

REPORT NO: 2237 TOWNSHIP Seacroft

Booked into post book (✓) (No. of vols: 1)

Booked into report catalogue (✓)

Officer confirmed acceptance 22/5/12 (initials/date)

02 APR 2012

FRN 11,737

KILLINGBECK HOSPITAL, LEEDS

MARCH 2012

FIELDWORK REPORT



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Report Details

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COUNTY: *West Yorkshire*

NATIONAL GRID REFERENCE: *SE 344 348*

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FIELDWORK TEAM: *Onsite Archaeology (2005)
Mike Griffiths and Associates (2010)*

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Summary

A programme of building recording and archaeological fieldwork was carried out on the site of the former Killingbeck Hospital, Leeds between 2004 and 2010. The works comprised a watching brief, an archaeological excavation (Area A) and two areas of the site where a strip map and sample approach was implemented (Area B and Area C). The majority of the fieldwork was completed in 2005. The final part of Area C was excavated in 2010.

The excavation of Area A recorded the structural remains of Killingbeck Hall. This included several wall foundations and a large cellar belonging to the 18th century building and a number of later walls and chambers related to a 19th century extension. No evidence for any earlier buildings was recorded in this part of the site.

The investigation of Area B recorded at least two phases of Romano-British enclosure and a ditch/pit alignment also of a Romano-British date. Area B was located on the southern side of the Killingbeck plateau in the former gardens of the tuberculosis wing where the archaeological remains had escaped much of the truncation observed elsewhere on the site. A series of pits and small post holes were also excavated in Area B. Although these did not contain dating material they were also considered to be a component of the Romano-British phase.

In the southern part of Area C the work uncovered a small ring ditch which was believed to be the remains of an Early Bronze Age barrow. This was cut by a later boundary ditch and a grave shaped pit containing a small Roman jar. These appeared to have been deliberately sited using the ring ditch as a reference point in the landscape. No human remains were found during the excavation of the ring ditch or grave pit.

In the northern part of Area C the investigation recorded two large pits. While these did not contain any dating material their form and backfill suggested that they were prehistoric in origin and possibly storage features.

Other remains recorded in Area C included three large vertical sided pits/shafts that were cut into the bedrock. These all appeared to be post medieval in date and pre-dated the hospital.

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1 Introduction

This document serves as a final report for the archaeological fieldwork undertaken at the site of the former Killingbeck Hospital, Leeds (NGR SE 344 348). The works commenced in 2003 when after a period of disuse the land was sold into private hands and planning permission was granted for the redevelopment of the site for residential housing. As a condition of that permission a programme of historic building recording, archaeological excavation and monitoring has taken place. The results of the archaeological fieldwork are presented here.

Initially the main heritage focus of the development was the former tuberculosis hospital at Killingbeck. This steel and concrete structure, one of only two buildings still standing on the site in 2003, was purpose built in 1936 and at the time of the planning application was Grade II listed. Due to its dilapidated state it was delisted in November 2004 and subsequently demolished. A basic record of the structure was made prior to demolition. This and a summary of its historical development and significance are the subject of a separate report (Jones 2005).

A Desk based Assessment for the Killingbeck Hospital site was produced in 2003 (Timms and Jones 2003). It concluded that, on the basis of the lack of known sites in the surrounding area, the site was generally of low archaeological potential. The work identified a number of areas (zones) within the development area that had escaped disturbance from the construction of the hospital. These were earmarked for further archaeological investigation.

The subsequent fieldwork comprised a combination of approaches. The area of Killingbeck Hall was subject to archaeological excavation in advance of drainage works. The areas to the south of the former tuberculosis wing and to the north of the mortuary were subject to a strip map and record approach and the drainage excavations across the site were monitored as part of a watching brief.

The fieldwork recorded archaeological deposits from the prehistoric, Roman and post medieval periods on the site. The bulk of the investigation was carried out in 2005 and a preliminary report summarising the results was produced in 2006. Due to a number of factors the final phase of fieldwork, however, was not concluded until December 2011.

This document draws together the results of the 2005 and 2011 work in addition to presenting the results of further analysis recommended by specialists in the 2006 and report.

1.1 Site Location

The Killingbeck Hospital site (NGR SE 344 348) is situated on the northern side of the York Road (A64) on the eastern approach to Leeds, 5km east of the city centre (Figure 1). The site comprises an irregularly-shaped parcel of land which measures approximately 450m east-west by 410m north-south, covering an area of 11.35 hectares. The site is situated on a plateau which slopes gradually from north (77m AOD) to south (63m AOD), with land falling away steeply to the north, west and south beyond the site boundary. Access is gained from the York

Road via a tree-lined lane. To the south, the site has been truncated by modern industrial development, but it retains its extensive parkland to the north and west as part of the Wyke Beck Valley Park.

