

Interim Report on  
Archaeological Excavations at  
Bottoms- Holcombe Moor

April to October 2015

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# Contents

- 1.0 Summary
- 2.0 Aims of the 2015 Excavation
- 3.0 Site location and description
- 4.0 Archaeological and historical background
  - 4.1 Historical information
  - 4.2 Prior seasons findings
- 5.0 Methodology
  - 5.1 The 2015 excavation
    - 1. Western Bay
    - 2. Medieval Areas
    - 3. Eastern Bay
    - 4. Central Bay
- 6.0 Finds
- 7.0 Discussion and conclusion
- 8.0 Proposals for future works
- 9.0 Acknowledgements
- 10.0 References

## Appendices

- Appendix 1- Site plan 1:100 as at October 2015
- Appendix 2- Archaeological context descriptions
- Appendix 3- Various plans from 2015
- Appendix 4- Various photos from 2015

# 1.0 Summary

*The archaeological excavations carried out on the site known as Bottoms during the 2015 season were a continuation of excavations started in 2013. Excavations were carried out from March through to October 2015.*

*Excavations took place in four strategic places.*

- 1. The western bay*
- 2. The central bay*
- 3. The eastern bay*
- 4. South of the building area.*

*The excavations have led to significant breakthroughs in our understanding of the site and the story of the site's history has started to come together.*

*The medieval area has been shown to extend further than our previous excavations have led us to believe and have provided us with more of our Pennine Gritty Ware pottery.*

*The western bay has been completely emptied of demolition rubble and has given us a surprise or two as well as giving us areas of high interest for next seasons work.*

*The eastern bay revealed some interesting but confusing archaeology and we still have unanswered questions regarding this area.*

*Work in the central bay went way beyond our hopes and discoveries there have confirmed the use of the building we are excavating, as an 18<sup>th</sup> century cotton spinning mill.*

*All in all, this was an incredibly successful year and I must thank everyone involved for their dedication and hard work, which has made this season the success it has been.*

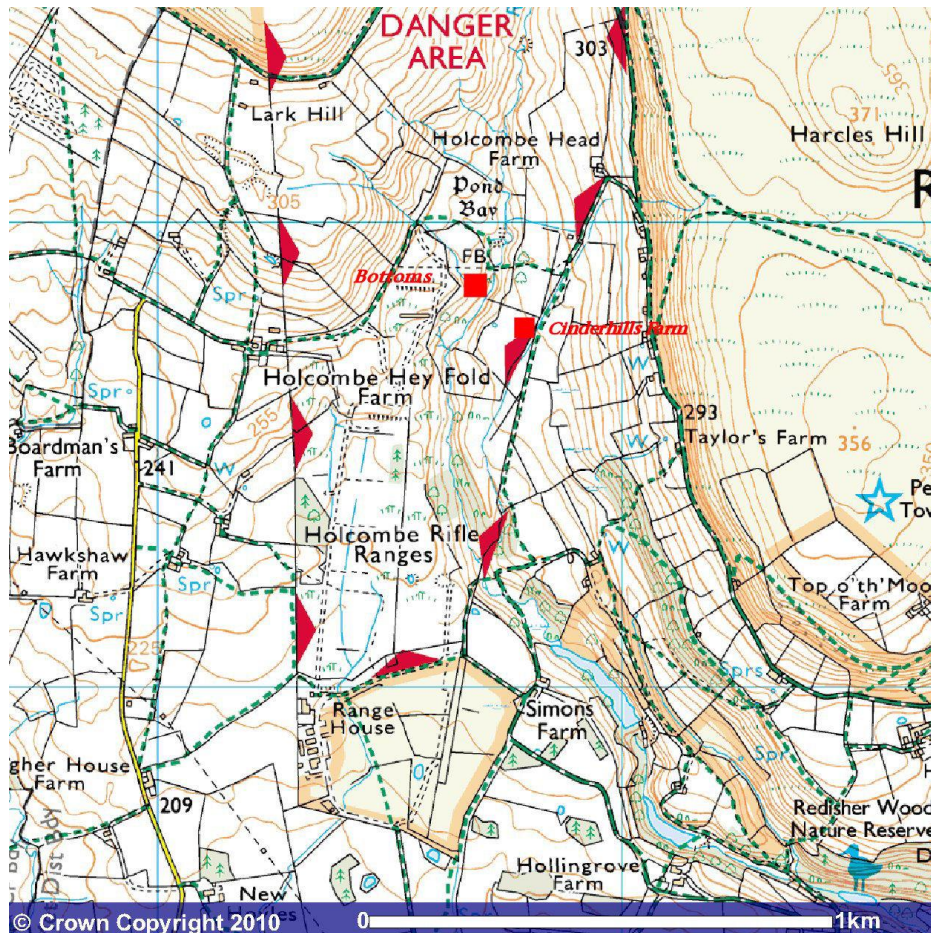
## 2.0 Aims of the 2015 Excavation

There were four main objectives for the 2015 excavation season.

1. The complete removal of demolition rubble in the western bay.
2. Investigation into the possible position of a water wheel in the central bay.
3. Further investigation of the medieval layers to the south of the building.
4. The intrusive investigation of the sub floor layers in the eastern bay.

### 3.0 Site Location and Description

The site known as Bottoms Mill ( SD 7670 1690 ) is situated towards the northern end of Holcombe Valley on the West side of Red Brook. The site comprises of a pond to the North, a three bay building situated to the South of the pond with its northerly wall built into the pond bank, and a flat plateau to the South of the building.



*Illustration 1: OS Map showing the location of the site*

The site is at the bottom of an upland river valley, directly adjacent to Red Brook. Up until roughly a hundred years ago it was farmland. It is now part of the MoD's Training Area and is left unattended and allowed to grow wild. The site is roughly rectangular in shape, with the bank of a millpond across its northern end, an old overgrown road to its western side and evidence of a leet system. On its eastern side is the brook that cuts across at the south east of the site and cuts off the land parcel along its southern side. Beyond this is a footbridge. A public footpath passes close to the site down its western side to the footbridge.

A flora survey has found 22 types of flowering plants and shrubs, 3 types of ferns, 7 types of grasses, rushes and sedges, 2 mosses and horsetails and 5 types of trees. None of the plant species are rare to the area or to Britain.

## 4.0 Archaeological and Historical Background

### 4.1 Historical Information

The surrounding area of the site has been known as Cinder Hill Estate since the 16<sup>th</sup> century and maybe even longer. Cinder Hill Farm was known to be occupied in the 16<sup>th</sup> century along with Holcombe Hey Fold. The first reference to our immediate site is in the Survey of Tottington in 1794, the site being referred to as an engine house owned, along with Cinder Hill Farm and other buildings, by Lawrence Brandwood.

Approximately 50m north of the site is a well-constructed weir which has the effect of raising Red Brook sufficiently high enough to feed the pond that is situated immediately to the north of our site by means of a series of culverts and leets ( a form of early canal ).

Around 1825, John Parker, a cotton spinner from Manchester, took over the Cinder Hill Estate including the engine house. He proceeded to construct a new factory 200m downstream of the engine house and that was named Cinder Hill Factory. Around the same time the engine house was converted to 3 cottages and given the name 'Bottoms'. These were in use through to the end of the 19<sup>th</sup> century when the rural industries fell into decline.

Archaeological evidence on the site has pushed the date back for activities on this site to the 11<sup>th</sup> or 12<sup>th</sup> century, with the discovery of a possible water powered iron bloomery site.

At the beginning of the 20<sup>th</sup> century the Army took over the valley and the site was then completely lost as the training camp took over the area.

### 4.2 Past Seasons Findings

The discovery of the site in 2010 led to the start of the excavation project in 2013. These excavations led to the discovery of a slag deposit that was dated in 2014 to the 12<sup>th</sup> century. The discovery of the flooring and features at the rear of the building during the 2014 season seemed to suggest an industrial use to the building and reuse as cottages for the main part of the 19<sup>th</sup> century.

