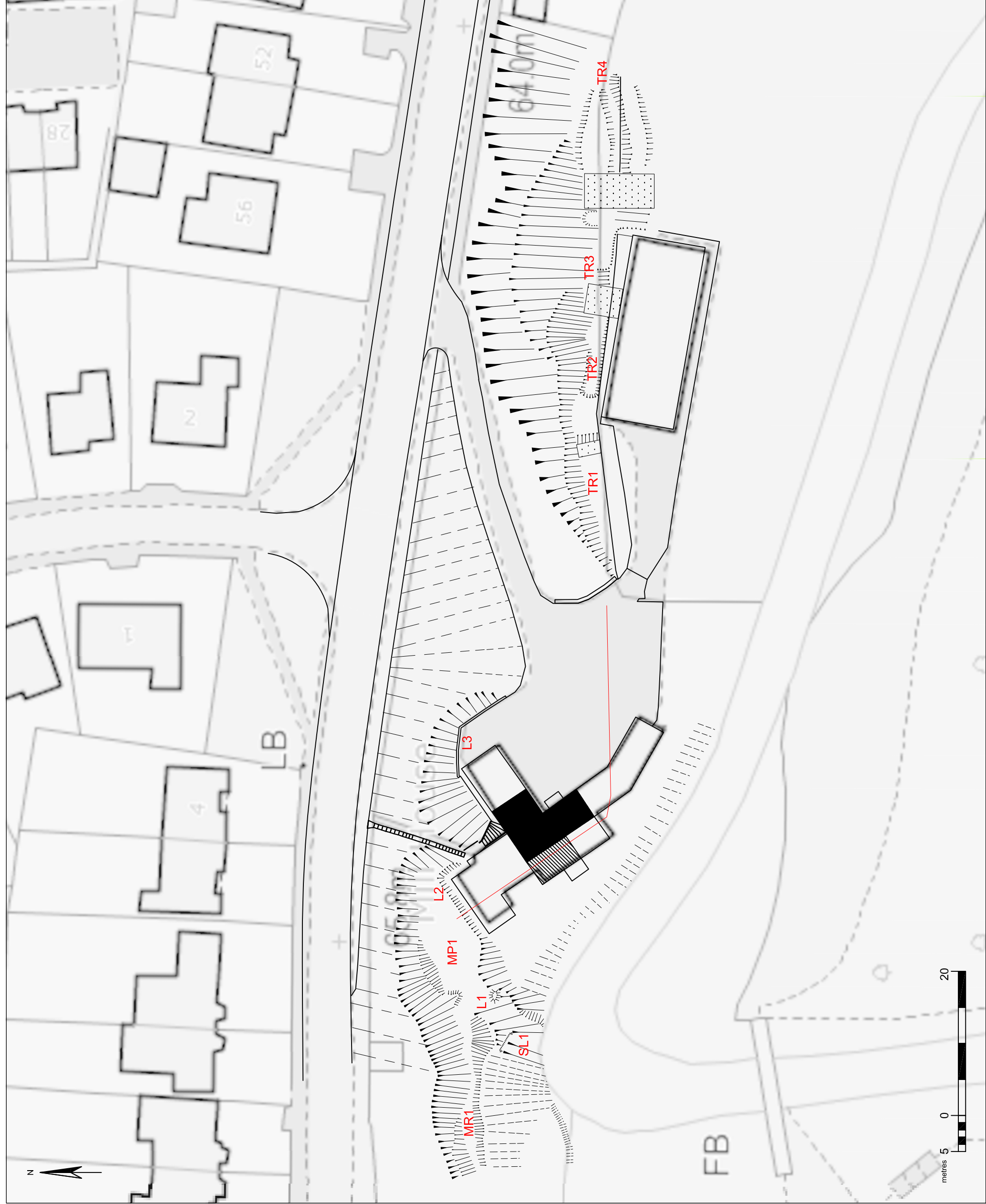
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Figure 82: Interpretive map
of earthwork features

Key:

-  Mill Race
-  Mill Pond
-  Bypass Sluice
-  Landscaping
-  Tail Race

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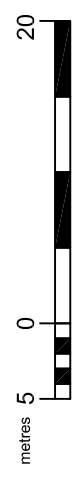
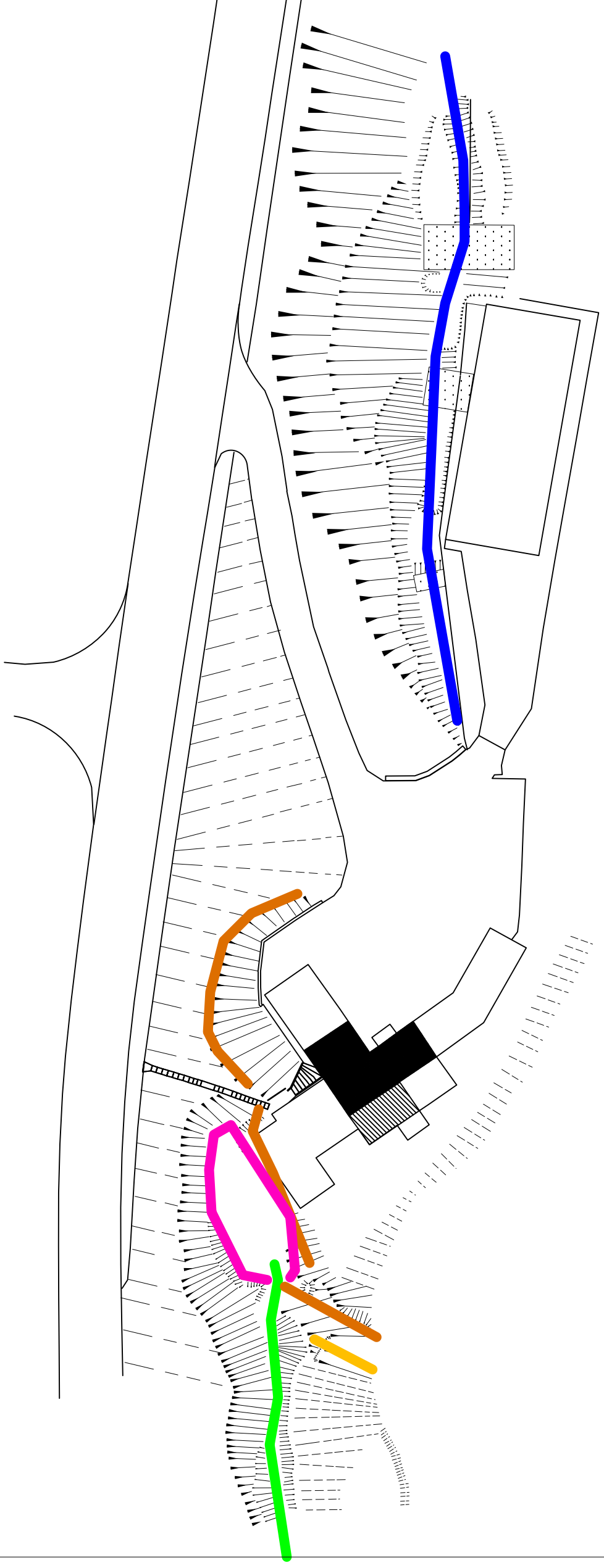