The underlying geology comprises sandstones, mudstones and shales of the Lower Coal Measure Series.

1.2 Historical Background

Prior to this project there had be no archaeological work on the site or in the surrounding area.

A Desk Based Assessment was carried out in 2003 by Field Archaeology Specialists the results of which are discussed below. As part of this final report the Historic Environment Record at WYAS was consulted again to see whether there had been any other discoveries in the Killingbeck area since 2003 relevant to this report. There were none.

A summary of the results are presented here.

1.2.1 Prehistoric

Prior to the current investigation there was little evidence for prehistoric activity in the immediate vicinity of Killingbeck. Prehistoric defensive sites are thought to be located further afield at Gipton, Seacroft and Temple Newsam, with Killingbeck situated in the centre of these three (Thornton 2002, 4; Burt and Grady 1994, 11). Excavations at Stile Hill in Colton, 3km to the southeast of Killingbeck, were carried out by WYAS in 1991. They recorded a substantial Iron Age hilltop enclosure and associated field system. Chance finds of two single polished stone axes were also made at Roundhay and Seacroft to the south of the site.

Further afield extensive settlement and ritual remains have been excavated along the A1 M1 link road (Roberts et al eds. 2001) and the A1 at Ferrybridge (Roberts eds. 2005).

The A1/M1 link roads were between 4km and 8km to the southeast of the current development area. The results of the excavations allude to a rich and varied human presence in the region in the Iron Age and Romano British periods with slighter evidence for earlier occupation and burial. Aerial photographs plotted as part of this exercise recorded an extensive pattern of field boundaries, enclosures and track ways in the area of Colton, Swillington Common, Garforth and Micklefield

On the current evidence, however, Killingbeck and Seacroft appear to be peripheral to this. This may be a result however in a bias in the evidence caused by the lack of site investigation and urban character of the area.

