10. Discussion of the site at Broughton in comparison to a number of sites around the region.

10.1. Introduction

The following study has been carried out in order to aid interpretation of the features and deposits found on site at Broughton, help place it in context with broadly contemporary sites found within the surrounding area, and to help understand the nature of the occupation on the site. It consists of discussions and descriptions of the findings at Broughton incorporating comparisons with other sites.

Research into other rural Romano-British structures has been useful in comparison to Broughton. It appears that the evidence for structures and industrial activity at Broughton has many similarities around the region. A search of the North Yorkshire County Council HER within the districts of Ryedale, Scarborough and Hambleton returned interesting results of several comparable sites. The distinction between rural farmsteads and villas is one of status; however the construction methods of the buildings go through similar phases. It has been an interesting exercise to consider the interpretations made by other archaeologists. However, this is not intended to be an exhaustive study of every site of this period, but the sites chosen have similar characteristics to Broughton and were broadly contemporary. Martin Burrough's dissertation is concerned with villas in particular, he made two lists of villa groups around Malton, and some of those are compared here, with a few exceptions. (See fig 8) (Burroughs:2001)



Figure 8- The location of villas around Malton, after Burroughs:2001.

Two groups of Romano-British building types have been considered in this study. The first group are those interpreted as Romanised farmsteads of lesser status than villas, the second group are villas but only using the evidence from their earliest pre-villa phases. A couple of examples of buildings in the Roman town of Malton have also been used, due to its local influence rather than it being in comparison to a rural site. The kilns found at Malton appear to have been more sophisticated in

design so have not been used as a direct comparison in form here, although some comparison of the evidence of function is worth noting.

However, there are inconsistencies in the excavated accounts of these sites meaning that the evidence is incomplete due to various circumstances. For example Beadlam and Crossgates were only excavated down to the latest phases, some sites were excavated before scientific techniques and methods had been developed such as at Amotherby, Langton and some parts of the vicus at Malton. Most sites have been evaluated with trial trenches which give limited evidence, and others such as Wharram le Street and Wharram Grange were only excavated by a series of test pits, therefore only discovering a fraction of the evidence from the site.

The comparisons made here concentrate on the form and nature of the deposits and features. A full comparison of the sites including the pottery and finds has not been attempted here, but is identified as a valid line of research in the future.

The sites identified for comparison to Broughton are (See fig 9):-

Farmsteads: Spaunton, Crossgates, Hutton Hill Farm, Burythorpe, Sike Spa and West Moor Farm Villas: Beadlam. Langton, West Lilling, Wharram-le-Street and Wharram Grange. Amotherby lies within a mile of our site and could fall into either of these categories. It has some similar features to Broughton, although there is very little information available on the excavation, some characteristics have been mentioned in the discussion





One other site which shows a resemblance to Broughton is Settrington (See figure 11). The similarity of these structures as seen in remote sensing techniques such as aerial survey and resistivity survey is clear to see, as shown below.



Figure 10 – Broughton geophysics plot (80x20m)

The resistivity survey at Broughton appears to show the remains of a rectilinear building divided into rooms. (See Fig 10) The locations of the trenches were chosen to target high resistance areas that may have represented the walls of this possible building. The excavations have been successful in finding these areas of high resistance, and in identifying and recording parts of the external wall foundations of the building.

The closest site in form to Broughton as seen on the resistivity survey is at Brough Hill Settrington. Cropmarks have shown a four roomed rectangular building within a ditched enclosure. (Ramm:1978, p76). (See Fig 11) This site is two and a half kilometres north of Langton and is situated along a track which could be traced for seven kilometres and joins the trackway/holloway to Malton from North Grimston. The main building which measures 28 x 6 m and is divided into four rooms can be seen within a sub-divided enclosure, which also includes three round houses to the north.



Figure 11 – Brough Hill, Settrington, after Ramm 1978

This example has not been excavated so all we can see are the predominant features causing the variation in crops and vegetation in the field. However the form of the latest phase at Broughton, as can be seen on the resistivity survey appears to be in the same form as this structure. If the Broughton site is within an enclosure ditch or has any other associated structures of any kind, remains to be discovered. A more recent geophysical survey, to be reported on in the next interim report (forthcoming), suggests there may be an outer enclosure, but this remains to be tested by excavation.

Below is a discussion of the excavated evidence of the main phases at Broughton in relation to the building materials used and the nature of the deposits, including comparisons to the sites chosen for their similarities, listed above. For the purpose of the comparisons to be drawn the Broughton site phases have been grouped into three broad phases of occupation. The earliest phase on the site which is the industrial phase; the second phase involving post built structures and the third phase involving stone built structures or at least those with stone foundations. It is recognised that this is an over simplification of the phasing at Broughton, and that each of these main phases is likely to have included several sub-phases, and that they probably also overlap with each other. Attempts have been made within the individual trench summaries included in this report for the phasing of the site, although this will be refined once Trench 6 has been completed which may help to join up the opposite sides of the site.

The dating of these phases cannot be determined until a full pottery report has been completed and studied for all contexts. At present we have the first pottery assessment (see Appendix 4) but this does not include Trench 5 x1. Therefore, when T6 is finished another pottery assessment will be

done to include all the pottery recovered up until the end of the 2013 season. The results of this will help to define the date ranges for each phase. At present the spot dates on pottery found in a selection of features are all within the Roman period, with very few exceptions from the Late Iron Age. The time period that might have elapsed between the earliest phases which did not contain any pottery, to the next phase on site is unknown at present. Therefore, the phases described below have been determined by stratigraphy only. For details of the features mentioned in the following discussion, please refer to the individual trench reports in Section 7 this report. Any references in the text to Trench 6 are made for the sake of comparison, as at the time of writing excavation of Trench 6 was incomplete, therefore, only limited information is available. The plans, photos and full descriptions will be the subject of the next report, which will be finished by the end of 2014.

10.2 Phase 1 - Industrial Kilns

At Broughton the hearths/kilns differ in size and shape but all except one share similar fills. The first kiln to be found in T4 x1(4123) has been considered to be a probable lime kiln because its fill consisted of compacted limestone grit. (See Fig 12,13 & Plate 2). This kiln had the least evidence of burning, and was the only one to have a large limestone flag at its base, although this stone had no signs of burning. Three others were found in T4X2. One of these kilns had no flue and appears to be a clamp kiln, (4358) (See Fig 14,15, Plate 4) while another was in the shape of a figure of 8, (4310/4312) (See Fig 16,17, Plate 7), the last one showed several phases in its construction and had evidence of metalworking.(4366,4371,4372) The flue of the lime kiln cut through these contexts.(4361) (See Fig 18,19,20, Plate 6). The three kilns in T4x2 and further kiln/hearths discovered in T6 to date all share reddened linings, not thought to be deliberately lined with a different material but the cut of the features having been affected by intense heat in situ. The fills of these kilns contain a mixture of burnt deposits of ash, burnt stone and daub with a small number of burnt bone fragments and deposits of charcoal

At Broughton we have three different forms of kilns: circular with flue, hour glass shaped and oval clamp kiln. The kiln that provided the only evidence for its use through the presence of hammerscale, mentioned above, is more complicated in that it went through several phases and appeared to span most of the life of the site. It seems to have started life as a series of small hearths, possibly with several re-cuts, subsequently cut through by the flue of the "lime kiln", and then ended as a circular stone hearth- associated with metalworking. This feature survived in use through to the stone phases of the site.