Work in 2014 also uncovered two drains outside the main footprint for the building and these were assumed to be connected with the later cottage phase rather than the earlier mill phase. The slag deposit was removed during 2014 and revealed several sherds of Pennine Gritty Ware pottery that are dateable to the 12<sup>th</sup> to 14<sup>th</sup> centuries. During the removal of the slag, a piece of charcoal was discovered and was sent to Glasgow University for a carbon-14 test, the result of which was a date range of 1027-1182calAD.

By the end of the 2014 season, the central bay had been mostly emptied of demolition rubble and the eastern bay was completely clear and a complicated stone feature had been uncovered running into the pond bank at the rear of the central bay.

## 5.0 Methodology

The site, due to being on MOD land, could possibly contain potential hazardous finds and as such extra care was taken when excavating in the upper layers. Consequently, the MoD have very kindly given several members of the excavation team a lesson in ordnance recognition and any new diggers on site are given a Health and Safety briefing that includes the instruction to halt digging and inform the dig supervisor if a suspicious object is located.

The MoD have also carried out a complete sweep of the area and have declared the area safe to excavate.

The area has been swept with a metal detector set to reveal non-ferrous items such as the numerous expended cartridges before any excavation work was carried out. Due to the high ferrous content of the Siderite deposits we couldn't reliably detect any ferrous munitions, so excavation in the top 4" of the area was undertaken with extra care.

Once through the top 4" any areas that contained building demolition were cleared using shovels and if necessary mattocks to loosen the rubble. On areas of more delicate archaeology, trowels were used for excavation.

## 5.1 The 2015 Excavation

### 1. Western Bay

The main task for this year was the complete removal of the demolition rubble from this bay. This was a long and arduous task and a huge thanks must go to the team who undertook this work. The demolition layer makeup was one of topsoil, mortar and stonework from the building.

Almost straight away while removing the demolition layers, it became obvious that something was different about this bay. The other two bays had both revealed well laid flagged flooring, but this was oddly missing from this bay. Also, the other two bays provided no evidence for rooms within the bays, other than the large rooms making up the bays themselves. The western bay provided us with two small ante rooms 4.5m back from the front wall. These ante rooms themselves were also different in that the construction of the walls for these rooms was different in each room and the floor level was different too, the eastern room being some 40cm lower than the western room. The western wall of the eastern room was also vastly different from the other walls associated with these rooms, its width being 82cm wide compared to 18cm of the other walls in the western room. The south wall of the eastern room was also significantly different as well, being 42cm wide, suggesting that the eastern room was perhaps for a different use than the western room. Both rooms are of a similar internal size, that being just over 1m square.

A well-constructed fireplace was discovered 1.5m from the front wall built into the western wall of the bay. This had an internal width of 1m and was constructed with a large upright block of masonry at each end of the fireplace.

The entrance to the western bay showed signs of being blocked up at some time, as there was a large flagstone overlying the actual entrance stone and had been placed directly over the cut-outs for the door posts. Pieces of slate had been used as a filler to level up the cut-outs. It was noticed that the southern wall of the bay where it ended against the doorway, was constructed with semi rounded blocks of masonry suggesting that the wall had been rounded at the entrance. This is not evident at any other entrance way throughout the rest of the site.

At the rear of the western bay, is another open full width room 4.3m North/South x 2.2m East/West. Again this room appears to be a different construction. The flagged flooring is again missing from this area but there appears to be a sandy gravel layer, very reminiscent of the sandy gravel layer (073) that was found directly under the flooring in the central bay that was overlying the wheel pit. This doesn't go all the way to the walls and to the east it appears that there may be evidence of a flagged surface approx. 20cm under this layer.

Where the eastern wall meets the rear wall of the western bay, there is evidence that the east wall mostly butts up to the rear wall apart from one 30cm section that is keyed in, that starts 45cm up from the floor level. This then reverts to a butt joint to the top of the remaining wall. A similar type of construction is also in evidence where the western wall meets the rear wall of the bay, suggesting that all walls in the western bay are contemporary.

### 2. Medieval Areas

Our first task in this area was to find out if the medieval layers continued on the western side of the drain (025). A 2m x 0.5m slot was put in against the drain (025) and was taken down to the sandy layer (044). The fill here was a loamy mix with a very small quantity of tap slag but there was no



sign of the slag deposit that was found in 2014 which was observed to be running under the drain (025). However, we did find evidence of the medieval in the form of 4 sherds of our Pennine gritty ware pottery. It was therefore decided to extend the search for the medieval by taking the rest of the open area around both drains down to the medieval levels. The slag deposit that was visible running under the drain (025) in 2014 was discovered to be a very compact layer of slag that didn't extend beyond the west of the drain cut. At this point it may be that the position of the drain (025) is the reason why the slag here is so compact, with the weight of the drain compressing the slag deposit.

It was decided to completely remove the structure of both drains in order to extend the search for the medieval layers. This provided us with the discovery of a row of rounded stones running roughly East/West towards the South of the excavated area. To the South of this row of stones, the soil being removed changed from having a large number of stone inclusions to one that had very few inclusions and was suggestive of a very fine loam garden soil. It is possible that the row of stones marked a boundary for a yard surface in front of the building, an idea further supported by the fact that the row of stones sat on the rough cobble surface (023) and the surface stopped at that point.

The medieval finds continued in most parts of the extended excavation area and a large cobble stone layer was found to be sitting on the sandy layer (044). This was a very rough and fragmentary layer that revealed a large quantity of the gritty ware pottery. Evidence suggests that this layer continues to the South of the excavated area.

At the western end of the excavated medieval area it was decided to put in an extension to test the theory of a tail race for the suspected water wheel pit that had been discovered in the central bay. During this extension, a large pad of natural grey clay (100) was found with a circular cut (101) running through it. This cut (101) was not a construction cut for a tail race but was an early cut through the clay feature. The cut for the tail race (102) was found to be cutting through the earlier cut (101). To one side of this area was noted a deposit of gravel and a quantity of iron stone and it is suggested that this cut maybe an area where the iron ore was being dug out of the natural. This theory will be tested in 2016 when further examination of the feature will take place.

### 3. Eastern Bay

At the rear of the eastern bay, against the rear wall, was an area of disturbed flagstones. This was chosen as a suitable area to investigate what was underneath the flagstone floor of the cottages. On removal of the flagstones, an ash and cinder layer (053) was revealed. This was interesting because although it was expected to find such a levelling layer, it was interesting to note that the ash layer was covering a clay and cobble layer (057) underneath. This undulating layer had a bowl shaped feature which revealed some earlier pottery in the form of 18<sup>th</sup> century slipware and tin glazed earthenware. We found two possible stake holes lying roughly East/West approximately 1m apart. One flat stone that was found on this layer runs under the rear wall of the eastern bay thus suggesting that this feature pre dates the rear wall of the cottage.

It was decided to extend the excavated area further to the west to meet with the western wall (032) of the eastern bay to find the extent of this layer (057). Removing the flagstones revealed another depression filled with the same ash and cinder fill as before. Also noted was an iron spike driven firmly into the clay and cobble layer (057). This layer runs up to the western wall (032). The layer (057) was removed against the wall and revealed that the wall was sat on large cobbles that make up the natural (999) in this area, providing a firm foothold for the wall (032). We took some of the "natural" out from this area and found two shards of glass, possibly from a carboy, in the fill.

This suggests that the natural had been redeposited as part of the process of digging into the natural to build the wall foundations. After recording this area, the excavation was backfilled and flagstones started to be replaced. This will be completed in 2016.

#### 4. Central Bay

The initial task in the central bay was to complete the removal of the demolition rubble and to remove the hawthorn tree that was situated over the front wall of the bay. Later in the season it was decided to test what the central bay flooring was sat on and so an area of damaged flooring was targeted and removed. This revealed a strange sunken stone lined feature (068) that was filled with an ash and loam fill. This fill had stained the internal sides of the feature. The feature was only stone lined on the North, South and East sides, having no evidence for walling on the Western side. A small area 1m to the North of (068) was then opened to check what was happening further towards the back of the building. This revealed a sandy gravel layer which provided a nice find in the form of a bone handled knife. This layer had a depth of 13cm and was overlying a demolition layer with rubble and mortar fill.