Figure 83: Topographical
 Survey

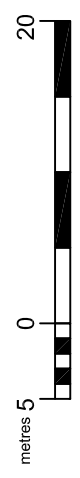
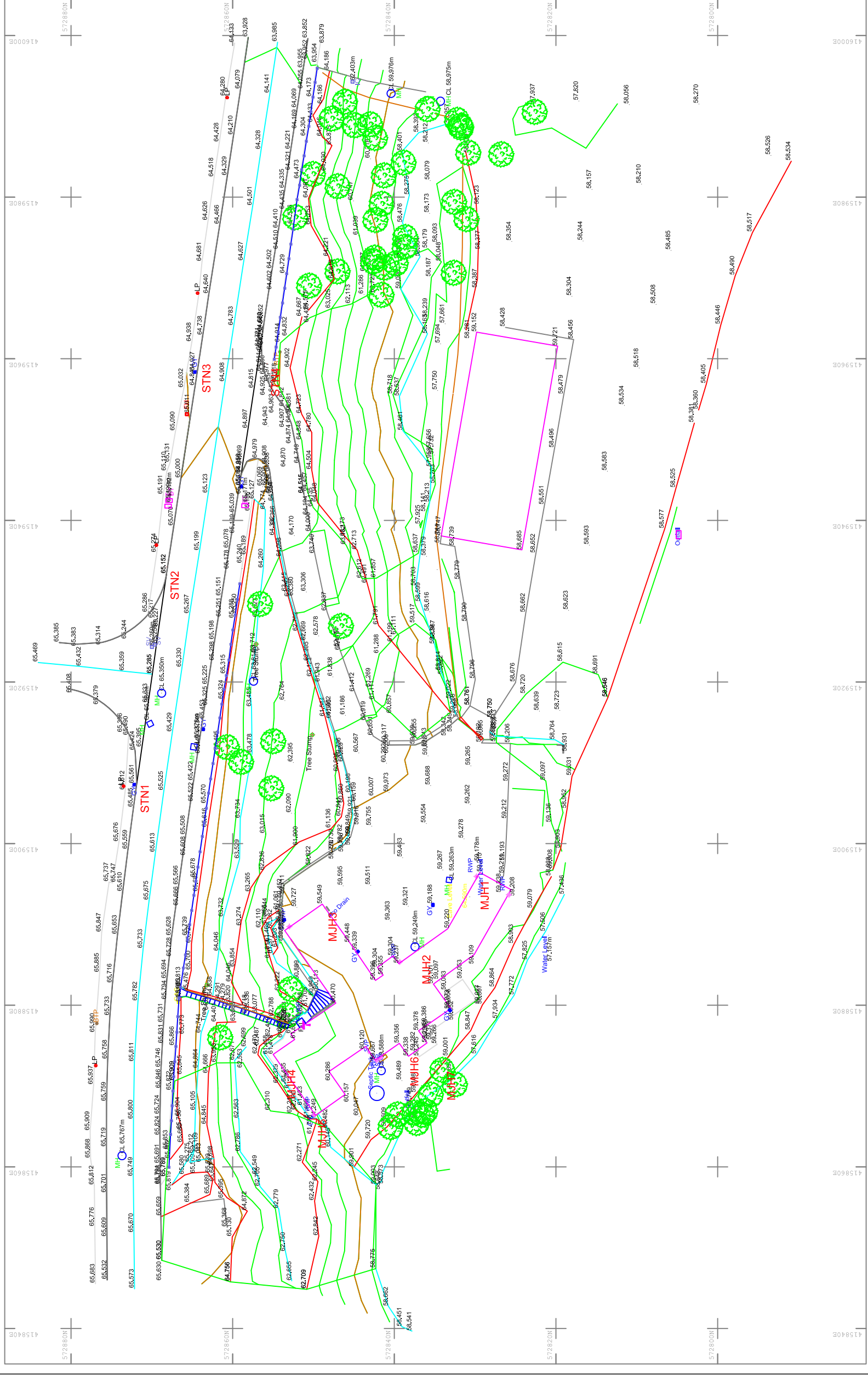
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SURVEY STATIONS			
Name	Easting	Northing	Height Remark
MJH1	415895.95	572829.62	61.015
MJH2	415896.741	572837.037	61.375
MJH3	415892.019	572848.639	61.714
MJH4	415896.443	572849.948	63.566
MJH5	415874.332	572838.520	61.216
MJH6	415871.875	572841.010	61.277
STN1	415907.864	572871.875	65.556
STN2	415945.672	572884.246	64.937
STN3	415959.397	572855.727	64.948



5. RESULTS OF THE WATCHING BRIEF

The archaeological watching brief was conducted in two stages; first during the grubbing-out of the foundations of Mill House; and second during the groundworks associated with the installation of the foundations and landscaping for the new housing development.

5.1 Grubbing-Out of Mill House Building Foundations

5.1.1 There were two areas of particular archaeological interest identified during previous archaeological work at the site, both as part of the current staged programme of work and during the archaeological evaluation (Cockburn 2012). These areas consisted of the remains of the Tail Race as it skirts around the southwest and southeast ends of the original mill building (Cockburn 2012) and the potential remains of the wheel pit under the concrete floor of Building C, Room C4 (see Section 3.3.11). Particular attention was paid to these areas during the course of the watching brief.

5.1.2 The concrete floors and foundations of Mill House were removed by a machine using a toothed ditching bucket (Figure 84). The resulting masonry was removed from site and the excavated areas filled in with spoil and debris.

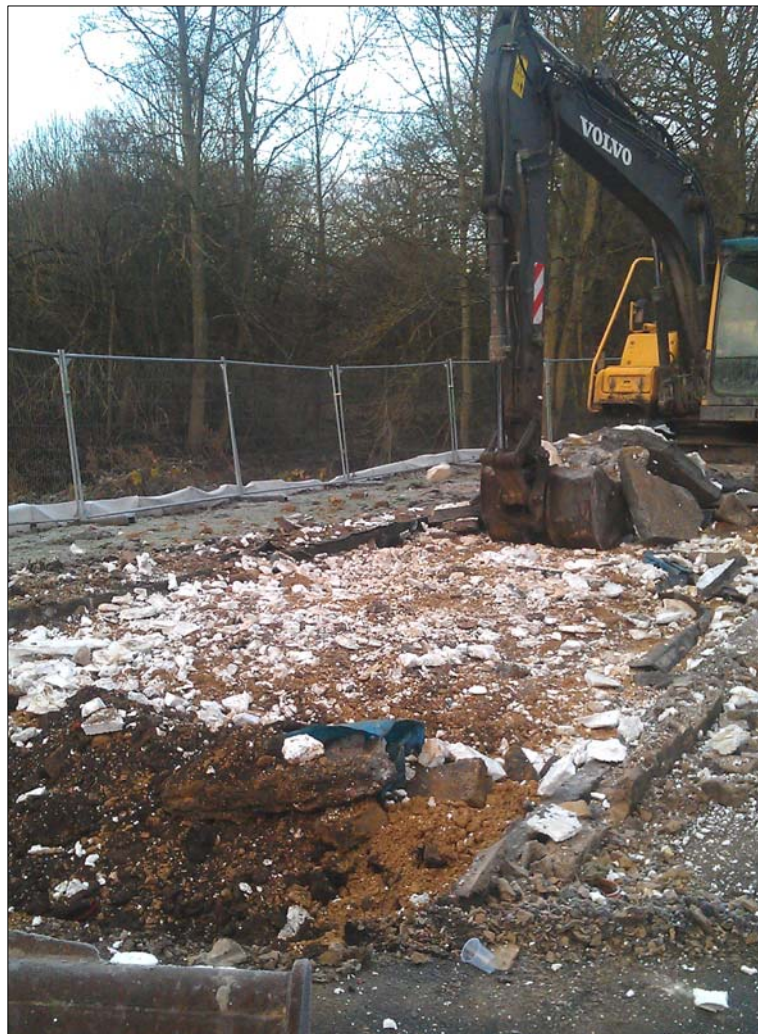


Figure 84: Removal of the floors and foundations of Mill House.