The numbers of kilns recorded at each site is as follows, Broughton 15 including T6, not in this report, West Moor Farm 1, Burythorpe 1, Spaunton possibly 5, Langton 2, Sike Spa 2, Hutton Hill Farm 2 and West Lilling, 1. The number of kilns at Broughton is far higher than other sites, but this is probably due to the more limited nature of the excavations at some of these other sites.

In comparing the sites where kiln features have been found, several similarities have come to light in the nature of the evidence and the form of the kilns. At Crossgates III a burnt feature was excavated within an Iron Age enclosure but not in the same trench area as the Roman building. The burnt feature consisted of a narrow flue with burnt reddened lining, a circular pit at one end and an oval pit adjacent. (MAP:1999, p18-19). The kiln at West Moor Farm had no flue so was presumably a clamp kiln. (Young:2001,p5), and kiln at Spaunton was recorded as having no flue, so may also have been a clamp kiln. The remaining four at Spaunton were recognised as flues without any bowls attached so perhaps the remains are incomplete at this site (Whitaker:1967, pp14-16). The kilns at Hutton Hill Farm were both sub-circular bowl shaped with flues, (NAA:1999, pp9-10) at West Lilling an hour glass shape was recorded (On-Site Archaeology:2003, pp3-4) and at Sike Spa presumably the

same form was found but recorded as a dumb bell shape, while another on the same site was described as having a double bowl. It is uncertain if this means two bowls with a flue or another hour glass shaped kiln (Wood:2000, pp3&4). Hour glass shape, dumb bell or double bowls are probably the same shape as the figure of 8 shape recorded at Broughton.

The fills of these kilns had much in common with the fills at Broughton. Wood ash or peat ash was identified at Spaunton, and wood ash at Langton. Reddened clay, burnt daub and large amounts of charcoal are common in all comparable sites with kilns:- Spaunton, Crossgates(III), Hutton Hall Farm, Burythorpe, Sike Spa, West Moor Farm, Langton and West Lilling. Sometimes other material was specifically mentioned, such as a burnt red lining at Spaunton and Crossgates III, Grey plastic clay and heat affected sand at Hutton Hill Farm and what appeared to be a white mortar in a flue at Spaunton, which may be similar to the limestone grit found in the first kiln at Broughton. (See Plate 20)



Plate 20 – The crushed limestone/mortar? fill (4076) of the "Lime Kiln" (4123) T4x1. See Figure 12 for scale

Two sites had kilns containing objects that may have been used for kiln furniture, such as limestone blocks, box flue tiles and imbrex fragments at Burythorpe and the kilns at Hutton Hall Farm included fragments of fired ceramic kiln furniture in the backfill. Imbrex tile was found within the kiln at West Lilling but only as abraded fragments as part of the fill. (Whitaker:1967, pp14-16, MAP:1999, p18-19, NAA:1999, pp9-10, Stephens:2006, p16, Wood:2000, p3&4, Young:2001, p5,Corder & Kirk:1932, p56-57, On-Site Archaeology:2003, p-3-4) At Broughton there is a complete lack of any kind of kiln furniture within any of the fills of the kilns. One kiln in T6 (6147) contained a Roman tile standing on its edge, this feature had been cut by a post hole (6144) and the end of a slot (6112), therefore it was thought that the tile may have been used as a packing stone for these features rather than being associated with the kiln.

Another feature found to be present at sites comparable to Broughton is described as "material raked out "from the kilns. This has been noted at Spaunton and Hutton Hill Farm, for example, where burnt deposits the same as that found in some of the fills of the kilns has been found in spreads around them, which appears to represent the clearing out of the kiln before the next firing. This had been trampled in to the ground and built up over time to develop into substantial dumps of burnt material. (NAA:1999, p9-10, Whitaker:1967,p17) The semi-circular hearth at Malton which had an earlier forge beneath it had an area opposite the flue "where the soil was black and full of ash" (Corder:1930 p29) There are several areas like this at Broughton around the areas of the kilns where

the ground is covered in a layer of material full of charcoal and other burnt material. In one area of T6 a group of intercutting kilns is in the process of being excavated at the time of writing. These surround a deep deposit of charcoal rich burnt material containing lenses of ash, which appear to represent a substantial dump of raked out material from several kilns over time.

For many of these kilns, no evidence has been found for their function. In some cases they have been interpreted as corn dryers due to the lack of evidence for other uses. Examples include two in the vicus at Malton excavated in 1949-52; West Lilling; Langton; West Moor Farm; Crossgates III and Spaunton. (Wenham & Heywood:1997 p37, Mitchelson:1963, p225-6, On-Site Archaeology:2003, p32, Corder & Kirk:1932, p57, Young:2001, p5, MAP:1999, p18-19, Whitaker:1967, p17) Two of these had some evidence to show this. At West Lilling the feature described as an oven contained charred cereals, this has been suggested as a corn dryer (On-Site Archeology: 2003, pp4&32.) and the kiln at West Moor Farm had charred plant remains in the fill suggestive of cereal processing taking place on site, if not within the kiln (Young:2001, p5). The only site where a function has been positively identified is at Hutton Hill Farm where evidence has been found to show that the kilns were used for the manufacture of pottery and tiles (NAA:1999,p9.) The evidence for tile manufacturing sites is an unusual occurrence in this area. The tile production was later than the pottery which provides a tight chronology for these tiles if identified elsewhere (NAA:1999, p16). Metalworking has been suggested at Burythorpe, (Stephens: 2006, p22) and for one of the kilns at Sike Spa smithing is a possibility, (Wood:2000, p4-5). A crucible fragment and slag found at Langton may suggest metalworking on site but these were not associated with any feature. (Goodall:1972, p37)

At Broughton a similar situation has been found where only one of the kilns contained any evidence for a possible function. Two deposits which lay above the fill of (4361) and adjacent to a circular hearth/ oven base, described in a later phase below (4324), contained hammerscale (4325,4317), and a small metal bar was found within the fill of the hearth/ kiln (4372). This kiln is likely to have been used for smithing. The other kilns had no visible evidence for their function, no pottery has been found within them and no deposits of burnt grain. In an attempt to determine the purpose of these features, bulk samples have been taken from the deposits for assessment at a later date.