To facilitate the investigation of a possible water wheel, the central bay flagstone floor at the rear of the bay against the rear wall was lifted to open an area of 4m x 2m. This revealed two distinct forms of fill underneath. Towards the western side of the bay was a rubble and mortar fill, compared to a sandy gravel fill towards the east. This was similar to the fill discovered in the previous exploratory pit. On removing these layers, a stone feature (078) was found running North/South and was thought to be part of a water wheel structure. To the eastern edge of the feature (078), a compacted clay floor layer was found with various different levels as the area had been added to over and over again, due to a constant problem with the area sinking. These layers were removed and a pit like feature was discovered cut into the natural (999) on the eastern edge.

The fill for this pit was removed down to a depth of 2m and consisted of redeposited natural mixed with a very sticky stiff grey clay (083), to provide a very firm fill. A stone feature at the rear of the pit, partly seated under the rear wall of the bay, was found to extend to the bottom of the pit as far as we excavated and was suggestive of the rear wall of a wheel pit. It was also noted that the stone feature (078) was actually sat on the fill for the pit and could not have been utilised by a water wheel and must therefore have been of some later use. There is no evidence for any side walls for the wheel pit.

The foundation area for the eastern wall for the bay was uncovered and the foundation was found to be sat on natural (999) at the northern most point where the wall met with the rear wall for the bay. However, just 1m from this point there was a cut in the natural (999) and the wall foundation was built on a loose rubble and loam fill (090) and this was causing the wall to be very unstable at this point. A Health and Safety decision was taken to remove the wall to protect the area from collapse for a length of 1m southwards from the cut in the natural. It was from this fill (090) that several pieces of metalwork were found that were pieces of machinery. These are described in more detail in the finds section of this report.

In order to prove that we had indeed found the wheel pit for the mill, it was decided that as we couldn't find the bottom of the pit due to the depth being more than 2m, that an extension to the medieval areas to the south of the building should provide evidence for a cut for the tail race from the wheel pit. This was carried out on the projected line of the tail race and did uncover a cut through the medieval where predicted.

## 6.0 Finds

Once again we have been incredibly fortunate in the number of finds uncovered from every area opened and investigated. The following is a summary of the finds found this year.

### Bottoms Finds 2015

Type	Sherd Count	Weight (g)	Rims	Bases	Bodies
Animal Bone	41	271			
Bone Handle Knife	2	146			
Bottle Glass	23	433			
Brass Objects	8	66			
Buttons	4	17			
Ceramic Studs	6	22			
Clay Marble	10	45			
Clay Pipe Bowl part	18	36			
Clay Pipe Stem	180	407			
Coin	1	9			
Corroded Metal	258	18,347			
Fossil	2	172			
Glass Object	9	145			
Lead	7	24			
Lead Window Came	9	142			
Leather	3	87			
Metal Object	5	115			
Pottery	2,315	17,571	370	154	1,791
Rod and Roller Set	2	1,482			
Shells	10	52			
Slate Stylus	2	2			
Slag	140	6,880			
Thick Window Glass	208	15,782			
Thin Window Glass	604	925			
Vessel Glass	344	3,553			
Wood	2	4			
Wooden Rollers	1	58			
	4,214	66,793			

Once again the majority of the pottery finds were very small sherds of pottery comprising the usual collection of 19<sup>th</sup> century local earthenware, stone ware, cream ware and transfer printed ware. We also found several sherds of 18<sup>th</sup> century pottery in the form of local earthenware, tin glazed earthenware and slipware. There were several pieces of note. From the demolition rubble from the western bay we discovered several sherds from an 1862 Keiller Marmalade jar. Another nice find was recovered from the fill underlying the flagstone flooring in the central bay. This was a stoneware bottle, made by J. Bourne, and was dated to between 1817 and 1834. This dating fitted in with our date of 1825 when the engine house was converted to cottages. Several sherds of mocha ware, of various designs, were found from a variety of contexts together with various designs of transfer printed wares. It was noted that whenever pottery was found under the floor

levels, this was from the earlier 18<sup>th</sup> century rather than the typically 19<sup>th</sup> century pottery found from the upper layers. Several dozen sherds of our Pennine Gritty Ware pottery were found, mostly very tightly associated with an area no bigger than 1.5 square metres and were once again fairly small fragments. However, several larger rim sherds were also found and have shown that the pot in question would have been lidded and was most probably a cooking vessel. Another rim sherd was also found that was of a different design, thereby giving us two distinct pots from the 12<sup>th</sup> to 14<sup>th</sup> century.



*Figure 1: Iron Bar with Brass Rollers discovered by the Wheel Pit in the Central Bay*

Figure 1 shows an iron bar comprising 8 brass rollers “sweated” onto the bar. This is mostly probably from an Arkwright Water Frame style spinning frame and is in fairly good condition. Figure 2, below, shows the corresponding set of wooden rollers that would have been positioned directly above the rollers shown above. These wooden set of rollers would have had weights suspended from the brass link between the rollers which would have had the effect of maintaining an even pressure between the two sets of rollers. The cotton would then have been drawn through these rollers and spun onto the spindles at the base of the machine.



*Figure 2: Wooden set of Rollers that would have been positioned above the Rollers shown in Figure 1.*

Another nice find from the fill of the wheel pit was the discovery of an 1806 George 3<sup>rd</sup> halfpenny as shown in figure 3 below. This has given us an excellent piece of dating evidence for the backfilling of the wheel pit, as it means that the pit cannot have been filled in prior to 1806.



*Figure 3: 1806 George 3rd Halfpenny*

Once again this year, we have found a multitude of shards of glass. This was typically split between three distinct styles. Firstly, the thick window glass shards that we have found in previous seasons. This measured between 11mm and 13mm in thickness and a total of 15¾ kilos of shards were found. Secondly, the thin window glass shards. Again this has been found wherever we have dug, with the exception of the medieval areas. Thirdly, the discovery of over 300 shards of what has been interpreted as vessel glass, probably belonging to a carboy, which would have been used to store bleach, acid or some other corrosive liquid.

Two bone handled knives were also found from similar contexts, one of which is shown below in figure 4.



*Figure 4: Bone Handled Knife Context (079)*

## 7.0 Discussion and Conclusions

The discovery of the wheel pit and the machine parts has finally enabled us to confirm the function of the building as that of a late 18<sup>th</sup> century Cotton Spinning Mill, utilising Arkwright's spinning technologies. This is a major discovery as we now have position, form and function for the engine house.

The wheel pit is an interesting piece of archaeology. The stone feature (078) that originally appeared to be part of the water wheel construction is in fact built onto the fill of the wheel pit, hence it is of later use than the water wheel. But significantly it is also under the flooring that was placed down when the mill was converted to cottages in 1825, therefore pre-dating the cottage phase. We also know that the wheel pit was filled in post 1806 due to the find of the George 3<sup>rd</sup> half penny. Therefore, we must be looking at some major change in the form or the function of the mill between 1806 and 1825.

The wheel pit is interesting as well due to the lack of any sidewalls or evidence of robbing and we may be looking at a timber lined wheel pit, evidence for which is so far sadly missing. It is possible that given the quality of the natural clay in this immediate area that simple posts and boards may have been used at the sides of the wheel pit.

The sunken stone feature (068) in the central bay is also something of a mystery. The evidence of an ash like fill, which has also stained the remaining masonry, suggests that we may be looking at some form of ash pit / fireplace. Indeed, given the position of the fireplace (097) in the western bay, it would appear that this is in a rough East / West alignment with our sunken feature. This has raised the question of why would a fireplace / ash pit be sunken? This would make the emptying of the pit harder work than necessary. It may be that this feature relates not to the cottage phase but maybe the earlier mill phase, work in 2016 should hopefully answer this question. Any associated masonry surrounding the feature is also of poor construction and we have to question whether this would be sufficient to build a fireplace into.