5.1.3 As mapped on the Ordnance Survey First Edition map of 1865 (Wooler 2012, Figure 10), the tail race is located beneath the present Buildings A and B. The concrete floors of these buildings were removed to reveal the continuation of the tarmac car park beneath the buildings (001). This was removed to reveal a layer of hardcore make-up for the car park (002) which was left *in-situ* (Figure 84). The remains of the tail race are therefore likely to be preserved beneath this layer, but were not observed during this phase of work.

5.1.4 The Building Recording element of this programme of work indicated that any remains of the wheel pit were likely to be located beneath a concrete pad in Building C, Room C4 (see Section 3.3.11). This concrete pad (003) was found to extend to a depth of $\approx 0.9\text{m}$ on its western side and $\approx 0.35\text{m}$ elsewhere (Figure 85). The pad was removed using a breaker to reveal a make-up layer of concrete and brick chippings (004) which had a depth of $\approx 0.4\text{m}$ (Figure 86). This was removed to reveal a layer of dark brown silty clay loam (005) which was excavated to a total depth of $\approx 1.4\text{m}$ beneath the concrete cap (Figure 87). No evidence of the wheel-pit was discovered at this depth, suggesting that the wheel-pit was either removed prior to the installation of the concrete cap, or it was originally located elsewhere. The depth of concrete required to cover this area, however, acts as circumstantial evidence of there having been a perceived risk of subsidence at this location and this was most likely due to the previous presence of a wheel-pit here. Some remains of the base of the wheel pit may be preserved in this location at a depth of over 1.4m , but were not observed during this phase of work and it is considered likely that the wheel pit was purposefully removed.

5.1.5 No archaeological features were identified in the remainder of this phase of the watching brief. The area previously occupied by Mill House was tracked over by the machine and left in a safe condition in preparation for the next phase of work.



Figure 85: The concrete pad (003) forming the floor of Building C, Room C4 prior to removal



Figure 86: Brick and concrete chippings (004) beneath the concrete pad (003) in Building C, Room C4.



Figure 87: Brick and concrete chippings (005) beneath the brick and concrete chippings (004).

6. DISCUSSION

6.1. The Building Recording

6.1.1 The historic building recording of Mill House has provided information relating to the history and development of site, as well as providing a record and assessment of the standing remains.

6.1.2 The earliest written reference to the site is in 1802 when it is described as 'Ponteland Mill Farm' (Wooler 2011, 6), however mapping evidence shows a building on the site from at least c.1800. A series of proposed alterations to the site survive from 1827, however 'these do not necessarily represent what was actually constructed or the modifications which may have been made to the existing structure' (Wooler 2011, 24). Ordnance Survey mapping shows the site to have consisted of a T-Shaped structure (Building C) from the First Edition to 1978, with only minor alterations or additions.

6.1.3 The building recording refined the chronology of the mill buildings thus:

- PHASE 1: Rooms C1 and C2 of Building C with a single roof, hipped on the northeast and southeast ends. The first floor level of Room C2 was originally c.0.7m higher than present, allowing for extra ceiling height on the ground floor to accommodate the large mill machinery. The mill wheel and wheel pit was likely to have been against the exterior of the southwest wall.
- PHASE 1a: Addition of Room C4, a single-storey lean-to extension to the southwest of Building C prior to 1842. This most likely functioned as a wheel house and enclosed the mill wheel and wheel pit.
- PHASE 2: Removal of mill machinery and conversion of the mill to domestic use, possibly including the addition of a first storey over Room C4 and the addition of the first part of Room C3. Also most likely including the addition of the now filled-in brick-built outhouse and steps to the north of Building C, between 1896 and 1916.
- PHASE 3: Conversion of the mill house to office accommodation and addition of Buildings F and G to the north of Building C between 1964 and 1978. This phase also includes the filling-in of the brick-built structure beneath the floor of Building F.
- PHASE 4: Final eastward extension of Building C, comprising the east end of Room C3 - modern undated
- PHASE 5: Addition of Building B to the south of Building C after 1993.
- PHASE 5a: Addition of Building A to the south of Building B after 1993.
- PHASE 5b: Addition of Building E to the west of Building C after 1993.
- PHASE 5c: Addition of Building D to the west of Building B after 1993.

6.2 The Analytical Earthwork Survey

6.2.1 The analytical earthwork survey of Mill House has provided information relating to the landscape features in the immediate vicinity of the mill and has shown that the site retains the well preserved remains of water management systems associated with the post-medieval water-powered corn mill. Several of these features were known from early Ordnance Survey mapping and the present survey therefore records the surviving elements of this system in their current state, prior to development.

6.2.2 Features associated with the mill and mill race first appear on a Plan of an Estate at Pont Island dating to c.1800 (Wooler 2011, Figure 5). The features identified through the earthwork survey all date to the post-medieval and modern period and relate to the following three phases in the mill's development:

- PHASE 1: The original construction of the mill, consisting of original L-Shaped portion of Building C, the mill race (MR1), mill pond (MP1), tail race (TR1, TR2, TR3, TR4) and bypass sluice (SL1). Dated generally to the post-medieval period pre 1800.
- PHASE 2: Conversion of the mill to domestic use. This involved the destruction of the west side of the mill pond (MP1) and part of the south bank of the mill race (MR1) to drain both features back into the river via a channel cut into the naturally sloping river bank (L1). This phase presumably also included the removal of the flume leading from the south side of the mill pond to the wheel, and the deliberate in-filling of the tail race immediately to the south and east of the mill building. Dated to between 1986 and 1916.
- PHASE 3: Extensions to the mill building and associated landscaping works (L2, L3); which also included the destruction of the southern side of the mill pond (MP1), which was built over by Building F. Dated to the modern period, post 1968.

6.3 The Watching Brief

6.3.1 No archaeological features were identified during the grubbing-out of the floors and foundations of Mill House. It was anticipated that the remains of the tail race may have been exposed under Buildings A and B, however no remains of this feature were observed at the excavated depth beneath tarmac. Similarly, it was anticipated that the wheel pit would be preserved beneath Building C, Room C4, however no remains of this feature were observed at a depth of c.1.4m below the concrete pad. Both features may survive beneath the excavated depths, but were not observed during the course of the watching brief.

7. CONCLUSION AND RECOMMENDATIONS

7.1 The historic building recording of Mill House has highlighted the history and development of the site and has shown the site to be post medieval in date and to date from c.1800. The historic building recording has also shown that the development of the site consisted of five phases; dating from c.1800, through to the latest addition in 1993.

7.2 A previous evaluation carried out by ARS Ltd (Cockburn 2012) and the earthworks survey (conducted as part of the wider archaeological scheme of works) confirmed that the site retains the well preserved remains of water management systems associated with the post-medieval water-powered corn mill. No archaeological features were identified during the watching brief, although associated mill features may survive below the limit of excavation.