All eight of the sites compared with Broughton were successful in finding a date for their kilns. At Crossgates III a date of 40BC- 40AD was found through archaeomagnetic dating, (MAP:1999, p18-19) the other seven sites were dated using pottery found within them, Sike Spa, to 1st-2nd century and 4th century (Wood:2000, p3& 5) Langton 4th century (Corder & Kirk:1932, p56-57)and West Lilling 280-400AD (On-Site Archaeology:2003, p4). At Spaunton a single piece of 4th century grey ware was found under a flue (Whitaker:1967, p16&18), The kiln at Burythorpe contained fragments of box flue tile and Imbrex fragments and in a later context, 4th century pottery, (Stepehson:2006, p16) and at Hutton Hall Farm a large assemblage of 4th century pottery was found in two kilns (NAA:1999, p9-10).

At Broughton we were unsuccessful in obtaining a date through archaeomagnetic dating. In the absence of pottery in these features, charcoal samples have been taken in an attempt to determine chronology. Samples from the primary fills of three of the kilns proved suitable for radiocarbon dating. CBA Challenge Funding was granted in 2013 to obtain dates from these samples, which are as follows:

The Clamp Kiln Trench 4 x2 (4359) = 41BC- 80AD (95% probability, SUERC-47088), Kiln from T6 (6006) = 36BC - 124 AD (95% probability, SUERC-47092) Kiln from T6 (6137) = 17 - 136AD (95.4% probability, SUERC -47093. Full details will be included in the next interim report. This information determines two of these features as the earliest on site with a pre-Roman date. The rest remain undated and rely on phasing for relative dating.

The phasing of the kilns in relation to other features and structures varies from site to site; some have been assigned to a phase earlier than stone structures and some are contemporary with them. In an area of kilns at Hutton Hill Farm and one of the kilns at Sike Spa the excavators saw evidence to show that the kilns were earlier than the structures, (NAA:1999, p11, Wood:2000, p3) At Beadlam although there are no details of kilns similar to those described here, two possible ovens were noted beneath two of the rooms and therefore belonged to an earlier phase than the stone building (Neal: 1996, p13). However, at Burythorpe evidence showed that the kiln there was probably in existence at the same time as the building as it was placed "down from the prevailing wind and away from the buildings" (Stephens:2006, p22). The kilns at Spaunton were thought to have been later than the buildings due to the direction of the flues in comparison with the wall foundations but there was no definite stratigraphy to show this and so it remained uncertain (Whitaker:1967, p17).

At Broughton it is possible that some wooden structures were in existence while the kilns were in use but some were definitely later as we have post holes and ditches cutting some kiln features. The northern wall foundation (4264) is stratigraphically later than the hour glass shaped kiln in T4x1, (4310/4312) and although there is no other direct relationship to show this stratigraphy between the kilns and the stone structure, in all cases with one exception, all the kilns are beneath the stony layers. The one exception is the possible smithing hearth as discussed above, with the latest phase being a circular stone built hearth/oven base (4324) which was found directly under part of the stone spread in T4x1 and may have been contemporary with that phase. (See Plate 10 & 11)The group of features comprising the smithing hearth are important on the site, although except for the cut of the later flue, the phasing only shows the continuity of the hearths and kilns in the same location rather than determining any stratigraphic relationship with other features on the site.

As mentioned in association with "raked out" material earlier, at Malton a semi-circular hearth was found built up against a wall which had an earlier blacksmiths forge beneath it. The hearth measured 8ft (2.4 m) in diameter and was constructed of large worn stones, many dressed and most with signs of burning. This feature contained a coin dated to AD330-7 and was interpreted as a hearth or industrial furnace.

The semi-circular platform at Malton was found to have no foundation but rested on earth; and was found to be above a blacksmiths forge from an earlier phase. The forge was built from masonry and clay, there was evidence of heavy firing of the forge surfaces, with several stones reduced to powder and heavily burnt clay. The feature included a pit containing fine black ash and a post hole in a position likely to represent a wooden upright for a roof extending over the floor and ash pit to shelter the smith. Clinker was found suggesting a forge (Corder:1930, p29).

The Malton feature was much more substantially built although is a similarly phased feature to our metal working kiln at Broughton. This indicated that a probable metalworking forge, evidenced by the presence of hammerscale, had been superseded by a later phase of a circular hearth built partially over earlier hearths/kilns, this is described later in the stone built phase at Broughton. The wall against which the Malton feature was built up against lay 13ft (approximately 4m) to the south east of an apsidal wall, although the associated wall was of a later phase than the apsidal. The circular hearth at Broughton by coincidence was approximately 5-6m to the south east of an earlier apsidal structure. Both sites show the same kind of continuity.

10.3 Phase Two - Between the Industrial Phase and the Stone Built Phase

This broad phase describes at least two phases of deposits and features relating to probable post built structures.

Relict Ground Surfaces

The kilns described above lay beneath and within layers representing either the build-up of material or a succession of previous ground surfaces probably associated with a phase of wooden structures on the site. These were earlier than the rubble spreads which overlay them and probably earlier than the stone foundations. These layers contained burnt daub, bone, pottery, charcoal flecks and numerous areas of burnt deposits including ash, reddened clay, and burnt stone, although much of it was made up of a pale brown sandy clay with no identified features. These layers extended across the site and could be up to 30cm deep. The wall foundations in T6(6085,6111,6027,6023,6034,6066) and the northern part of T4 X2 (4264)and also inT5 (5009) cut these deposits. Numerous post holes, pits and ditches were identified at various levels within these layers in all trenches, obviously representing multi-phase structures. The wall foundation in T4x1 cut through a possible earlier floor surface (4086), rather than a relict ground surface, demonstrating the variability of the deposits across the site. More precise dating from these layers would help our phasing. The initial pottery analysis includes some spot dates; the majority of these are from contexts thought to represent structural features, or stony deposits, therefore the layers representing relict ground surfaces or occupation layers can only be said to date from the Roman period between 1st to 5th centuries AD.

At West Lilling an old ground surface was recorded overlying two ditches and one of three post holes in one of the trenches, this consisted of four deposits containing fragments of painted wall plaster, opus signinum and building stone. The wall foundations thought to form part of a building were cut into the relic soil, and a demolition layer was observed partly over the wall foundation (Hopkinson:2000,pp22-24). The remains of some building material within deposits overlying post holes and ditches at West Lilling implies that these were deposited before the wall foundation cuts were made into the same deposits. Perhaps from a nearby higher status building than that represented by the ditches and post holes, followed by a stone built structure on the same site (On-Site Archaeology:2003,p6). This seems to be a similar sequence to that at Broughton except that the West Lilling deposits contained higher status material than those at Broughton.