The clearance of the western bay also gives us hints that the western bay was the hub of the mill and excavations next year will hopefully enable us to confirm this theory. With the water wheel positioned in the centre of the mill this conforms to the Arkwright Factory Standard. This may also explain why the western bay extends further into the pond bank than the other two bays.

The discovery of the fireplace in the western bay (097) is of interest for a couple of reasons. Firstly, this is the first positive identification of a fireplace on the site, and considering that we supposedly have three substantial cottages, it is strange that this is the first fireplace found, especially as all three bays have now been excavated. Secondly, the fireplace shows evidence of three phases of use: Firstly, the full 1m width was used, then at some point in time the width of the hearth has been reduced down to 33cm, then finally the hearth has been totally closed for some reason. Hopefully some dating evidence will be found for these changes next season. We know that the fireplace was part of the original construction of the building due to it being built into the Western wall of the mill, but this raises the question that why would you have an open fireplace in a cotton spinning mill? This would surely be a fire hazard.

The removal of the demolition fill (054) from the western bay has revealed that very little of the expected flagged surface has remained intact. In fact, there is very little of the final floor surface

(092) of the building left, with the only fragments around the entrance, the “corridor” to the rear of the building and some fragmentary examples to the North of the fireplace (097). The rest appear to have been robbed away in antiquity. This has, however, given us a look at the earlier level under the later flooring and has revealed a clay and cobble layer (061) that is not unlike the layer found under the flooring in the eastern bay.

The two small rooms, positioned two thirds of the way towards the back of the western bay, are again most unusual. The floor levels are quite different, with the eastern room floor (108) being 40cm lower than the western room floor (106). Could the reason for this be that there was machinery associated with the water wheel in this vicinity which required the lower floor level? Work will be carried out in 2016 to test this theory.

Finding the cut for the tail race (102) was also a major discovery and this will enable us to project where the likely outflow from the tail race is to be found and will enable us to position a trench next year to hopefully discover the tail race mouth and give us the information about size and flow capabilities, and also information with regard to construction techniques.

The work in the eastern bay didn't, unfortunately, provide us with many answers as to what was happening at that side of the mill. The discovery of the features under the flooring was intriguing but has raised more questions than answers. The iron spike driven into the natural suggests that there was perhaps some industrial process or equipment taking place in the eastern bay but any further evidence was sadly lacking. The western wall of the eastern bay (032) was also confusing, as it had been constructed on the natural in the eastern side but on rubble and loose loam (090) to the west, suggesting that the wall was later than the wheel pit. But this doesn't explain the blocked hole feature in the wall, because if the wall related to the cottage phase, why was a hole built into the wall between two cottages? Perhaps the wall and the hole related to a later process in the mill.

Extending the medieval area was once again rewarding, in the discovery of many sherds of our Pennine Gritty Ware pottery. In particular, were the several rim sherds that gave us the knowledge that the pot itself would have had a lid and was probably a cooking vessel. We were also fortunate enough to find a rim sherd from a separate pot giving us two different Pennine Gritty Ware vessels. The lack of any major slag deposits is a bit of a concern, as any industrial activity on the site would have generated tons and tons of slag waste and this would be more evident than it is. However, the visit by Gerry McDonnell in April, gave us renewed faith that we had a major site on our hands as he suggested that given the quantity of air in the slag, that we may be looking at a water powered iron bloomery site. These are incredibly rare and given the date of our charcoal from a stratified context, this could be an incredibly early example as well, provided that we find the bloomery itself and that our dating evidence is correct!

The stone cobbles discovered as part of the medieval layers are interesting and a high proportion of the gritty ware pottery was recovered from around these cobbles. So far we have not been able to satisfactorily explain their presence and more work is needed in future seasons.

## 8.0 Proposals for Future Work

There are four main areas of interest for future work. These are the East, West and Central bays and the area to the South of the building footprint. There are various tasks to be carried out in each of these four areas.

The western bay has a feature attached to the western wall on the outside of the building and it is proposed that some investigative work is carried out on this feature to ascertain a function and design. Work will also continue on the inside features of the western bay to obtain more information on the use of the building as a spinning mill.

The central bay has the wheel pit in the centre of the bay and more work is required on this area to obtain information as to the style of the water wheel and the size, so as to ascertain the potential power of the wheel and the capabilities of the mill. Work also needs to be done on the stone feature at the rear of the building that appears to be leading into the pond bank. This may require an extension to the trench in order to find the extent of the feature.

The eastern bay requires a small intrusion into the layers below the flooring just inside the bays entrance. This will provide information as to whether the medieval area is visible under the building or whether the area has been destroyed by the construction of the mill. The area at the back of the eastern bay that has been backfilled in 2015 will need to be tamped and levelled and then have flagstones replaced on the areas where intrusive work was carried out in 2015.

The medieval area to the South of the building footprint will need to be planned before any further work is undertaken here. The area will then be extended further South to find the extent of the medieval features. It is suggested that the spoil from this extension is used to start the backfill process of the medieval features just to the front of the building, once the area is recorded and sheeted up for protection.

An investigation into the mouth of the tail race is to be undertaken. A trench will be put in on the projected line of the tail race where it should meet the stream as it heads down the valley. This will give us the position and construction techniques for the tail race which will subsequently be recorded and backfilled.



## 9.0 Acknowledgements

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Norman Tyson – Bury Archaeology Group

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Norman Redhead – GMAAS

Pam Burrow - for washing and photographing the finds

## 10.0 References

Bottoms Mill- Evaluation Exercise October 2010 : R. Bowden and B. Simpson  
Short Overview of Bottoms Dig : B. Simpson  
A Note on Industrial Activity at Cinder Hill, Tottington : Norman Tyson  
Holcombe Moor Site Visit Report April 2015 : G. McDonnell

## Appendix 1

### Holcombe Moor Heritage Group 2015



Bottoms Site Plan October 2015  
Scale 1:100

## Appendix 2- Archaeological Context Descriptions

Context	Type	Grid Ref.	Description
001	Deposit	Test Pit 01	Topsoil : Brownish black silty loam layer. Very few inclusions, very small grainy stones. 10cm deep.
002	Deposit	Test Pit 01	Very loose orange brown gravel and stone layer. Pea gravel, size increasing to larger boulders as depth increased. 23cm deep. Fill is a stream deposit, thereby showing that this area is made up of stream deposits and the test pit was shut down.
003	Deposit	Test Pit 02	Topsoil : Greyish black loam. Firm. Very few inclusions. 10cm deep.
004	Deposit	Test Pit 02	Compact layer, mid brown black, sandy loam. Very fine gravel inclusions. Depth of 23cm as far as excavated. Weather stopped excavation.
005	Deposit	Test Pit 03	Topsoil : Brownish black silty loam layer. Very few inclusions, very small grainy stones. 10cm deep.
006	Deposit	Test Pit 04	Topsoil : Brownish black silty loam layer. Very few inclusions, very small grainy stones. Depth of 20cm to the West of the trench dropping to 17cm at the East.
007	Deposit	200/100	Topsoil : same as (010)
008	Deposit	205/100	Topsoil : Dry and compact grey black, fine sandy loam. Depth of 8cm turf and topsoil.
009	Deposit	205/100	Very loose rubble fill comprising large fragments of masonry and general demolition rubble. Depth of 18cm running 3m as excavated North South to the south of the flag stones running along the south of the front wall.
010	Deposit	200/100	Topsoil : Very loose grey black gritty loam. Very small gritty inclusions. Depth of 10cm.
011	Masonry	205/100	Flagged surface with an average depth of 6cm. Smooth flag stones. Runs along the front of the building.
012	Masonry	200/100	Building front wall.
013	Deposit	200/100	Very loose rubble fill comprising large fragments of masonry and grey white mortar. Depth of 28cm.
014	Deposit	200/100	Drain : Mid brown black fine sandy loam with fine gravel inclusions. Depth of 7cm. Loose fill build up overlaying drain.
015	Deposit	205/100	Compact mid yellow brown layer. Small pea gravel inclusions.
016	Deposit	200/110	Stone Tank : Behind the North wall of the building central bay, the rear wall, there was a fill of large river cobbles and larger boulders. There was a dark grey gritty silt mixed in between the rocks. This fill went to a depth of 1m as excavated. The fill extended North by 70cm where a secondary wall feature was located.
017	Deposit	200/110	Topsoil : Loose grey black fine loam. Depth of 5cm. Strip running North South up the pond bank at the rear of the middle bay of the structure. Runs down the bank and