7.3 The watching brief was suspended after the removal of the foundations of mill house. Although the site retains archaeological potential in the form of remains of the mill race and mill pond, it is considered that the results of the previous evaluation (Cockburn 2012), together with the results presented in this report, provide a full record

of the mill and its associated landscape features. These results indicate that it is unlikely that the site hosted any remains of an earlier mill, as was suspected in the previous desk-based assessment (Wooler 2011). It is therefore unlikely that further archaeological intervention in this location will provide significant knowledge gain. No further archaeological works are recommended.

8. PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

8.1 Any publicity will be handled by the client.

8.2 Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

9. STATEMENT OF INDEMNITY

9.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

10. ACKNOWLEDGEMENTS

11.1. Archaeological Research Services Ltd would like to thank all those involved with the work, in particular Karen Derham, Northumberland Assistant County Archaeologist and David Atkinson and Mac Bell of Galliford Try.

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APPENDIX I: PHOTOGRAPH REGISTER: BUILDING RECORDING

Shot No.	Direction	Scale	Description	Taken By
1	W	2m	Building A SE elevation	GE
2	E	2 x 2m	Building A SW elevation	GE
3	N	2m	Building B SW elevation	GE
4	NE	2m	Junction of Buildings A and B	GE
5	NE	2m	Building B window detail	GE
6	N	-	Junction of Buildings B and C	GE
7	N	2m	Building D S elevation	GE
8	NE	2m	Building D W elevation	GE
9	NW	2m	Buildings C and E SE elevation	GE
10	NE	2m	Building E SW elevation	GE
11	SE	2m	Building E NW elevation	GE
12	E	2m	Building C SW elevation	GE
13	E	2m	Building C SW elevation blocked door detail	GE
14	SE	2m	Building C NW elevation	GE
15	NE	2m	Building F SE elevation	GE
16	NW	2m	Building G SE elevation	GE
17	SE	2m	Building G SW elevation	GE
18	SE	-	General view	GE
19	SE	-	General view	GE
20	SW	2 x 2m	Building A NE elevation	GE
21	SW	2 x 2m	Building B NE elevation	GE
22	SW	2m	Building C NE elevation	GE
23	SW	2m	Junction of Buildings B and C	GE
24	SW	2m	Building C NE elevation	GE
25	NE	2m	Building C SW elevation Part 1	GE
26	NE	2m	Building C SW elevation Part 2	GE
27	NE	2m	Building C SW elevation Part 3	GE
28	SW	2m	Building C NE elevation	GE
29	SE	-	General view	GE
30	SE	2 x 2m	Building C NW elevation	GE
31	SE	2m	Building C NW elevation blocked opening detail	GE
32	W	2m	Footpath adjacent to Building C NW elevation	GE
33	SW	2m	Building F NE elevation	GE
34	SW	2m	Building G NE elevation	GE
35	S	-	Building C NW elevation	GE
36	SW	2 x 2m	Building G NW elevation	GE
37	SE	2m	Building A internal SW and SE walls	GE
38	NW	2m	Building A internal NE and NW walls	GE
39	SE	2m	Building B internal NE and SE walls	GE
40	NW	2m	Building B internal NW and SW walls	GE
41	NE	1m	Building C Room C1 detail of reception area	GE
42	E	2m	Building C Room C1 NE and SE walls	GE
43	NW	2m	Building C Room C1 NW and SW walls	GE
44	NE	1m	Building C Room C1 brick-built NW wall-	GE

			partition	
45	NW	2m	Building C Room C2 staircase detail	GE
46	NW	1m	Building C Room C2 breeze-block partition	GE
47	N	1m	Building C SE elevation blocked door and inserted window detail	GE
48	NE	2m	Building C Room C2 NE and NW walls	GE
49	SW	2m	Building C Room C2 SE and SW walls	GE
50	SW	2m	Building C Room C2 SW wall	GE
51	SE	2m	Building C Room C2 SE wall detail	GE
52	W	2m	Building C Room C3 NW and SW walls	GE
53	S	2m	Building C Room C3 SE wall	GE
54	N	2m	Building C Room C3 NW and NE walls	GE
55	-	-	Building C Room C3 reused floor joists	GE
56	NW	2m	Building C Room C4 NW and SW walls	GE
57	NE	2m	Building C Room C4 NE walls	GE
58	SW	1m	Building C Room C4 SW wall blocked door detail	GE
59	SE	2m	Building C Room C4 SE wall	GE
60	-	-	Building C Room C4 inserted floor joists	GE
61	NE	1m	Building C Room C4 concrete floor platform	GE
62	S	2m	Building D internal SE and SW walls	GE
63	N	2m	Building D internal NE and NW walls	GE
64	SW	-	Building E internal access in SW wall	GE
65	NW	-	Building C first floor over Room C4 SW and NW walls	GE
66	NE	-	Building C first floor over Room C2	GE
67	SE	-	Building C first floor over Room C1	GE
68	SE	-	Building C first floor over Room C1 roof detail	GE
69	E	-	Building C first floor over Room C2 evidence of change in floor level	GE
70	NW	-	Building F filled-in outbuilding	GE
71	N	-	Building C NW elevation blocked window	GE
72	NE	-	Building C first floor over Room C2 evidence of previous hipped roof	GE
73	SW	-	Building C first floor over Room C2 evidence of previous hipped roof	GE
74	NW	2m	Building F internal NW and SW walls	GE
75	SE	2m	Building F internal NE and SW walls	GE
76	SW	2m	Building F internal earthen foundations	GE
77	NW	2m	Building G Room G1 NW and SW walls	GE
78	SE	2m	Building G Room G1 SE and NE walls	GE
79	SE	-	Building G Room G1 breeze-block construction	GE
80	N	2m	Building G Room G2 NW and NE walls	GE
81	S	2m	Building G Room G2 SE and SW walls	GE
82	SE	1m	Building F basement blocked window in NW wall of Building C	GE
83	NE	-	Building C Room C4 rectangular slot for drive shaft?	GE

APPENDIX II: PHOTOGRAPH REGISTER: EARTHWORK SURVEY

Shot No.	Direction	Scale	Description	Taken By
1	W	1m	Mill Race (MP1)	GE
2	S	1m	Mill Race (MP1)	GE
3	W	1m	Mill Race (MP1)	GE
4	S	-	River	GE
5	W	1m	Mill Race Bypass Channel	GE
6	E	1m	Bypass Sluice (SL1)	GE
7	W	-	Demolition of Building G	GE
8	NW	1m	Mill Pond (MP1)	GE
9	W	1m	Landscaping (L2)	GE
10	NE	1m	Steps in naturally sloping hillside	GE
11	SW	1m	Landscaping (L1)	GE
12	SE	1m	Landscaping (L1)	GE
13	E	1m	Tail Race (TR2)	GE
14	SE	1m	Tail Race (TR2)	GE
15	W	1m	Original Form of the Tail Race (TR3)	GE
16	NW	1m	Tail Race (TR3)	GE
17	N	1m	Machine Cut in Tail Race (TR3)	GE
18	SW	1m	Tail Race (TR4)	GE
19	W	1m	North bank of Tail Race (TR4)	GE
20	N	1m	Scarp to accommodate Tail Race (TR4)	GE
21	E	1m	Culvert for footpath over the Tail Race	GE
22	NW	1m	Tail Race	GE
23	NE	1m	Tail Race meeting the River	GE