At Broughton the finds within these ground surfaces/deposits are of Roman date and also show evidence of industrial rather than domestic activity, with burnt deposits, ash, burnt stone and burnt daub. In fact some of the features found to cut into these deposits at various levels are of the kilns described above. There are less finds of pottery and bone than one would expect from a purely domestic site, some domestic activity possibly associated with the people involved in the industrial processes is evident. Within these old surfaces are discrete areas that appear to be deposits of burnt material tipped or raked out and trampled or worn into the surface. Some of these are fairly small areas probably representing only a shovel full or bucket load of ash, both red and grey, charcoal and burnt stone and daub, periodically thrown on the ground after cleaning out a kiln or hearth. Others are larger spreads which may be the result of the regular raking out of kilns in the area, as described above.

10.4 Phase Two - Cut Features representing pits, ditches, post holes, slots or other structural features.

Some relative phasing of features found beneath the stony layers at Broughton has been possible by observing where some of these features cut others, although many features exist with no intercutting, making the assigning of these features to a specific phase very difficult. All that can be said is that these features are all linked stratigraphically by the fact that they all underlie the stony

layers/spreads on the site, and in some cases they cut the industrial phase features. They may be broadly contemporary to each other in that they may represent fairly short phases in construction, but further analysis of the pottery and in particular the spot dating is required here before a chronology of phasing can be attempted. Some of the features may be contemporary with the wall foundations but it has not been possible to determine this with any assurance .Neither has it been possible as yet to determine which features belong to the same phases between T5, T5 x 1 and T4 x 1, 2, due to the physical gap between these areas. This may be resolved upon the completion of T6 which lies between these two trenches. Therefore the task of reconciling the features beneath the stony phase across the site is postponed until after the 2013 season, and until receipt of the second pottery assessment.

Observations can be made however, regarding the phasing of the probable post-built structural features.

Firstly there are some features that have been found directly beneath the wall foundations. Under the northern wall in T4 x1 (4107), a deep post hole with packing stones was discovered (4111). In T4x2 a possible post hole (4248) was found beneath the wall foundation (4264) (See Fig 4.) In T5 & 5X1 a possible beam slot (5045) was cut by the wall foundation (5009), and post hole (5049) was beneath it. (See Fig 5, Fig 21 & Plate 21) Beneath the short southern wall section in T6 (6085), a slot running across the width of the foundation and into the trench edge was recorded (6098), this was also stone filled but much narrower (0.40m) than the wall foundation (0.80m). (See Plate22-23)



Plate 21- Post Hole (5049) adjacent to a beam slot and beneath the cut of wall foundation (5009)



Plate 22 – Fill (6089) of slot (6098) beneath the wall foundation cut in T6



Plate 23 – Slot (6098) beneath the wall foundation cut in T6

Other features were interpreted as structural. The apsidal ditch in T4x1 (4127, 4098) belongs to the probable wooden building stage as it had evidence of post construction within the cut, and possible evidence of a mortar floor (4086) (See Plate 9). The wall foundation in this trench cut through both these features. (4107) (See Plates 12 &13). The apsidal feature was dated by pottery spot dated to $1^{st}-2^{nd}$ century AD. Not truly apsidal the ditch is a linear turning into a curve at the northern end, although no return to the curve has been found and the feature extends beyond the excavated area. The apsidal ditch extends for approximately 3.8 m slightly west of north then curves round to the east for approximately 2.8 m. Although its fill contained stones, these may have been either post packing or have sunk down from the rubble layer which overlay it. The apsidal ditch is a key stratigraphic feature as the northern wall foundation (4107) cuts it and in turn it cuts through two kiln features showing these to be an earlier phase. (4123, 4310/4312). (See Fig 22,23, Fig 4 & Plates 1 & 8), Three post holes may be associated with the apsidal ditch. (4111,4319,4381) The latter two were large square post holes containing post pipes. The possible remains of a floor surface (4086) were found abutting the apsidal ditch, formed of a broken up mortar or chalk surface containing charcoal and burnt clay. An area of approximately 105 x 0.89m survived to a depth of 0.03m.

In T5 the structural features also appeared to be separated into two main phases underlying the stony phase, with evidence that some features had been re-cut. This part of the site did not have any kilns or hearths and so the post holes, pits and ditches are the earliest features here. However the fills of many of these cut features contained the same kind of burnt deposits found underlying the stony deposits in the rest of the site. This suggests that these are earlier in date than the kilns, or at

least were still in use at the same time, and backfilled with this material. A gully (5004) was interpreted as a possible drainage gully associated with the structure represented by the wall foundation (5009). This may be a possible drip gully for drainage from around the structure leading into a gully in T3 (3023) that runs into the deep ditch (3015). (See Fig 24,25,plate 24). This is an interesting feature not identified amongst any of the comparable sites.



Plate 24 – Possible drainage gully (5004) See Fig 24 for scale and detail, also Plate 40

Three square post holes (5050), (5062) and (5065) appear to be similar features to the two found in T4 X1 & 2 and with two others recently found in T6 it is a possibility that they may be associated with each other in the same phase. (See Plates 25-26) (5062) is cut by a possible beam slot or post in trench fence/structure (5058) showing it to be one of the earliest features, this is reinforced by the spot date of pottery to the Late Iron Age/ Roman. (See Fig 26, Fig 5 & Plate 17). This seems to coincide with the relative phasing of the other square post holes which are stratigraphically beneath the stony features and possibly associated with the apsidal ditch.



Plate 25 – Square Post Hole (5062) depth = 0.77m Plate 26 – Square post Hole (5065) depth = 1.04m

Other sites with examples of this type of activity are at Crossgates, Sike Spa, West Lilling, Wharram Grange and possibly Beadlam. It is suggested that these sites had earlier probably post built structures pre-dating the stone foundation built structures which overlay them, although there were some problems with determining a definite stratigraphy.

At Crossgates, earlier post built structures lay beneath a cobbled yard surface, and were dated to the Late Iron Age along with an enclosure ditch. As nothing more was excavated beneath the limestone building, no earlier features were identified there, it was assumed that the earlier structure extended beneath the limestone building (Stephens:2000,pp11&12). At Broughton only T4 has been excavated outside the footprint of the building, as seen on the geophysical survey, this appeared to be a yard surface, but no post holes were found beneath it. (Snowden& Kenny:2005)

At Sike Spa the site began as three to five round houses of Late Iron Age – Early Romano-British date, followed by a kiln, curvilinear ditches, pits and intercutting ditches in the 2nd phase, dated to the late 1st and 2nd centuries. Phase 3 of this site was a rectangular stone building. Therefore Sike Spa shows dateable continuity right through to the 4th century. The dates of two of the round houses were 41BC-130 AD and 184 -393 AD, therefore the occupation of these overlaps with the period of occupation of the stone building in the 3rd century (Wood:2000,p2-5). There was some evidence at Beadlam for post built structures which were earlier than the villa building – but as the villa was not excavated past its latest phase this is speculative. Stone packed post holes were found beneath a floor and a possible sleeper beam to the north east of another room (Neal:1996, p13). Likewise at Wharram Grange, one part of a chalk floor had sealed a post hole from an earlier timber structure, but as the excavation consisted of small test pits this also is inconclusive.(Rahtz,Hayfield& Bateman:1986,Sect27.3)

At West Lilling there were some features which showed chronology, for example in Trench 4 a wall foundation sealed a pit which contained charcoal and burnt material, in turn the wall foundation was built into a layer of cobbles which was sealed by demolition material. However, many of the features had no stratigraphic links and could not be assigned to particular phases, and were dated broadly to the 4th century. (Hopkinson:2000,p24, On-Site Archaeology:2003, p30)

In some of these comparable sites it has been possible to suggest that some of the cut features were probably contemporary with the stone built structures rather than pre dating them. At Crossgates this was uncertain due to the limited scope of the excavation, which did not continue below the stone foundations of the building (Stephens:2000,p12). At Sike Spa several post holes were interpreted as being associated with roof supports, internal divisions from either phase or beam slots for internal wooden walls. (Wood:2000,p4) While at West Moor Farm structural slots were identified along similar alignments to a wall foundation and assigned to the same phase , dated by pottery to 1st-2nd century AD (Young:2001,p5).