			covers two thirds of the top of the rear wall of the structure.
018	Deposit	205/100	Compact mid brown black fine gritty loam. Small cinder pieces inclusions. Depth of 2cm. Surface directly under the flagged pathway (011). Assumed to be surface put down for pathway.
019	Masonry	205/100	Flat river cobbles and small flagstones running East West for 1.9m at a width of 20cm along the south edge of the flagged pathway (011). Depth of 6cm. Assumed to be surface runoff for pathway (011).
020	Deposit	205/100	Very compact rough cobble surface with grey yellow gritty fill. Depth varied from 5cm to 7cm. The surface extends 2m North South and 8m East West. Surface finishes against runoff (019). Layer extended over the North South Drain (025)
021	Deposit	200/110	Behind Rear Wall : There was an orange brown clay fill coming down the pond bank that had been put down over the secondary wall. It included a few pebbles and angular stones. The depth of the clay at the deepest point, (furthest into the bank ) is 55cm as excavated. A 1797 Cartwheel Penny was found lying under the clay deposit and on top of the secondary wall feature.
022	Deposit	205/100	Compact grey yellow surface, patches of small pebbles and flat stones, average size 20-30mm diameter. Depth of 6cm. The surface extends 2m North South and 8m East West with the Drain (025) running North South cut through the surface. (019) runs into the drain (025) at the south of the entrance flagstone. (011)
023	Deposit	200/100	Same context as (022) but is to the West of the drain (025). Depth of 9cm.
024	Deposit	205/100	Ash loam layer : Fairly loose dark red brown layer, with fine gritty inclusions. Depth varying 2- 3cm. The layer extends 3m North South and 1.5m East West. This is a thin layer overlying (027).
025	Drain	205/100	Stone capped drain running North South from the entrance flagstone (011).
026	Deposit	200/110	Topsoil
027	Deposit	205/100	Very compact small cobble surface. Average pebble size 30mm x 15mm. Depth to the surface from the top of the entrance flag = 18cm. Depth to the surface from the top of the wall = 24cm. Surface slightly slopes to the Southern extremity. The small pebbles extend 90cm North South then the pebble size increases to 70mm x 100mm average. This change occurs where the surface starts to slope away to the south.
028	Cut	206/103	Cut made when the South wall of the building was being built.
029	Deposit	200/100	Fill over drain (031)
030	Cut	206/103	Cut made when the South wall of the building was being built.

031	Drain	200/100	The drain runs roughly East/South/East- West/North/West along the front of the building.
032	Masonry	204/103	East bay West wall
033	Masonry	200/103	Central bay West wall
034	Masonry	200/110	Central bay North wall
035	Masonry	205/110	East bay North wall
036	Deposit	205/105	East bay flagstone floor
037	Deposit	200/105	Central bay flagstone floor
038	Deposit	200/100	Fill over drain (031) same as (029)
039	Deposit	200/100	Very compact stone cobble surface same as (027). This surface is to the west of the North South drain (025) and is a continuation of context (027). The small pebbles extend for 1m West of the drain (025) and 80cm South of the flag surface (011). Larger cobbles extend from 1m to 1.9m West of the drain (025) and South to the cut for the East West drain (031).
040	Deposit	200/100	Very compact dark orange brown clay and gravel layer possibly re-deposited natural. Depth of 15cm. The gravel comprises both angular and round pebbles 20mm- 30mm in diameter. The drain (031) has cut through this layer to the North.
041	Deposit	205/100	Drain Contents : Dark brown black slightly compact drain fill. Very small gritty inclusions. Even depth of 11cm across the drain. Area cleaned out was the junction between (025) and (031).
042	Deposit	205/100	Slag Deposit : A mix of slag and dark red brown loam. Deposit extends under the entrance flag and 1.35m out to the East edge of the site where the stream has eroded the bank, and approximately 1.20m South from the foundation cut for the front wall of the building. Large quantity of slag, both tap and honeycomb type. Depth of context 40cm.
043	Deposit	205/100	Loose mid red brown sandy loam and slag deposit. Deposit is a continuation of (042) and extends South from (042) lensing out towards the East West Drain (031), a distance of 2m. Contains a smaller quantity of slag than (042) with the bulk being towards the western edge where it meets the North South Drain (025). Context goes under (025) where a very substantial piece of very compact slag is seen in section, size roughly 45x25x17cm. Depth of context varies from 10-20cm, the deeper being at the Southern end of the deposit. Loam contains small fragments of hammer scale or small broken fragments of slag.
044	Deposit	205/100	Sand Layer : Light yellowish grey with patches of burnt orange scattered throughout the layer. Lenses of light grey visible in section and also in plan. Very level and fairly compact layer bounded by cobbles / stones on the North, South and possibly to the West under the drain (025). Cobbles / stones appear to be slightly arcing round under the entrance flag and drain (025). Depth of layer varies

			from 4cm at the North of the context to around 20cm midway and lensing out to the South.
045	Fill	205/100	Fill of (046). Dark red black friable fill. Contained small fragments of tap slag and pottery of various dates.
046	Cut	205/100	Oval feature cut through (044) down to natural (999). Size 73cmE/Wx49cmN/S. Depth at W 4cm, E 19cm, N 27cm, S 20cm. Break of slope 18cm from the west.
047	Deposit	205/100	Compact yellow orange sandy clay deposit to the east of the drain (025). Layer 1.35m N/S x 0.9m E/W 0.65m S from the entrance flagstone. Thickness averaging 2cm. Possibly thrown up from the excavation for the drains (025) and (031). Extends to the west of drain (025) for 1.5m. Contains patches of red orange clay.
048	Deposit	200/095	Topsoil. Same as (010). Comprises of a firm loam 9cm deep. Colour 10YR 2/1 Black
049	Deposit	200/095	Ash and loam layer comprising of ash and cinder fragments avg size 15mm x 10mm, depth of 4cm
050	Deposit	200/095	Stoney loam layer depth of 6cm. Comprises of various size pebbles avg size 50-60mm. Also fine grit in with the loam
051	Deposit	200/095	Stone cobble surface same as (023)
052	Deposit	200/100	Sandy silt layer around the base of the removed tree. Comprises of very fine grains of sand. Would originally have been under the flagstone pathway (064). Colour 2.5Y 2.5/1 Black
053	Deposit	205/105	Cinder and ash layer lying under the flagstones (036). Inclusions of mortar fragments, coal and lime wash render. Colour 7.5R 2.5/1 Reddish black
054	Deposit	195/105	Demolition rubble layer. Comprises loam, render and mortar fragments and frequent building materials. Depth of 40cm. Colour 10R 2.5/1 Reddish black
055	Deposit	195/105	Demolition rubble layer. Comprises loam and mortar fragments. Depth of 20cm. Colour 5Y 4/1 Dark Grey
056	Deposit	200/095	Sandy silt layer with small pebbles lying next to E/W drain (031). Extending 2.8m E/W and 0.6m N/S with an avg depth of 12cm. Colour 5YR 3/2 Dark reddish brown
057	Deposit	205/105	Undulating sandy clay and cobble stone layer with large bowl shaped depression at the east end. Extends 4m E/W x 2.5m N/S as excavated with a depth between 5cm and 8cm. Comprises small pebbles moderately sorted throughout the context. A metal spike was noted driven into this layer 1.46m from the west wall and 1.04m from the north wall. Colour 10YR 5/4 Yellowish brown
058	Masonry	205/105	Stone feature in eastern bay comprising of 3 walls but no internal floor. Size of feature is 82cm N/S x 1.2m E/W. Flagstone floor (036) butts up to the feature on N, S and W sides. N and S walls are 25cm wide and W wall is 46cm wide. Eastern wall missing due to stream erosion. Height of 34cm from the surface of (036) and 43cm from the inside of the feature. Feature cuts into (057) on North. Built from flat dressed blocks of stone, 7 courses high.