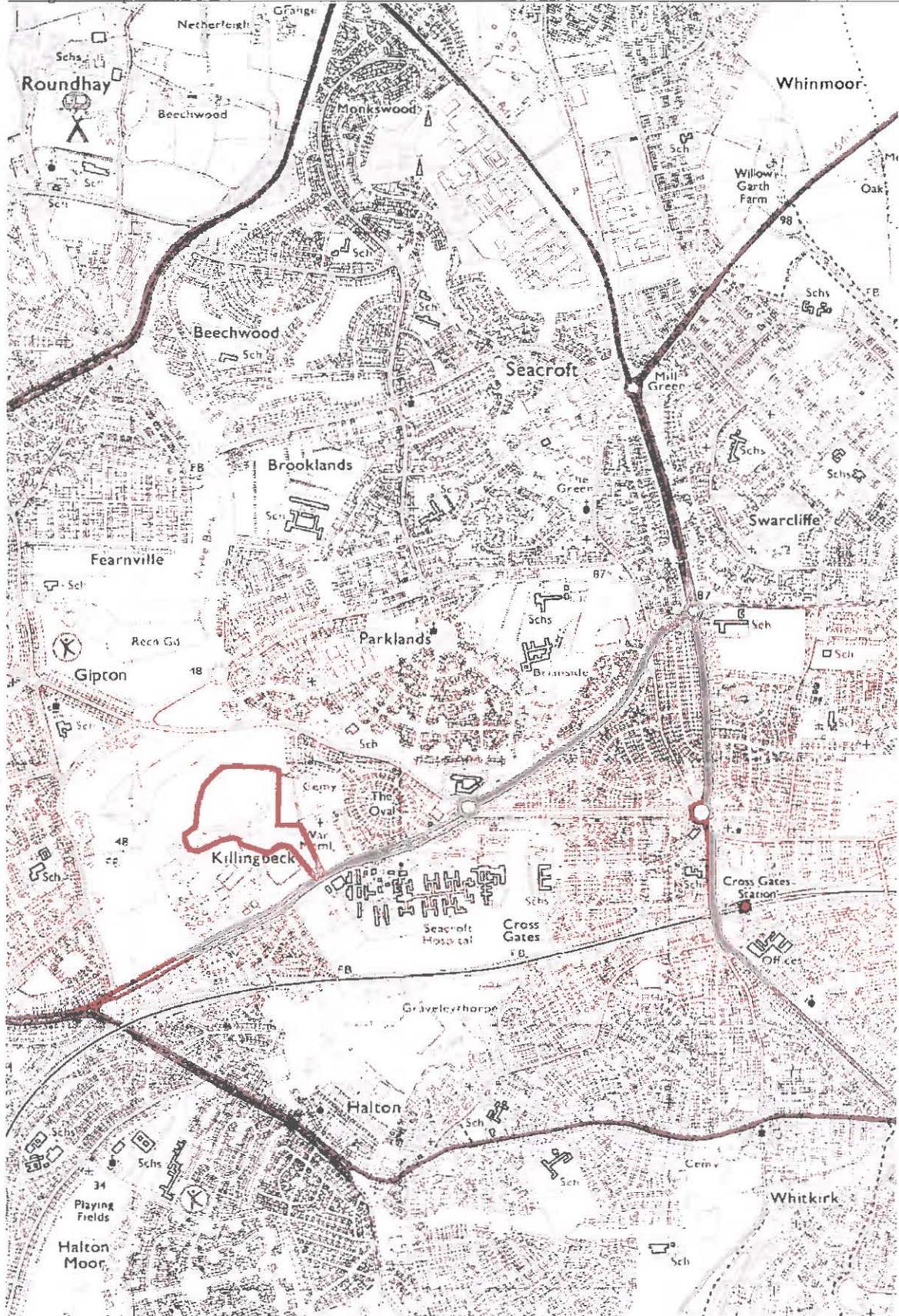


Figure 1 Site Location

1.2.2 Roman

Before this project the only archaeology of a Roman date suggested at Killingbeck was that of a possible Roman Road. Although never actually seen, the road is predicted to run to the east of the site through what is now Killingbeck cemetery. The road was identified in the 19th century and its alignment is based on a 14th century street name. Road 712 was believed to have run from the Roman settlement of Leodis (Leeds) across the Aire eastwards towards Calcaria (Tadcaster). No physical evidence of the road has, however, ever been found in the area.

As noted above extensive remains of rural settlement and enclosure have been recorded further to the southeast at Stile Hill and Swillington Common on the A1/M1 link road. The aerial photographic plots allude to an extensive system of field boundaries, enclosure and rural settlement sites in this period between 3 and 8 km to the east of the site (Roberts op cit).

1.2.3 Early Medieval

There is no evidence for early medieval activity on the site or in the immediate area.

1.2.4 Medieval

Killingbeck is not mentioned in the Domesday but the nearby hamlets of Gipton and Colton are recorded as 'waste', being worth only two shillings, although the former did have a church (Thornton 2002, 11).

Seacroft, in contrast, did have some value as the property of the Norman lord Ilbert. This significance was further endorsed in 1294, when Henry de Laci was granted leave by the King to hold a weekly market in Seacroft and neighbouring Roundhay (Markhill 1891, 215, 217). The de Laci family were important landowners in the area, with links to the Cistercian abbey at Kirkstall. Under Henry II, in the late 12th century, the extensive deer park at Roundhay was given to the abbey by Robert de Laci. The park is known to have extended to the northern boundary of Killingbeck in the 16th century, but may have extended further south when the gift was made. A direct link between the land and the abbey was secured in 1499, when Robert Killingbeck was made abbot.

The first documentary reference to Killingbeck comes from the 1300/1 feodary, a list of feudal tenures, which details the Knights Hospitallers as holding half a bovate in Killingbeck and the Knights Templars as holding three, thus continuing the ecclesiastical dominance of the area (Faull et al 1981, 495).

Evidence for buildings at Killingbeck does not appear until 1341, when a survey was carried out at Seacroft. This described the Seacroft manor as having 'a hall, a chamber, two granges, one building for sheep... [and also] fifty-one acres of land of ancient tenure, in the hands of tenant farmers...' (Markhill 1891, 226). One of these granges was located at Killingbeck Farm. This is located to the west of the present site. Reference to an earlier building being present on the site was made during the construction of Killingbeck Hall in the mid-18th

century (Waterson et al 1998). Unfortunately, the precise form and location of the building was not recorded.

It would appear that from the medieval period onwards Killingbeck comprised a grange, hall or estate as opposed to an extensive rural settlement. There is no evidence in either the documentary sources or on the ground to suggest that a larger hamlet or village was ever present in the area.