Some other sites have curvilinear ditches; at Crossgates a curvilinear gully was recorded within the square enclosure which may have been structural, although no further details are given in the report that can be used as a comparison. (MAP:1999, p12). And at Sike Spa phase 2, 1st-2nd century, a curvilinear ditch was observed although this was a much wider, deeper and more substantial ditch than at Broughton, and was thought to be part of an enclosure system(Wood:2000,p3)

The apsidal features at Langton and Malton were the remains of walls which were definitely structural parts of buildings. At Langton this was a small apsidal room approximately 8ft (approx. 2.4 m) wide on the end of a large rectangular building. No definite dating evidence was found although it was in an earlier phase than the Baths and Barn Building so therefore probably the earliest civil occupation probably late 2nd or early 3rd century. (Corder & Kirk:1932, pp57&58).

In Malton one of the structures dating from the 4th century, found to be encroaching on the north east rampart of the vicus was a building with an apsidal end 27ft x 19ft and 2ft thick (2.4m x 5.8m x 0.6m), four courses high, with no floor or evidence for its use. It had been built over an earlier rectangular building and a culvert (Corder:1930,pp27,28&68). Both the apsidal at Malton and Langton appear from the evidence to belong to much more substantial buildings than at Broughton, where the evidence suggests the apsidal feature probably supported a wooden structure, perhaps a post in trench feature

The site at Hutton Hill Farm is a little different from the other comparable sites used in this research in that it is a known pottery production site and for whatever reason did not go on to develop any stone built structures. However the descriptions of the site are very similar in form to the earlier phases at Broughton. Several possible structures were identified some of which were contemporary with the kilns, which were in production between AD285-400. Roman period structures associated with the kilns were found. A rectangular structure with a curved south end wall was recorded, 4.8 m wide and 8m long north-south. The structure comprised a series of linear and curvilinear structural cuts, in plan this structure appeared apsidal and pottery found in the foundation slots was similar to that found in the kilns. The structure was demonstrated stratigraphically to be later than one of the kilns. This was thought to be a beam-slot or post in trench structure. (NAA:1999,p11). The apsidal at Broughton is later than at least one of the kilns and seems to be constructed in the same way as Hutton Hill Farm, although the pottery from the feature at Broughton is earlier than that at Hutton Hill Farm.

The difficulty experienced at Broughton in defining the phases of cut features through stratigraphic relationships appears to be a common problem in many of the comparable sites. At Broughton as mentioned above, our earliest phase is the industrial activity which occurs in the western and central parts of the excavation, in T4 x1 and 2 and also in T6. It is unknown if some of the ditches and post holes which occur over the site were contemporary with these industrial features. There are post holes and slots that can be shown stratigraphically to be later than the kilns. Therefore, the conclusion is that these post built structural features represent at least two phases of occupation relating to either industrial or domestic activity.

The evidence suggests, therefore, that although the industrial phase was the earliest on the site, this may also have included some of the ditches and post holes representing possible wooden structures associated with hearth/kilns. After the kilns went out of use, a subsequent phase of post built structures occurred, cut into a ground surface made up from the previous industrial activity.

10.5 Phase Three - Rubble Spreads and Wall Foundations

The structural features and layers of built up material described above lay beneath rubble spreads and in some parts of the site, under plough soil. Remains of stone wall foundations were also either beneath the rubble or the plough soil but have been described together with the rubble spreads in this broad phase as they are likely to be part of the same structure.

The use of limestone characterises the latest phases on the site with spreads of limestone rubble overlaying ditches, postholes and industrial features. In parts the limestone rubble appears to represent either the demolition or collapse of a building, and in other areas is more compacted in layers as though representing a surface of the foundations of a floor which had been deliberately laid. In Trench 4 this compacted limestone was extremely difficult to excavate and gave the impression of being the hard-core under a yard surface (Snowden &Kenny:2005).

The rubble surface that straddled T4x1 & T4x2 corresponds to an area on the resistivity survey that appears to represent a dividing wall between two rooms. No wall foundation was seen beneath this rubble spread, or any other structural evidence for any room division or floor surface, corresponding to the resistivity.

The rubble spread in these two trenches gave the impression of being a rough surface that had been laid and compacted, but it is also possible that after collapse or demolition the material had been spread and compacted over time by agricultural use of the field. The spread was made up of stones of varying size and shape packed together with no apparent structure. Although within the rubble spread other features were found; for example, context 4069 was within this layer in T4x1, immediately under the top layer of small pieces of limestone rubble. This consisted of a flat topped stone surrounded by smaller flat stones set slanted on end in a hollow, and was interpreted as a possible post pad. This contained pottery dated to 140-200 AD. Other similar features were noted but could not be definitely determined as real features. Some areas of burnt stone were also identified amongst the spread. The rubble spread came to an abrupt stop diagonally across trench T4x1 in a NNW-SSE direction and across T4x2 in an E-W direction. To the eastern side of T4X2 the spread continued into the trench edge, into what is now T6, and to the south of both trenches the spread came to a more gradual end. The phenomenon of the straight edges remains although with the lack of structural evidence for internal divisions between rooms for example, beneath or adjacent, it is perhaps likely to have been a demolition/collapse layer of the external walls, subsequently spread by the plough. The rubble spread also occurred in T5 & 5x1 occupying the area immediately surrounding and over the wall foundations, and was interpreted in the same way. See Plates showing rubble spreads in T4x1, x2 &5 (Plates 15,16 & 27)