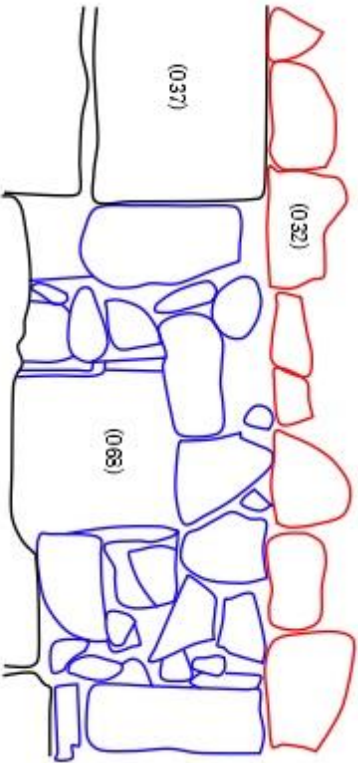
059	Masonry	195/110	Western bay North wall. Length of wall taken from inside the building is 4.4m E/W. Height of 1.35m. Comprises of well laid blocks of dressed stone. Evidence of mortar in use up to 80cm W of the Eastern wall then unmortared for the rest of the run of the wall.
060	Cut	205/105	Linear cut in (057) running N/S. Dimensions of 1.3m N/S x 70mm E/W. Depth of between 5cm and 8cm
061	Deposit	195/105	Sandy clay layer with river washed cobbles of varying sizes embedded randomly around the layer. Flagstone fragments and evidence of flagstone floor are also visible suggesting that the flooring that sat on this layer has been removed.
062	Masonry	200/100	Central Bay Front wall. 3 courses of roughly dressed sandstone blocks running 4m E/W to a height of 28cm. Width of 50cm. Loosely bonded with pinkish grey mortar. Front and back faced with a rubble core. Entrance of 118cm wide with evidence of sockets cut into wall for door posts. Threshold 76cm front to back.
063	Masonry	195/100	Western Bay Front wall. 10 courses of well laid dressed sandstone blocks running 4.3m E/W to a height of 68cm. Stones are of various sizes. Width of 50cm. Bonded with pinkish grey mortar. Entrance way 1m wide positioned next to eastern wall with evidence of sockets cut into wall for door posts. Threshold 50cm front to back. Examples of small vertical stones around the base of the internal wall.
064	Masonry	200/100	Flagged pathway outside the front wall of the Central Bay. Extends 4.6m E/W and 1.2m N/S. Same context as (011). Rough flagged pathway apart from threshold stone which has a smoother finish. Section of 1.1m missing just east of the entrance where a later tree has stood.
065	Deposit	200/095	Silty sand layer. Very fine and friable. Very few inclusions. Extends 3.8m E/W x 82cm N/S as excavated to a depth of 42cm. Bounded to the North by a row of rounded cobble stones sat on the edge of (023). Colour 7.5YR 4/2 Brown.
066	Fill	200/105	Loose brown black clayey silt fill of (068). Mix of topsoil, mortar and ash. Depth of 19cm.
067	Deposit	200/105	Sandy clay layer under the Central Bay floor (037). Friable with small gritty stones throughout. Same as context (073). This was a small intrusion through (037) of 50cm N/S x 48cm E/W and revealed a depth of 13cm. Colour 10YR 4/4 Dark Yellowish Brown.
068	Masonry	200/105	Sunken stone feature in the floor of the Central bay butting up to the eastern wall. The feature measures 1.46m N/S x 0.6m E/W with a central sunken area of 45cm N/S x 40cm E/W to a depth of 26cm. Two large truncated upright slabs are located at the North and South limits of the feature. The sunken area is constructed out of well laid, mortared flagstones on three sides of the area. The western side being unwallled. These walls are built onto a flagstone base.



069	Deposit	200/105	Soft silty sand layer with rubble inclusions throughout. Depth of between 10-20cm. Colour 7.5YR 5/2 Brown. Same as (079)
070	Deposit	200/100	Soft clay sand layer to the west of the drain (025). Same as context (043). Contains medieval pottery and a heavily compressed slag deposit running N/S. Depth of 30cm at the N end lensing down to 6cm at the S. Very fine quartz inclusions less than 1mm diameter. Colour 2.5YR 3/2 Dusky Red.
071	Deposit	205/095	Loose cobble layer to the South of the drain (031). Comprises assorted river cobbles avg size 60mm x 35mm. Slightly undulating surface. Extends 1.7m E/W x 0.80m N/S as excavated. Depth of 4cm.
072	Deposit	200/105	Demolition rubble layer lying under the floor in the NW area of the central bay. Mix of mortar, rubble, clay and loam. Extends 2.3m N/S x 1.3m E/W as excavated. Large deposit of coal fragments 35cm x 120cm. Coal deposit overlying slightly context (076)
073	Deposit	200/105	Loose sandy coarse sand layer under the North end of the flagstone floor in Central Bay. Same as (067). Small stone inclusions throughout the layer. Extends 2.8m E/W x 2.3m N/S to a depth of between 12cm and 15cm. Colour 10YR 4/4 Dark Yellowish Brown.
074	Deposit	200/105	Firm silty sand layer comprising mostly coal and cinder. Extends 2.2m E/W x 2m N/S with depths of 7cm at the E and W sides and 5cm at the mid point. Colour 10R 2.5/1 Reddish Black.
075	Deposit	200/105	Firm clay layer that has been tamped down to provide a firm layer. Extends 1.9m E/W x 1.7m N/S with depths of 5cm at the E and W sides and 4cm at the mid point. Colour 10YR 5/3 Brown
076	Masonry	200/105	Flagstone layer under demolition layer (072). Extends 1.4m E/W x 60cm N/S. Depth of 3cm. Flagstones have been broken into smaller fragments.
077	Masonry	200/105	Large stone block lying E/W under (073) and sat on (080). Dimensions 78cm x 27cm and a depth of 10cm.
078	Masonry	200/105	Stone feature running N/S under the demolition layer (072). Dimensions of 1.6m N/S x 0.8m E/W. Sat on (079).
079	Deposit	200/105	Silty sand clay and mortar layer. Extends 3.1m E/W x 2.3m N/S. Depth of 1.1m.
080	Deposit	200/105	Clayey sand compact mortar layer extending 1.3m N/S x 1.7m E/W with depths of 3cm at the E and W sides and 5cm in the mid-point. Colour 2.5Y 7/3 Pale Brown
081	Deposit	205/105	Redeposited compact coarse sand natural thrown back around the East Bay West wall foundation. Extends 1.7m N/S x 0.47m E/W as excavated. Depth of 20cm. Inclusions of quartz fragments, pebbles of varying sizes and large boulders up to 50cm. Colour 10YR 6/4 Light Yellowish Brown