APPENDIX III: PHOTOGRAPH REGISTER: WATCHING BRIEF

Shot No.	Direction	Scale	Description	Taken By
1	NW	-	Mid-ex removal of Mill House floors and foundations	GE
2	NW	-	Mid-ex removal of Mill House floors and foundations	GE
3	NE	1m	Mid-ex concrete floor of Building C, Room C4	GE
4	SE	1m	Mid-ex concrete and brick chippings beneath floor of Building C, Room C4	GE
5	E	1m	Mid-ex concrete and brick chippings beneath floor of Building C, Room C4	GE
6	N	-	Mid-ex removal of Mill House floors and foundations	GE
7	E	-	Mid-ex concrete floor of Building C, Room C4	GE
8	W	1m	Mid-ex dark brown silty clay beneath the concrete and brick chippings beneath floor of Building C, Room C4	GE
9	S	1m	Mid-ex dark brown silty clay beneath the concrete and brick chippings beneath floor of	GE

			Building C, Room C4	
10	SE	1m	Mid-ex dark brown silty clay beneath the concrete and brick chippings beneath floor of Building C, Room C4	GE
11	S	1m	Post-ex dark brown silty clay beneath the concrete and brick chippings beneath floor of Building C, Room C4	GE
12	S	1m	Post-ex dark brown silty clay beneath the concrete and brick chippings beneath floor of Building C, Room C4	GE
13	SW	2m + 1m	Post-ex removal of Mill House floors and foundations	GE
14	NW	2m + 1m	Post-ex removal of Mill House floors and foundations	GE

APPENDIX IV: CONTEXT REGISTER: WATCHING BRIEF

Context No.	Description
001	Car park tarmac surface
002	Hardcore of modern car park
003	Concrete pad in Building C, Room C4
004	Brick and concrete chippings beneath (003)
005	Dark brown silty clay loam beneath (004)

Mill House, West Road, Ponteland

Written Scheme of Investigation for Archaeological Building Recording, Topographic Survey and Watching Brief



1 Introduction

1.1 Project Background

1.1.1 This document comprises a Written Scheme of Investigation (WSI) for a programme of works at Mill House, Ponteland, outlining the proposed methods of investigation as follows:

- Historic building recording of the standing remains prior to demolition
- Topographic survey of earthwork remains prior to demolition of standing remains
- Watching brief on groundworks during construction works

1.1.2 A planning application has been submitted for the demolition of the existing office building and construction of 7 new dwellings at Mill House, Ponteland (Fig 1). A previous desk-based assessment (DBA) and standing building assessment report has been produced by North Pennines Archaeology (Wooler 2011) for this site. The report identified the historic core of the building which appears to relate to the 1828 mill.

1.2 Location and Land-Use

1.2.1 The site is situated in Ponteland and is centred at NZ 15896 72840 (fig. 1). It sits approximately 50 metres from the centre of Ponteland on West Road which runs from east to west through the centre of the town. The bedrock geology of the area comprises Yoredale Group limestone, sandstone, siltstone and mudstone with overlying superficial deposits of sand and gravel (British Geological Survey 2012).

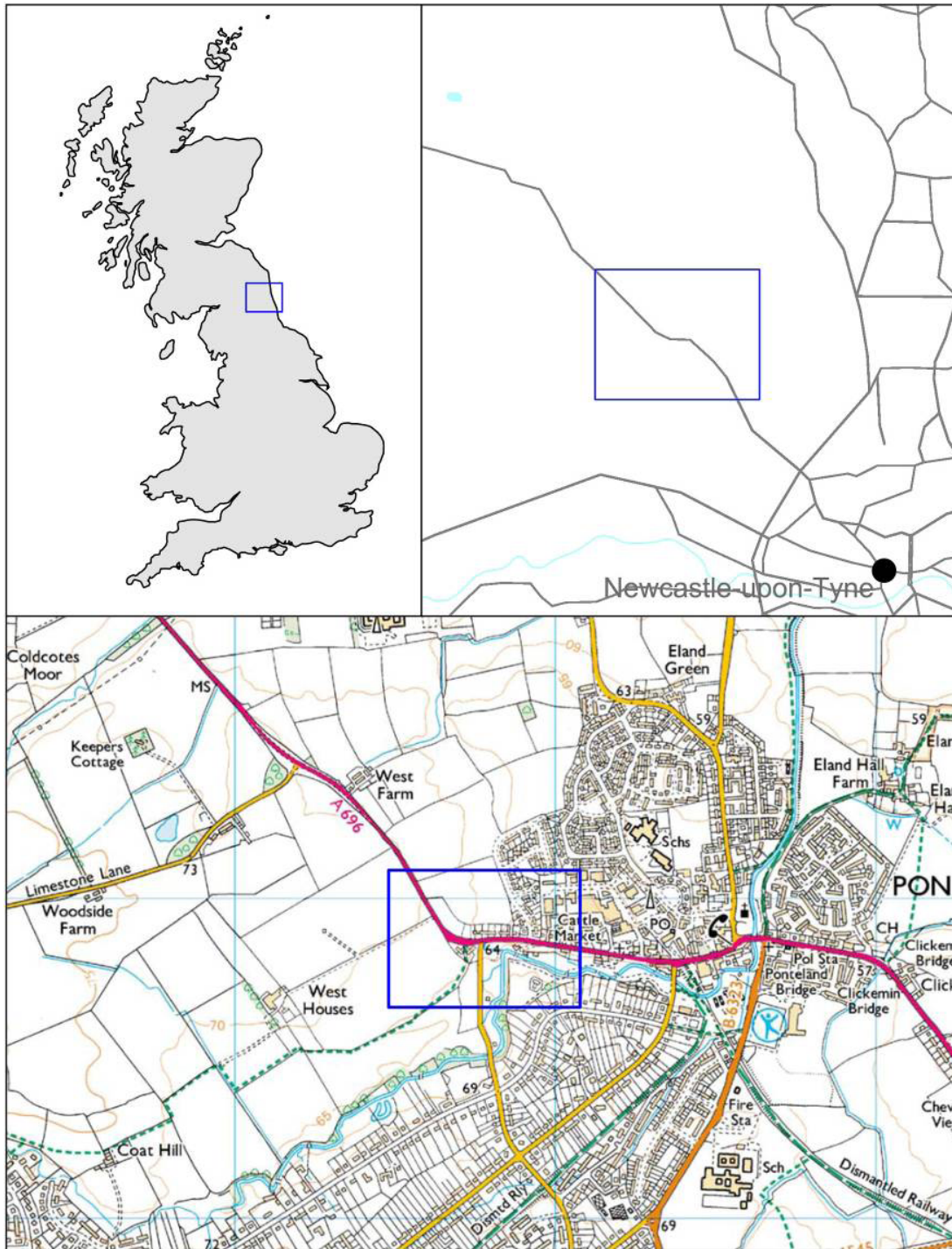


Fig. 1. Location of site.