Plate 27 – Rubble spreads in T5

Evidence has been found for those parts of the structure seen on the resistivity survey which fall within the area of excavation. In T4X1 it lay beneath the northern end of the rubble spread where the spread gradually became less intensive and in T4x2 it lay outside the main area of the rubble spread. The wall foundation seen running along the northern side of the survey area was identified in both T4x1, (4107 2.4m long 0.90wide 0.10-0.15m deep) T4x2 (4264 3.2m long 0.8m wide) and T6 (6027, 6023, 6034, 6066,) measuring 7.4m x0.8m wide and 0.12m deep, this section was split part way along by a plough furrow approximately 1.2m wide, which would have made the length of wall foundation in this trench a total of 8.6m. The wall foundation then turned to the south and continued into T5 & 5x1 where it joins up with the remains seen in the eastern end of the survey, forming the two corners and the end wall of the structure (5009). Although where these foundations but up against each other, and could possibly belong to different phases of building. In this north east corner of the foundations, an area of packed stones was found in the upper fill of rubble which appeared to be a support for a timber post or similar structure. (6032,6028)

The section of foundation in T5 & 5x1 (5009) measure 6.4mlong, 0.8-1.0m wide and 0.20 deep, in a NW- SE direction, then turned NE-SW for another 3 m, where it ran into the edge of the southern end of the trench towards what is now T6. Another short section which is less clearly seen on the resistivity survey was identified in the southern end of T6 measuring 2.2mx 0.8m wide and 0.8m deep, on the same NE-SW alignment, which then joined another short length of wall which ran northwards from the southern edge of the trench for 2.40m 0.80m wide. No join between the wall foundations in T5 and T6 was discovered during excavation. The area where they may have joined had been disturbed so it is unknown if these walls joined originally. (See Plates 12,13,14,28,29,30,31)



Plate 28 - (6005) Wall foundation in T6

Plate 29 – (6017) Wall foundation in T6



Plate 30 – (6041) Wall foundation in T6



Plate 31 – Wall foundations in T5(also shows rubble filled possible drainage ditch (5004) beyond

In all cases the remains of the wall foundations consisted of limestone rubble, with some larger slabs present in places, and were substantial enough to support at least low stone walls, but probably not designed to bear much more weight than that. These would have provided enough demolition material represented by the rubble spreads found on site. As yet these foundations cannot be demonstrated to have been joined together to form a whole structure and their form can only be projected, as seen on the resistivity survey.

It is interesting that the wall foundations in all cases included a matrix of yellow sand/clay which is similar to that found within the layers of stones making up the rubble spreads, which also contained thin layers of "pea gravel". It was observed in T5 & 5X1 that the layer of clay found on top of the remains of the wall foundations could have formed a base for larger stone slabs to rest sill beams on, or as a base for the sill beams themselves.

Rubble spreads have been found in nine out of fourteen of the comparable sites and have been interpreted as either floor/ yard surfaces, or demolition layers. At Burythorpe, (Stephens: 2006, P11-16 & 30) Beadlam, (Neal: 1996, p13, 34) Sike Spa, (Wood: 2000, p4) and West Moor Farm (Young:2001,p6&8) the deposits were more easily interpreted as the remains of floors within buildings. These were in the form of either stone slab floors such as at Burythorpe, (Stephens: p11-16 &30) and Beadlam (Neal:p37-38&43) or areas described as metalling also found at Beadlam, where an earlier circular building was thought to have existed with a metalled floor surface.(Neal:p13). The evidence at Sike Spa was of cobbling set in clay both within and outside of the building where it was interpreted as a remnant of internal flooring and an external covered passage, (Wood: p4) while at West Moor Farm the small area of cobbled stone surface was interpreted as a contemporary ground surface to the west of a probable construction trench for the building (Young:p6&8). In the area of the vicus at Malton, several buildings were demolished and re-built, sealing demolition rubble beneath the new foundations (Wenham & Heywood:1997,p38). This is not directly comparable to rural sites where the land is subsequently ploughed as at the other sites discussed. Although on one site in Malton in an area encroaching on the north east rampart of the fort was a patch of paving alongside a hearth, this was interpreted as an exterior yard surface. (Corder:1930, p29)

At Crossgates there were several examples. A cobbled surface found outside the limestone building was interpreted as a yard surface; a deposit of angular limestone of uniform size (0.05-0.25m) was thought to be possible internal surfacing within the remains of the building (Stephens:2000,p11-12 &14), whereas deposits described as amorphous spreads of limestone to the east and south of the building were interpreted as the demolition or collapse of the building. (MAP:1999,p12). At Burythorpe deposits representing demolition/collapse of Structure 3 are mentioned, but not described other than to say they were later in date than the use of the structure with associated pottery of the 2nd -4th centuries. (Steohens:2006, p13)

Other comparative sites that describe the rubble layer as demolition or collapse of the building are located at Wharram Grange and Wharram -le-Street.(Rahtz&Hayfield:1986). Both sites underwent particularly limited excavations with a series of small test pits being dug across the sites. Using this very limited evidence it was thought that there had been deliberate demolition and levelling of the site in preparation for post Roman ploughing at Wharram le Street (Rahtz & Hayfield:1986, Section 13). At Wharram Grange it was found that the sub-soil sealed rubble and mortar demolition material from the Roman stone buildings.(Rahtz&Hayfield:1986,p27.1) The small size of the test pits makes it difficult to compare the nature of the evidence with Broughton .

At Malton and West Lilling rubble spreads were interpreted as a form of foundation for the buildings. For example at the excavations within the vicus at Malton evidence was found in several places for the earlier stone buildings of the 1st half of the 2nd century, being founded on a bed of

broken limestone. Where floors were found they consisted of hard white mortar spread over the limestone bed. (Mitchelson:1963,p212&223). This appears to be a different method of construction to the comparative rural sites studied.

At West Lilling a cobbled surface was found which could be interpreted as part of the structure of the building foundations or a possible floor surface, this was bounded by two wall foundations, and had an earlier wall foundation incorporated into it. In places these deposits were overlain by a collapse/demolition layer .Within the same excavated area another cobbled surface containing pottery dated from AD350-400 lay over earlier cut features in a similar way to that found at Broughton. (On-Site Archaeolgy:2003, p5-6)

At Langton no floor surfaces were found in the earliest phase but in a very late phase, probably late 4th century, rough paving consisting of broken stone thrown down and trampled in, lay over most of the interior. The excavators called this farmyard paving and this was found frequently over parts **of** the site. In some places it was flush with and other places over the wall foundations. (Corder&Kirk:1932,p18). This is the most accurate comparison of the limestone rubble spread at Broughton, except that at Broughton the spreads lay over the remains of the wall foundations and didn't abut them.

Amotherby was excavated in 1868, therefore without any methods of modern recording. From the brief article in the Gentleman's magazine, large stone pavements some joined together and in other places separated, were found with some slabs paved edgewise and an earlier paving below a secondary deposit. (Smith:1868, p83) It is difficult to make comparisons to Broughton with so little evidence, but the nature of the deposits described is similar.