082	Deposit	200/105	Firm clayey silt fill under (079). Extends 1.8m N/S x 1.9m E/W with a depth of 0.7m. Very sticky fill getting increasingly stickier and wetter the deeper the fill went. Very few inclusions, mostly pebbles and grit. Colour 10YR 5/6 Yellowish Brown
083	Deposit	200/105	Firm very fine sticky clay fill under (082) towards the bottom of the wheel pit (104). Extends 1.3m N/S x 0.7m E/W as excavated. Depth of 0.85m. Colour 2.5YR 5/1 Reddish Grey
084	Deposit	200/105	Demolition rubble under (083) towards the base of the wheel pit.
085	Deposit	195/100	Mix of topsoil and demolition rubble outside the front wall of the Western Bay. Extends 4.3m E/W x 1.6m N/S as excavated. Depth of 50cm. Colour 2.5YR 2.5/1 Reddish Black
086	Deposit	200/105	Loose sandy sand levelling layer for (076) comprising black ash and cinder. Extends 0.90m E/W x 0.70m N/S to a depth of 10cm. Colour 2.5Y 3/1 Very Dark Grey
087	Cut	200/105	Cut in natural (999) along eastern edge of wheel pit.
088	Fill	200/105	Stoney loam fill of (087)
089	Deposit	200/105	Demolition rubble lying making up the foundation of the Central Bay Eastern wall. Depth of 30cm.
090	Deposit	200/105	Very loose black loam and mortar layer lying under (089) and over (999). Depth of between 10cm to 20cm.
091	Deposit	200/105	Gritty pebble fill
092	Masonry	195/100	West Bay flagged floor. Very fragmentary. Only a few flagstones remain in situ, around the entrance and just North of the fireplace (097) in the western wall (094) and between the two side rooms. Would originally have extended 4.3m E/W x 8m N/S. Evidence of edging stones around the perimeter of the walls. Several piles of flagstones visible around the bay. Depth where noted of 8cm.
093	Deposit	195/100	Loose silty sandy layer used as a levelling layer for flagstone surface (092). Comprises of cinder and ash. Extends 4.4m N/S x 4.3m E/W to a depth of 6cm. Colour 7.5R 2.5/1 Reddish Black.
094	Masonry	195/100	West Bay West wall. Extends 9m N/S with a width of 50cm. Fireplace (097) built into the wall 1.5m from the front wall (063)
095			N/A
096	Fill	200/100	Tail Race backfill
097	Masonry	195/105	West Bay Fireplace. Fireplace is built into the western wall (094) 1.5m from the front wall of the bay (063). The feature has two upright slabs 0.85m in height to the North and South extents. These uprights are keyed into the wall (094) by 14cm at the North and 8cm at the South. The full width of the fireplace is 1.02m and is 50cm from front to back.
098	Deposit	195/105	West Bay Sandy fill.

099	Deposit	200/100	Redeposited natural
100	Deposit	200/100	Grey sandy clay
101	Cut	200/100	Cut in (100)
102	Cut	200/100	Tail Race cut
103	Masonry	200/105	Wheel Pit North wall
104	Cut	200/105	Wheel Pit
105	Masonry	195/105	West Bay West Room walls
106	Masonry	195/105	West Bay West Room floor
107	Masonry	195/105	West Bay East Room walls
108	Masonry	195/105	West Bay East Room floor



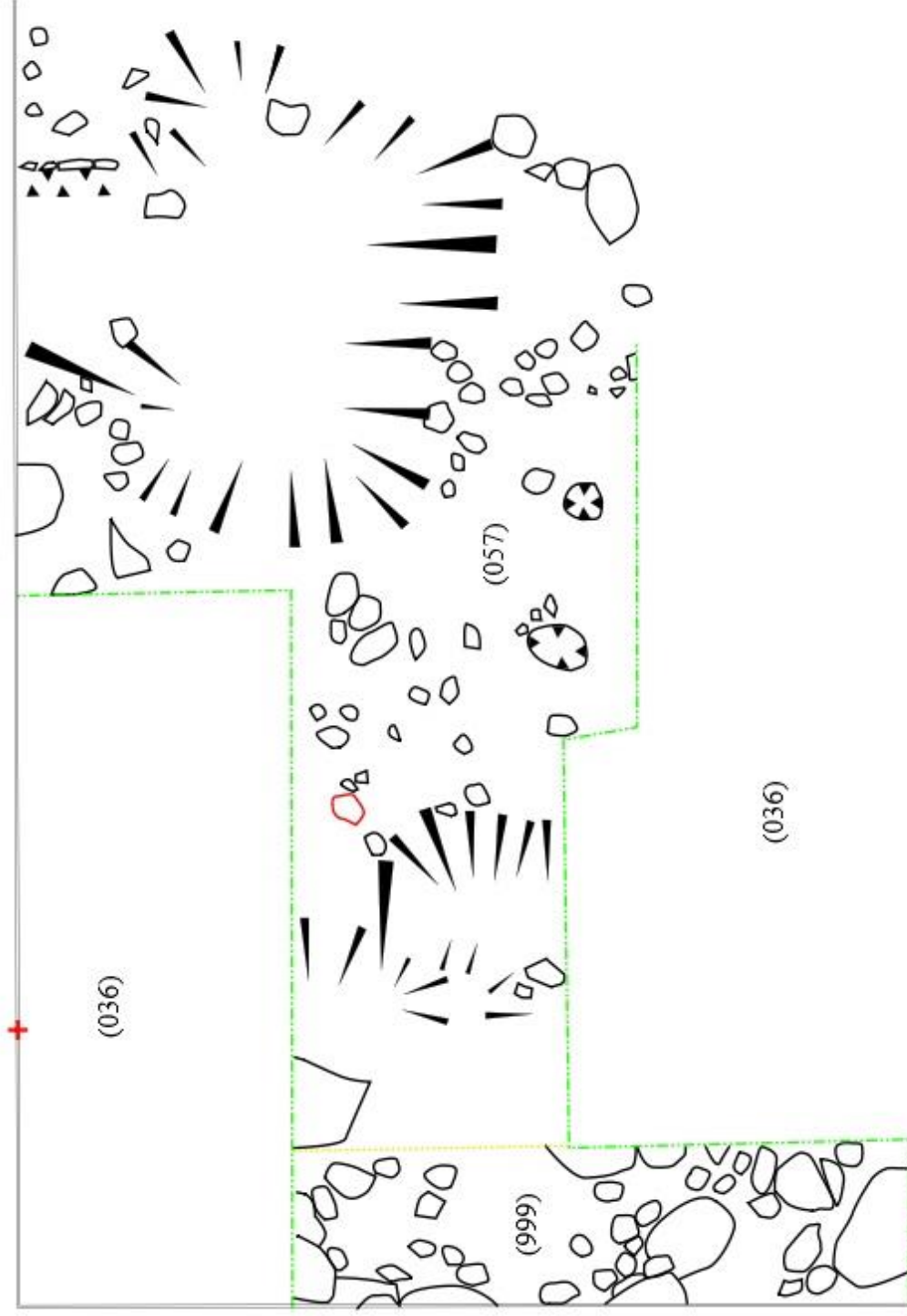
Contexts

- (032) East Bay West Wall
- (037) Central Bay Flagstone Floor
- (068) Central Bay Inset Stone Feature



Holcombe Moor Heritage Group	Context (068) : Inset Stone Feature in Central Bay	Site Scale Date Author	Bottoms 1:20 2015 N. Caldric
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205/110



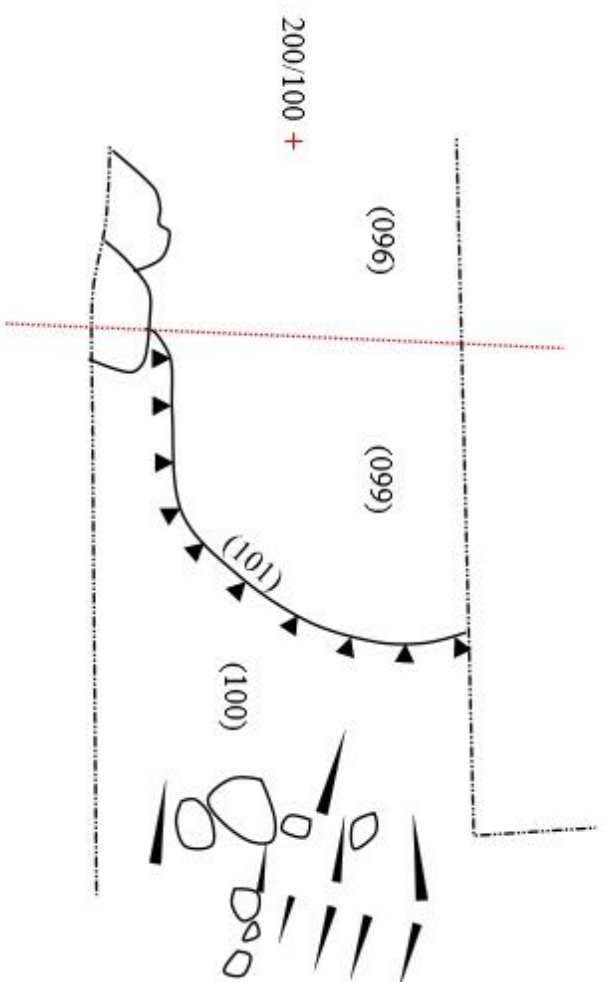
- (036) East Bay Flagstone Floor
- (057) Sandy Clay and Cobble Layer
- (999) Natural

- Building Walls
- Iron Pin driven into natural
- Limit of sondage
- Limit of excavation



North East Intrusion below flooring.