2 Archaeological Background: Mill House

- 2.1 An archaeological evaluation (Cockburn 2012) was undertaken on the site in July 2012 which was limited by the presence of standing remains and services. It identified the line of the mill race in the location shown on the First Edition OS map of c.1860 but due to the presence of services was not able to establish how the sides of the mill race were constructed. The evaluation showed no sign of capping that might be associated with the culverting of the mill race in c.1916. It was not possible to evaluate adjacent to the standing building to establish whether any remains of earlier mills were present. The earthwork remains of the mill pond were noted to the north-west of the mill during the pre-evaluation site visit made by the Assistant County Archaeologist and archaeological contractor.
- 2.2 The historic core of the mill building was identified in both the DBA and the standing building assessment and appears to relate to the 1828 mill. However, maps were also identified that showed an earlier mill building on this site from 1800 onwards. While historic references to a mill at Ponteland were also discovered, the actual location of that building is not known. Historic Ordnance Survey maps from c.1860 onwards show the mill race running through the western wing of the building, however later extensions have obscured the earlier walls so no associated openings can be seen and the line of the mill race is not visible on the ground to the west of the building and car park. The mill race is known to have been culverted beneath the car park in c. 1916. Historic maps predating c.1860 appear to show the mill race running through the eastern wing of the mill buildings and it is unclear whether this indicates the location of an earlier mill race or more stylised maps at a smaller scale.
- 2.3 The proposed development has the potential to remove important archaeological remains of a mill of at least 19th century date, an associated length of mill race, the potential remains of earlier mills and associated works on the same site. While the remains of the mill pond will remain largely intact, it will be completely disconnected from its historic and archaeological context, hence it is considered that in this case a staged programme of archaeological work is required to provide a record of the mill site prior to its demolition and removal.

3 Archaeological Background: Wider Historic Environment Data

Within 500m of the proposed development there is one designated site, which is a listed building, and three HER sites. There are also four event points (including desk-based assessments) from the area surrounding the site. A summary of them is provided below:

- 3.1 Sites:
- *SAM 31728* Vicars Peel: Vicarage Tower, Grade II. Tower house. Said to be 14th century, but existing remains appear early 17th century. In the 19th century the tower was part of a larger house the former Vicarage. This was demolished around the turn of the 20th century but the tower was left standing. Interpretation of the tower suggests a medieval house with a ground floor hall, an undefended building possibly dating from the 1280s.
 - *HER No. 11031*, Ponteland Corn Mill and Mill Race
 - *HER No. 19477*, NGR: NZ1614372816. Site of 'Lady Well'.
 - *HER No. 19478*, NGR: NZ1637272747. Stepping stones across the river Pont.
- 3.2 Events:

- Ponteland *Flood Defences: An Archaeological Assessment* – in 1994 Archaeological Services University of Durham undertook a desk-based assessment of the area on either side of the Pont prior to commencement flood defence work.
- *Vicar's Pele Ponteland* – the site of the Vicar's Pele at Ponteland was the subject of a desk-based assessment by The Archaeological Practice in 1998 (HER Event PRN: 13650).
- *An Archaeological Watching Brief at Ponteland* – North Pennines Archaeology Ltd carried out an archaeological watching brief in 2006 along lengths of Main Street and Thornhill Road during groundworks associated with the refurbishment of a mains water supply, in areas thought to be within the earlier settlement in Ponteland (HER Event PRN: 13804).
- An environmental statement was undertaken by Entec UK in 2008 in relation to the increasing of operating voltage of the Blyth to Heddon Tee overhead electricity transmission line and associated works (HER Event PRN: 14359).

4 Objectives

- 4.1. The work outlined in this WSI is designed to mitigate the impact of the planned development.
- 4.2. The research aims for any further work required following the works outlined here will be developed in an additional WSI.
- 4.3. If significant archaeological remains are identified during the works outlined in this WSI that require further examination, a site meeting will be arranged with the client, ARS Ltd and Karen Derham of Northumberland County Council in order to agree the requirement and timetable for further evaluation work. This is in accordance with Planning Policy Statement 5 (Department for Communities and Local Government 2010).
- 4.4. Any changes to the agreed WSI will be discussed with, and agreed with Karen Derham, Assistant County Archaeologist with the Northumberland County Council Historic Environment Team before implementation.
- 4.5. Policy relating to the assessment and mitigation of impacts to the heritage resource within the planning system is set out in the National Planning Policy Framework (Department for Communities and Local Government 2010). The Framework identifies that the planning system should perform 'an environmental role', contributing to and protecting the built and historic environment and that the pursuit of 'sustainable development' includes seeking improvements to the built, natural and historic environment.
- 4.6. The Framework further clarifies that, in circumstances where heritage assets will be damaged or lost as a result of development, Local Planning Authorities should require developers to record and advance the understanding of the asset to be lost in a manner appropriate to the significance of the asset. The evidence (and any archive) generated as part of the plan making process should be made publically accessible; copies of the evidence generated should be deposited with the relevant Historic Environment Record and archives with the relevant museum.

5 Historic Building Recording

- 5.1 As the building is due for demolition, it is vital that the historic building record is as complete as possible. As a result, it will be necessary to remove later obstructions in the interior of the building to enable a full record to be made of the historic building. This is of particular importance in the area where a wheel pit is thought to be located in the west of the building.
- 5.2 The completed building recording will result in a detailed understanding of the form, function and phasing of the standing buildings. The buildings (including curtilage structures) and their immediate setting will be examined. This work will augment the existing understanding of all features, fixtures and fittings relevant to the original and subsequent historical uses of the site. The historic building recording will be undertaken in advance of the commencement of development works.
- 5.3 The programme of building recording should be carried out to English Heritage (2006) guidelines.

5.4 Methodology

This programme of building recording will broadly comprise the following:

5.4.1 Archival Study

This will include assessment of the following sources:

- Plans and maps of the site and its immediate environs, including historical maps and including pre- and post-war Ordnance Surveys, up to the present day
- Trade and Business Directories
- Place and street name evidence
- Oral history evidence
- Historical documents and photographs (including aerial) held in libraries, archives and museums
- Records and information held by Northumberland County Council's Conservation team
- The Northumberland Sites and Monuments Record (SMR)
- Appropriate archaeological and historical journals and books
- Geotechnical data, where available.

5.4.2 Photographic Recording

As a minimum the photographic record will include:

- General views of the exterior of the building, from all angles
- The overall appearance of the principal rooms and circulation areas
- Detailed photography of internal and external features, fixtures and fittings particularly when relating to the original mill function

5.4.3 The photographic record will be in black and white 35mm print and colour digital formats and will be augmented to produce a full record of the interior, exterior, fixtures and fittings and architectural detail. Representative detail photographs will be taken in medium format using a graduated scale. Where necessary perspective control will be used. This photographic record will be supplemented by 35mm colour slide photography, especially where colour is an aspect that needs to be recorded, e.g. decoration.

5.4.4 A photographic register detailing (as a minimum) location and direction of each shot will be completed along with a plan detailing the location and direction of each photograph.

5.4.5 Drawn Record

Detailed plans and elevations have not been produced of the building as part of the application as it is due for demolition. As this building record is largely a photographic record, sufficiently accurate plans are required to enable the photographic record to be adequately located. Elevations will be required where the information cannot be effectively presented photographically or in plan.

5.4.6 Scientific Analysis

Given the known condition and age of the building, it is not envisioned that scientific analysis will be appropriate to the understanding of its historic development. Nevertheless, a contingency will be negotiated to allow for the analysis of any significant historic materials uncovered which are shown to have the potential to answer key interpretive questions about the historical development of the site.

5.4.7 Report Preparation

A draft copy of the Historic Building Record will be provided to Northumberland Conservation prior to building demolition commencing.

Record photographs will be printed at a minimum of 5" x 4" and they will be accompanied by a fully indexed field archive consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints. Labelling will be in indelible ink on the back of the print and will include:

- film and frame number
- date recorded and photographers name
- name and address of feature/building
- national grid reference.

Photographic prints will be mounted in appropriate archival stable sleeves. A written report will be produced including a non-technical summary outlining the results of the recording exercise. The report will detail who undertook the building recording, when the work was done, where the site/building is located, what recording was undertaken and why the work was required. The report will include as a minimum:

- A synthesis of the information gathered during the archival study
- A discussion of the construction sequence and use of the building
- an analysis of the results that will allow an understanding of the building's historical and architectural significance to be established.
- An assessment of the building's contribution to the area's historic character.