10.6 Discussion and Conclusions regarding the Rubble Spreads.

Therefore looking at the evidence from Broughton, in comparison with other sites, we can suggest possible interpretations for the rubble spreads. If the spreads represented floor surfaces then one would expect to see either slabs or something resembling a level laid surface. In places there were slabs paved edgewise, as at Amotherby, but no slab floor surfaces as were found at Burythorpe or Beadlam. In some places in the rubble spreads at Broughton there were features resembling post pads or sockets within the stony layer but none of these were definitely interpreted as such. None of these spreads abut the side of wall foundations, as at Langton; rather they overlaid wall foundations, but not all the wall foundations were overlaid with rubble. It is also worth noting that none of the spreads have wall foundations incorporated within them as at West Lilling

In the above comparative sites, where the rubble spreads were interpreted as floor deposits, it has been shown in the stratigraphy that either demolition deposits lie directly over the floor deposits, or the remains of wall foundations are within or on top of the floor deposits as would be expected. It is hard to interpret the spreads at Broughton as floor deposits when neither of these things has occurred. The rubble spreads overlie the remains of wall foundations, and only plough soil overlies the rubble spreads. Therefore, after looking at the evidence it can be said that these spreads do not represent the floor of the building represented by the wall foundations at Broughton.

There are some similarities in the nature of the deposits as compared above with the Langton 'Farm yard paving', the Amotherby 'paving', the West Lilling cobble deposit which overlies the 3rd-4th century cut features and parts of Crossgates, where the spreads have been interpreted as demolition or collapse of the building.

If the spreads were the result of demolition there would likely to be a mixture of building material within them, such as daub or plaster, tiles, roof tiles or dressed stone, such as at West Lilling. (On-Site Archaeology:2003, p6). The compositions of the spreads at Broughton were pieces of limestone in irregular sizes and shapes, with the occasional pieces of pottery. It is possible that the building never had wall plaster, roof or other tiles, or they have been robbed out. These deposits at Broughton, therefore, could be the debris left from demolition once anything useful had been robbed away.

The spreads could represent material that has collapsed from the walls if the building was constructed of low walls supporting a timber superstructure, this would account for the poor quality of stone on the site. This has been the suggested interpretation in several sites, such as Crossgates, West Moor Farm, and Burythorpe.(Stephens:2000,p14; Young:2001, p5; Stephens:2006,p16). It has been suggested that the walls at Broughton may have been constructed of mud and stones (McDonnell pers com) as well as timber. Therefore both of these methods of construction would not result in a large quantity of debris, or to contain building stone, tiles etc.

Both scenarios involving either robbed out or demolition/collapse of poorly made low walls would probably leave enough rubble to have been spread around and compacted by generations of ploughing.

Another explanation could be that after the building had been levelled, areas of rough paving were laid down some time later, to serve some unknown purpose, such as at Langton. (Corder&Kirk:1932, p18). This would explain the possible post pads found in the rubble layer. However, if this interpretation is accepted then this must have also taken place within the Roman period due to the frequency of Roman period pottery and practically nothing later within the stony layers.

In conclusion, therefore it would seem likely that the rubble spreads represent either demolition/ collapse of a building built of low stone walls supporting timber frames or cob walls, or that the building was robbed of all its useful building materials to use elsewhere leaving only poorer quality stone material within the archaeological remains.

As previously mentioned the spreads of limestone at Broughton in T4 appear to be a deliberate surface of compacted layers of small pieces of limestone, held together with a light brown sandy/clay material. This area lies outside the footprint of the building and can be seen on the geophysical survey extending beyond the trench at the southern side. This could be interpreted as a yard surface or perhaps the hard core which would have been constructed under a more evenly laid yard surface, since robbed away. (Snowden&Kenny:2005).

10.7 Discussion and Conclusions regarding the wall foundations.

In examining the remains of wall foundations found in the comparative sites, some similarities can be seen in the form of the walls and the probable methods of construction, amongst the farmstead sites but notable differences in the villa sites. The remains of the foundations on the villa sites are of more neatly structured footings, rather than being constructed of rubble or cobbles, such as are evidenced at the sites of lower status.

Taking the probable farmstead sites first, at Sike Spa, the north and south walls at Crossgates and Structures 3 & 4 at Burythorpe; the remains of the wall foundations were found to be very shallow. (Wood:2000,p3-4; Stephens:2000 p14; Stephens:2006,p16). At Crossgates and Structure 1 at Burythorpe they were interpreted as robber trenches, filled with mixed limestone rubble, gravel, cobbles and clay. At both these sites a layer of clay was found on top of the rubble foundations and

was interpreted as a levelling layer as a base for either stone walls or sill beam construction, (Stephens:2000, p14; MAP:1999, p12; Stephens:2006, p11 &16) whereas at Sike Spa there were cobble filled foundations comprising two layers separated by a layer of clay. (Wood:2000, p4). The dimensions and form of construction of the foundations at these three sites is comparable to Broughton. At Crossgates wall remains measured 0.75m wide and a robber trench 0.7m wide and 0.2m deep (Stephens: 2000,p13-14); at Burythorpe Structure 3 the walls were 0.75m wide at the most with some narrower; while at Sike Spa they were 1.1m-1.2m wide and 0.8m deep down to 0.4m-0.55m deep in some parts These dimensions were thought by the excavators of Sike Spa to be substantial enough to support more than one storey. (Wood:2000,p4) . The lengths of the walls on these three sites wasn't recorded in the reports but the overall size of the buildings were as follows:-Crossgates – 17.5m x 9.5m (Stephens: 2000,p13), Burythorpe – in the two buildings where wall foundations were identified and approximate due to plough damage was 12m x 6m and 3m x 9m (Stephens:2006,pp16&22) and Sike Spa – 8m x 13m. (Wood:2000,p3) (NB metric conversion 2ft5in=0.75m 3ft 7in-1.1m).

As recorded earlier the Brougton wall foundations were mostly around 0.80m wide and between 0.08m-0.15m deep. The depth and the surviving lengths of the foundations are dependent on the rate of survival and on the amount of damage by plough or by robbing out, but the width is surprisingly similar on these sites with Broughton, except for Sike Spa where they were wider and probably able to support two stories. The dimensions of the overall structure at Broughton so far as they can be determined are 14.2 x 6.4, although the walls do not join in the south east corner and the rest of the structure is outside the excavated area, these dimensions appear to be similar in size to the above sites. However, measuring from the resistivity survey the structure may be as large as up to 30mx7.5m, although probably slightly smaller due to the spread of the high resistance areas. The crop mark at Settrington measures 28m x 6m and is of the same rectangular form as Broughton, seemingly divided into four rooms, See Figure 11 (Ramm:1978, p77).