Scale 1:20  
August 2015

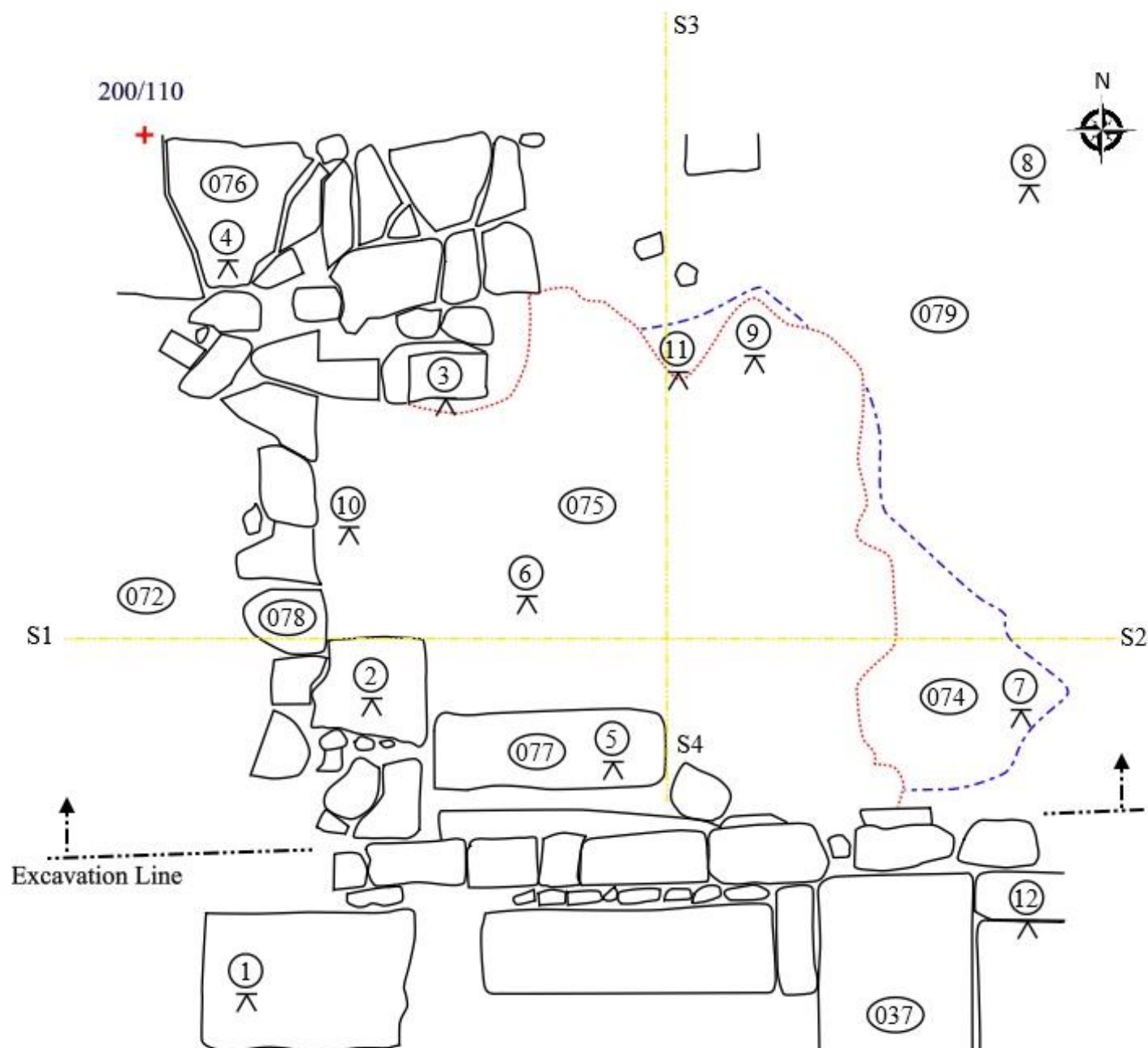


Line of Tail Race Cut (102)

#### Contexts

- 096 Tail Race Backfill
- 099 Redeposited Natural
- 100 Grey Sandy Clay
- 101 Cut in (100)
- 102 Tail Race Cut

Holcombe Moor Heritage Group	Plan Showing Tail Race Cutting through Medieval Layer	Site Scale Date Author	Bottoms 1:20 2015 N. Coldrick
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- Section Line
- Limit of Clay Layer (075)
- Limit of Black Loam Layer (074)

#### Contexts

- (037) Central Bay Flagstone Floor
- (072) Demolition Rubble Layer
- (074) Reddish Black Ash Layer
- (075) Firm Clay Layer
- (076) Flagstones
- (077) Large Masonry Block
- (078) Stone Feature
- (079) Clay and Mortar Layer

Levels		Reduced
TBM1	BS	1.51
1	1.66	-0.15
2	1.72	-0.21
3	1.63	-0.12
4	1.66	-0.15
5	1.80	-0.29
6	1.76	-0.25
7	1.64	-0.13
8	1.59	-0.08
9	1.64	-0.13
10	1.77	-0.26
11	1.70	-0.19
12	1.51	0

Central Bay Features under Flagstone floor overlying Wheel Pit  
July 2015

Scale 1:20



## Appendix 4



*Figure 5: Pennine Gritty Ware Sherds*

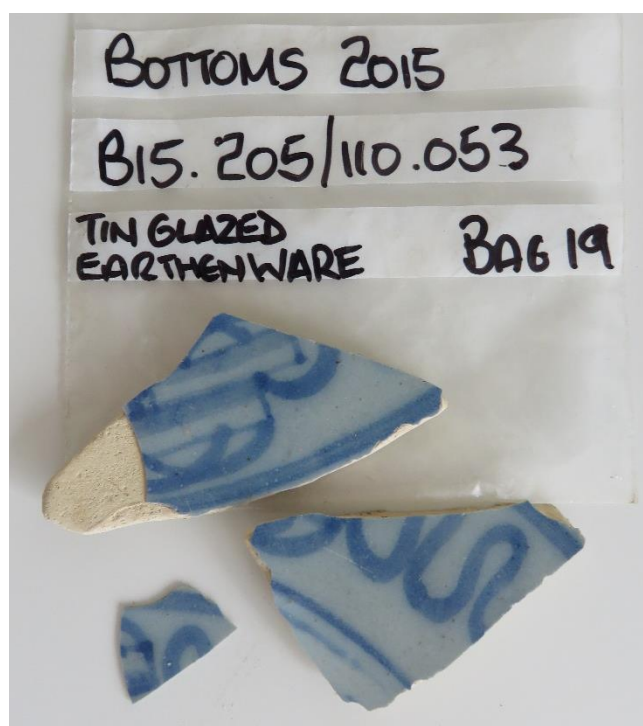


*Figure 6: Pennine Gritty Ware Sherds*





*Figure 7: A Typical Assemblage of Pottery Sherds*



*Figure 8: Two Sherds of Tin Glazed Earthenware*



*Figure 9: Two Sherds of Slipware*