The report will be fully illustrated, including as a minimum:

- a location map at not less than 1:2500
- a site plan at not less than 1:500
- copies of all historic map extracts consulted with the buildings/site clearly visible and outlined
- a complete set of copies of all photographs (excluding duplications) and selected slides - of at least laser copy standard - appropriately labelled or captioned
- the photographic record plans
- reproductions of the record and sketch drawings made.

6 Topographic Survey

6.1 The topographic survey is designed to provide a record for the mill in its context prior to demolition of the mill building and groundworks commencing and to provide a record of the mill, mill pond, mill race and any other associated activity in its context. The scope of the survey will cover the whole of the application area and record the following:

- The outlines of selected buildings and structural features geo-referenced to the national grid
- DTM points in a grid to provide contours to 0.2m resolution (grid of ca 1m) reduced to ordnance datum and geo-referenced to the national grid

Major breaks of slope and other landscape features, particularly the mill pond and mill race within area outline in purple on Figure 1. This should include the mill pond and a 10m length of mill race to the west and the continuation of the mill race to the east of the site

6.2 Methodology

6.2.1 All the archaeological features within the proposal area will be located as accurately as possible using a Leica TCR 307 (TPS 300 series) Total Station Theodolite. The measured survey will then be processed. The base survey produced will be used as the basis for the hachure survey. Detail of the hachure survey will be added using measurements taken by tape measure.

6.2.2 The survey will commence with a systematic walkover survey utilising Magellan Mobile Mapper CX mapping grade GPS accurate to within 0.3m which is sufficient for mapping at 1:2500. When earthworks are encountered measurements will be taken, the earthworks photographed and a description made of the feature(s).

6.2.3 A hachured plan of all recorded earthworks will be compiled, at an appropriate scale (1:200 or 1: 500) depending on the extent and complexity of the remains. This will record relationships between features, hachures showing steepness and direction of slope and annotations describing features which can be used to interpret the earthworks. An interpretation of the features identified and any relationships between them will be provided in the report. The survey will be located on an Ordnance Survey 1:2500 map of the area.

6.3 Report Preparation

6.3.1 A report will be produced which will include background information, a summary of the works carried out, and a description and interpretation of the findings in the form of a written catalogue. The report will also include:

6.3.2 A location plan showing the recording areas with respect to nearby fixed structures and roads;

6.3.3 Illustrations of all archaeological features with appropriately scaled hachured plans and sections;

6.3.1 Data files relating to measured survey will be provided as both a print out and in an electronic format which will be agreed with the Northumberland Historic Environment Record.

7 Watching Brief

7.1 The watching brief will cover the following groundworks for the development:

- Groundworks associated with site clearance, including the removal of previous building foundations
- Groundworks associated with the construction of the new buildings
- Landscaping activities

Should archaeology be discovered a course of action will be discussed with Karen Derham, Assistant County Archaeologist for Northumberland. An assessment will be made of the importance of the remains and any provision for their recording or preservation in situ as appropriate.

Should the groundworks not exceed modern disturbance or equally should they exceed the depth at which archaeological remains are present, Northumberland Conservation will be contacted in order to establish whether the watching brief need continue in these specific areas.

7.2 Methodology

7.2.1 All material will be excavated by machine, under archaeological supervision.

7.2.2 Any archaeological features will be cleaned using appropriate hand tools in order to expose and identify them.

7.2.3 All archaeological features and deposits will be recorded on a plan of the site.

7.2.4 All features exposed will be excavated by hand. Sampling will typically comprise 50% of every discrete feature; 25% of linear/curvilinear features with non-uniform fill and 10% of linear features with a uniform fill.

7.2.5 In the event of human burials being discovered, the archaeologist will procure and comply with all statutory consents and licences under the Burial Act 1857. Where any part of a human burial is disturbed, the whole burial will be archaeologically excavated.

7.2.6 Appropriate procedures under the relevant legislation will be followed in the event of the discovery of artefacts covered by the provisions of the Treasures Act 1996.

7.2.7 During and after the excavation, all recovered artefacts and environmental samples will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, regular monitoring of conditions and immediate selection for conservation of valuable material).

7.2.8 In the event of the discovery of the remains of an earlier mill or archaeological remains which are of a greater number or extent than anticipated, work will cease and Northumberland Conservation and a representative of the developer will be notified. An assessment will be made of the importance of the remains and any provision for their recording or preservation in situ as appropriate.

7.2.9 The contingency for this project has been set at up to 50 person-days.

7.2.10 In the event that hearths, kilns, ovens or areas of in-situ burning (of whatever period, date or

function) are identified during the watching brief, provision will be made to collect at least one archaeo-magnetic date to be calculated from each individual hearth surface (or in the case of domestic dwellings sites a minimum of one per building identified). Samples will be collected from the site and processed by a suitably trained specialist for dating purposes. In the event that such deposits or structures are identified, the Conservation Team will be contacted to discuss the appropriate response. This specific aspect of the sampling strategy will also be discussed in advance with English Heritage.

7.3 Environmental Sampling Strategy

Waterlogged deposits containing preserved reed fragments were encountered within the mill race during evaluation work conducted by ARS Ltd in July 2012. Therefore an environmental sampling strategy will be agreed with the English Heritage Scientific advisor for North-East England, Jacqui Huntley prior to the commencement of the watching brief and will most likely comprise the following elements, though these are subject to change following discussions with Jacqui Huntley:

- Deposits that have the potential for providing environmental or dating evidence will be assessed while the work is in progress.
- All intact archaeological contexts will be sampled. Small pit features will be 100% sampled while bulk samples of 40 litres will be taken from larger feature contexts, such as the mill race and linear ditch fills.
- Any samples recovered will be floated on site in graduated sieves with the smallest being 500µm and the flots and residues collected.

7.4 Recording

- 7.4.1 The site will be accurately tied into the National Grid and located on an appropriately scaled map of the area.
- 7.4.2 A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pro-forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings will be drawn at 1:50, 1:20 and 1:10 scales as appropriate.
- 7.4.3 The site will be recorded using a single context planning system in accordance with the ARS Ltd field recording manual. The stratigraphy of the trenches will be recorded even where no archaeological deposits have been identified.
- 7.4.4 All archaeological deposits and features will be recorded with above ordnance datum (AOD) levels.
- 7.4.5 A photographic record of all contexts will be taken in colour transparency and black and white print and will include a clearly visible, graduated metric scale. A register of all photographs will be kept.
- 7.4.6 Where stratified deposits are encountered, a 'Harris' matrix will be compiled.
- 7.4.7 A diary of the progress of the archaeological work will be kept including details of liaison and monitoring meetings, visits and record of staff on site.