At Spaunton the wall remains had a course of stone slabs over a foundation constructed of large limestone boulders packed with smaller pieces, no dressed stone or evidence of the use of mortar was found. The width of these foundations was quite substantial at 3ft wide, (approximately 1m) but no overall plan of the building was identified. (Whitaker:1967, pp14&16). One course of faced blocks of stone remained on the western wall foundations at Crossgates, the interpretation of the excavators of Crossgates was that originally the walls probably had no more than two or three courses, as a support for a timber superstructure. (Stephens:2000,p14)

Secondly looking at the evidence from the villa sites, the earliest phase of the main dwelling house at Langton was a building whose wall foundations survived, later to be built over by a high status building, with a hypocaust. This pre-villa phase was built on narrower foundations than those found at Broughton and Sike Spa, and were on average 27 inches wide (0.68m) consisting of courses of stones set on edge. The lower masonry course survived in one part of the building in the form of flat stones laid onto the footings, measuring less than 2ft wide (0.60m). The dimensions of this building were 52ft x 10ft 6in (Corder&Kirk:1932,p18) ,which converted to metres, equals approximately 16m x6m, comparable to other non-villa sites.

At West Lilling several wall remains were found to be of one or two courses of stones angled at 45 degrees to form a herring bone pattern, of dry stone construction. These had silty clay as packing and occasional tiles in the foundation. This building contained high status building materials within the demolition layer and is thought to be a probable villa (On-Site Archaeology:2003, p6). Similarly at Wharram le Street there was no evidence found for the use of mortar in the wall construction, although on the basis of finds this site is also thought to be of high status.(Rahtz, Hayfield &

Bateman:1986, Sect13) No comparison exists for Beadlam as the wall foundations were not excavated. (Neal:1996, p1).

Neither site type appeared to make use of mortar in their wall foundations. However, the use of clay as a setting for the foundations and in some cases as a base for either stone walls or sill beam construction appears to be a feature of several non-villa sites, including Broughton. Of the villa sites there is only West Lilling where enough evidence from the construction of the wall foundations has been possible; therefore it is inconclusive if clay was used in the same way on villa sites.

10.8 Roof and Other Tile

There were no pieces of dressed stone found at Broughton, but "substantial amount of roof tile, imbrex and tegula" were recovered from the ditch in T3. (Snowden&Kenny:2005,p18). A number of tiles have been found on site. One was contained within the wall foundation found in T6, (Plate 30) others have been found within contexts surrounding the wall foundations or within the fills of the post holes (6109, 6144/6112) These post hole can be shown to be stratigraphically earlier than the limestone foundations, from which phase the tiles would have been more likely to have come, but also both the posthole and slot (6144/6112) are later than the industrial phase as they cut kiln (6147).

This is likely to mean that the roof and other tiles have come from a higher status site nearby and near enough that rubbish from it could have been thrown into the ditch in T3, or possibly reused as packing for post holes, post pads or in the foundations of the structure being excavated here. The three that were found within the fills of the post holes could indicate that the building from which they originally came dates to the early Roman period. This phase at Broughton is between the industrial phase and the stone built phase so could be as early as 1st-2nd century, quite early for a high status building. The other problem here is that there weren't enough roof tiles found in the ditch, to be able to demonstrate that this building was roofed with tiles, and the lack of them on site may suggest that the structure was thatched.

Crossgates, Burythorpe and Sike Spa have also been found to have a small amount of roof and other tiles around the site and in contexts, but not in large enough amounts to suggest a high status building, this has also been interpreted as evidence of another high status site nearby to these sites. (MAP:1999, p24; Stephens:2006, p22&32; Wood:2000, p37). At West Lilling the wall foundations were cut into a deposit containing high status building materials suggesting an earlier high status building in the close vicinity. (On-Site Archaeology:2003,p6) It is also suggested at Spaunton and Crossgates that the building must have been thatched. (Whitaker:1967, p14; MAP:1999, p24; Stephens:2000,p14) These are also the conclusions that have been made for Broughton for the same reasons.

10.9 Continuity

The stone structural phase also included a perfectly circular hearth like structure in the southern half of T4x2 (4266). This was found directly under the limestone rubble spread, and measured 1.5m diameter and 0.03-0.05m deep. The hearth was made from pieces of limestone, together with yellow silt, deliberately laid to fit together as a circular flat surface, many of the limestone pieces had been subjected to heat. The hearth also contained baked reddened clay, and had a crushed limestone foundation, approximately 0.08m deep. (4324) This feature represented the final phase of a series of earlier kilns in the same location, these have been described earlier as those containing hammer scale and extending towards the west to join T4x1. The limestone hearth slightly overlay the edge of these features.

The hearth and kiln structure at Broughton is an important stratigraphic feature which is described in the stony phase of Broughton but is linked stratigraphically to both later and earlier features on site. It is similar, if less substantial, to the example found in the vicus at Malton because they both represent the continuity of industrial activity involving metalworking.

As is reasonable to assume, sites of this nature with multi phased features and a depth of relict ground surface layers can be long lived sites. The evidence at Broughton suggests a long lived site or with multiple phases of activity prior to the stone wall foundations being constructed. This can also be seen in the pottery assemblage that spans the $1^{st}-4^{th}$ century.

Most of the comparable sites have been dated by pottery as has Broughton, however, Broughton can be dated earlier still by the radiocarbon date from three kilns as described here. At West Lilling the pottery was of from the 2nd to 4th century with some late/sub roman period, (Hopkinson:2000, pp30&31),Sike Spa has been dated very similarly to between 41BC and 4th century AD, (Wood:2000,pp2-5,) Burythorpe to the Late Iron Age to 4thcentury AD (Stephens:2006,p1) and Hutton Hill Farm was also occupied from the Iron Age through to the end of the Roman period, although the nature of the deposits differs on the Hutton Hill Farm site and the comparison is mainly with the kilns.

On some of the comparable sites the excavation was too limited to determine the length of occupation for instance at Amotherby, Wharram Le Street and Wharram Grange. At Beadlam it can be tentatively dated between the late 2nd and 4th century AD (Neal:1996), and at Langton the late 2nd – 4th century AD was also suggested.(Corder&Kirk:1932,pp58&62). Occupation at Crossgates is shorter but still spans the transition period between the Iron Age and Roman periods, from the late Iron age to the 2nd century (MAP:1999, p24), West Moor Farm is short lived to between the early 2nd –early 3rd century, (Young:2001,pp4-5). The evidence from Spaunton was for the 4th century only on pottery evidence (Whitaker:1967,p16&18).

This demonstrates that the sites compared here were part of the contemporary landscape that Broughton existed within, and perhaps traded with or in some way came into contact with throughout the Roman period.

10.10 Summary

Our interpretations have been made at the time of excavation as can be seen in the phasing reports for each trench. It is interesting to note the interpretations made at these similar sites compared to Broughton, and it seems that these add weight to our own interpretations. The similarities to other non-villa sites is evident, and includes Broughton in a group of Romano-British sites in north east Yorkshire that have developed into rectangular stone built structures of Roman style, from earlier timber built structures.

Broughton appears not to be unusual in that the timber construction phase is extremely difficult to interpret. This is a problem with all the other sites compared here, and that the function of the kilns is often elusive.

These comparisons concentrate on the form and nature of the deposits and features. A full comparison of the sites including the pottery and finds has not been attempted here, but is identified as a valid line of research in the future.

Melanie Partlett Summer 2013

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