7.5 Finds Processing and Storage

- 7.5.1 All finds processing, conservation work and storage of finds will be carried out in compliance with the IFA guidelines.
- 7.5.2 Artefact collection and discard policies will be appropriate for the defined purpose.
- 7.5.3 Bulk finds which are not discarded will be washed and, with the exception of animal bone, marked. Marking and labelling will be indelible and irremovable by abrasion. Bulk finds will be appropriately bagged, boxed and recorded. This process will be carried out no later than two months after the end of the excavation.
- 7.5.4 All small finds will be recorded as individual items and appropriately packaged (e.g. lithics in self-sealing plastic bags and ceramic in acid-free tissue paper). Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. This process will be carried out within two days of the small find being excavated. Prehistoric pottery will not be cleaned or be subject to any abrasion or loss of adhering residues.
- 7.5.5 During and after the excavation all objects will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (including controlled storage, correct packaging, and regular monitoring, immediate selection for conservation of vulnerable material). All storage will have appropriate security provision.
- 7.5.6 The deposition and disposal of artefacts will be agreed with the legal owner and the Museum of Antiquities prior to the work taking place. All finds except treasure trove are the property of the landowner.
- 7.5.7 All retained artefacts and ecofacts will be cleaned and packaged in accordance with the requirements of the recipient museum.

7.6 Report Preparation

- 7.6.1 Following completion of the watching brief a report will be produced which will include as a minimum:
- Non-technical summary
 - Introductory statement
 - Aims and purpose of the project
 - Methodology
 - A location plan showing all observed areas and any archaeological features with respect to nearby fixed structures and roads
 - Illustrations of all archaeological features with appropriately scaled hachured plans and sections.
 - An objective summary statement of results
 - Conclusions
 - Supporting data – tabulated or in appendices
 - Index to archive and details of archive location
 - References
 - Statement of intent regarding publication

- Confirmation of archive transfer arrangements
 - A copy of this specification
 - A copy of the OASIS form
- 7.6.2 As an IfA Registered Organisation, ARS Ltd only use specialists who can provide the required level of expertise. The following specialists will be employed where required:
- Prehistoric finds – Dr. Clive Waddington (ARS Ltd)
 - Botanical Macrofossils – Paul Flintoft (ARS Ltd)
 - Human Remains – Kate Mapplethorpe (ARS Ltd)
 - Animal Bone – Louisa Gidney (Durham University) or Jen Wood (osteoaerchaeologyservices)
 - Pollen – Dr. Ben Gearey (Birmingham Archaeo-Environmental)
 - Medieval and post-medieval pottery – Chris Cumberpatch
 - Clay Pipe – Suzie White
 - Glass – Dr. Hugh Willmott
 - Industrial Metallurgist – Rod Mackenzie
- 7.6.3 Copies of the final report will be deposited with the Northumberland County Council Historic Environment Record, and will be submitted to the Assistant County Archaeologist within two months of the completion of fieldwork.

8 Access

- 8.1 Archaeological Research Services Ltd will give the County Archaeologist 48 hours (or less if so agreed) notice of the commencement of fieldwork.
- 8.2 Archaeological Research Services Ltd will afford access to the County Archaeologist or their representative at all times, for the purposes of monitoring the archaeological evaluation.
- 8.3 Archaeological Research Services Ltd will maintain regular communication with the County Archaeologist to ensure that the project aims and objectives are met.

9 Monitoring Arrangements

- 9.1 The Assistant County Archaeologist dealing with this application must be informed on the start date and timetable for the watching brief in advance of work commencing.
- 9.2 Reasonable access to the site for the purposes of monitoring the archaeological scheme will be afforded to the Assistant County Archaeologist or his/her nominee at all times.
- 9.3 Regular communication between the archaeological contractor, the Assistant County Archaeologist and other interested parties must be maintained to ensure the project aims and objectives are achieved.
- 9.4 Should complex archaeological features be discovered, requiring detailed recording, a contingency will be required. The allocation of this contingency will be agreed with the client and the Northumberland County Council Conservation Team. Consultation between the client, ARS Ltd and the Northumberland County Council Conservation Team will be

required at the end of the archaeological trenching to ensure that all the below ground archaeology has been adequately recorded.

- 9.5 ARS Ltd will liaise with Karen Derham of the Northumberland County Council Conservation Team at regular intervals throughout the course of the work:

Karen Derham
Assistant County Archaeologist
Northumberland County Council Conservation Development and Regulatory Services
Northumberland County Council
County Hall
Morpeth
Northumberland
NE61 2EF
Direct Dial: 01670 534095

10. Final Reporting

- 10.1 In line with the project brief, a final report will be produced following all three stages of mitigation work. This will comprise a detailed description of each stage of work and a synthesis of all stages of work.

11 Archive Deposition

- 11.1 A digital, paper and artefactual archive, which will consist of all primary written documents, plans, sections, photographs and electronic data will be submitted to the a suitable repository museum, in a format agreed in discussion with the Northumberland County Council Conservation Team.
- 11.2 All artefacts and associated material will be cleaned, recorded, properly stored and deposited in the archive (see above).
- 11.3 If they are forthcoming as a result of the work, a full set of annotated, illustrative pictures of the site, excavation, features, layers and selected artefacts will be supplied to the HER and deposited with the archive as digital images on a CD ROM.
- 11.4 The Northumberland County Council Conservation Team will be notified on completion of fieldwork, with a timetable for reporting and archive deposition.
- 11.5 Written confirmation of the archive transfer arrangements, including a date (confirmed or projected) for the transfer, will be included as part of the final report.
- 11.6 An OASIS online record <http://ads.ahds.ac.uk/project/oasis/> has been initiated and the watching brief data will be added to this record. Key fields will be completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .pdf version of the entire report (a paper copy will also be included within the archive).
- 11.7 The Northumberland County Council Conservation Team will be notified of the final deposition of the archive.

12 Changes to Methodology or Work Programme

- 12.1 Changes to the approved methodology or programme of works will only be made with the prior written approval of the Northumberland County Council Conservation Team.

13 Publication

- 13.1 A summary should be prepared for 'Archaeology in Northumberland' and submitted to Liz Williams, Northumberland HER Officer, by December of the year in which the work is completed.
- 13.2 A short report of the work should also be submitted to a local journal if appropriate and agreed with Northumberland Conservation. If publication is a requirement, the publication report will need to be approved by Northumberland Conservation before discharging the condition on the planning permission
- 13.3 In the event of significant remains being encountered and excavated, there will be the need for a more formal publication than in the summary form. In this instance a suitable programme and timetable for publication and dissemination will be discussed and agreed upon by all stakeholders.

14 Health and Safety

- 14.1 A full health and safety risk assessment will be carried out prior to each episode of fieldwork commencing. All people working on the site will be briefed on the safety requirements whilst working on-site and given access to a copy of the risk assessment and all ARS Ltd staff working on the site will undergo a Health and Safety induction to working at each quarry site. ARS Ltd maintains a strict health and safety policy and the appointed Health and Safety Officer for the company is Chris Scott.

15 References

British Geological Survey. 2012. Geology of Britain viewer. Available online at: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> [Accessed 7th November 2012].

Cockburn, P. 2012. *An Archaeological Evaluation on land adjacent to Mill House, Ponteland, Northumberland*. Unpublished client report by ARS Ltd.

Department for Communities and Local Government. 2010. *Planning Policy Statement 5: Planning for the Historic Environment*. London, The Stationery Office.

English Heritage. 2006. *Understanding Historic Buildings. A guide to good recording practice*. (available as pdf. files in three parts at the address listed below):

http://www.english-heritage.org.uk/upload/pdf/Understanding_Historic_Buildings_1.pdf

http://www.english-heritage.org.uk/upload/pdf/Understanding_Historic_Buildings_2.pdf

http://www.english-heritage.org.uk/upload/pdf/Understanding_Historic_Buildings_3.pdf

Wooler, F. 2011. *Land at Mill House, West Road, Ponteland, Northumberland, Archaeological Desk-Based Assessment and Standing Building Assessment*. Unpublished client report by North Pennines Archaeology.