1.2.5 Post Medieval Period

During the post-medieval period, the site appears to have been predominantly farmland or gardens associated with estate of Killingbeck Hall. Killingbeck Hall was constructed in the mid-18th century by William Brooke, although it was sold shortly afterwards to the Hanson family of Osmondthorpe (Waterson et al 1998, 27). The 1852 OS map (Figure 2) shows the Hall after it had been extended in 1846 to the northwest. The work was undertaken by W B Perkin on behalf of the owner, Edward Ward (Linstrum 1978, 383). Only ten years before it was demolished in 1977, Pevsner described the building as ‘a minor seven bay house of two and a half storeys... in the centre are attached Tuscan columns and two lower bay wings’ (Pevsner 1967, 337).

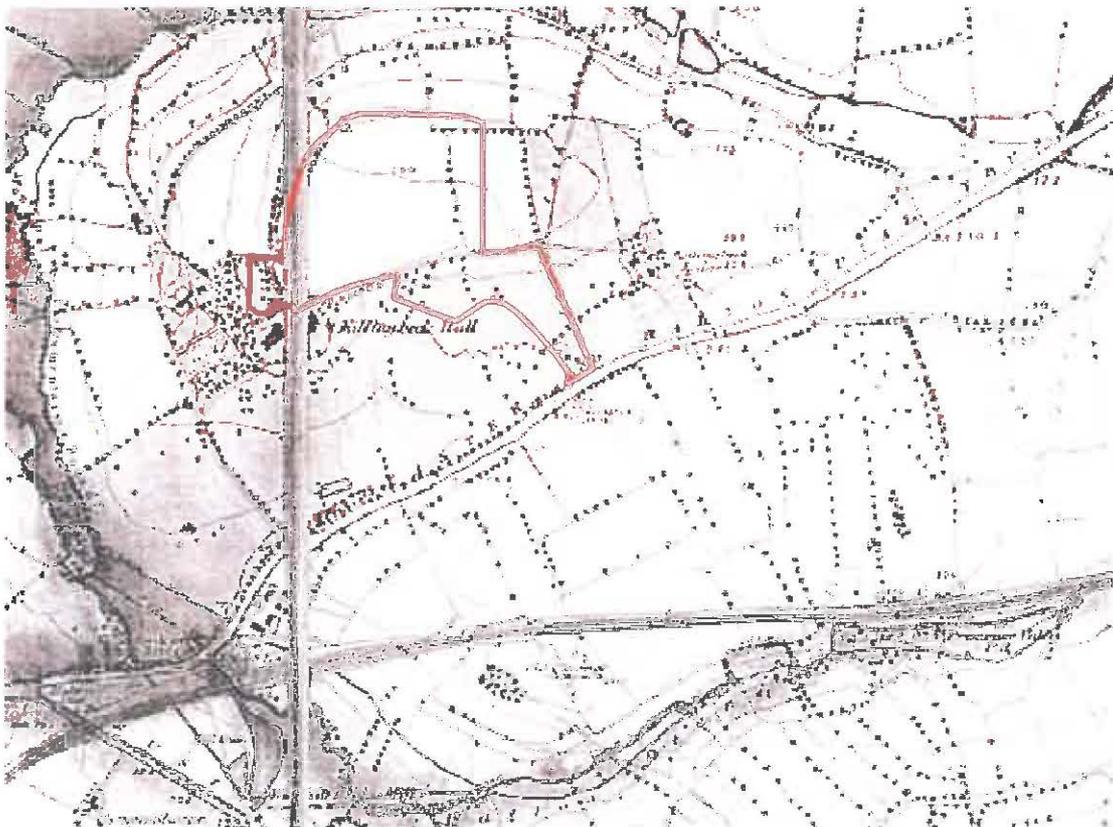


Figure 2 1st Edition OS (1852)

The 1852 map also shows the house situated in extensive grounds, with formal gardens to the west and further wooded parklands to the south. This landscaping is clearly defined on the 1893 OS map (Figure 3), which also shows the development of outbuildings to the north of the Hall, and the erection of greenhouses and summerhouses to the west.

Despite this late flourish, the Hall was sold by Lady Maynell-Ingram to the Leeds Corporation in 1898, at a cost of £21,000 (Waterson et al 1998, 27). At this time, the area to the north and northeast of Killingbeck Hall was depicted as a series of fields located on the top and slopes of the hill. Presumably agricultural in nature, this land may have been associated with Killingbeck Farm, depicted on the 1852 OS map, immediately to the northeast of Killingbeck Hall.

The extent of the Killingbeck estate itself is depicted in the 1852 map. From the pattern of field boundaries and general topography it would appear that the Killingbeck estate would originally have covered a larger area defined by the Tadcaster and Halton Dial Trust turnpike (now the A64 York Road) to the south, and Wyke Beck to the north and west.

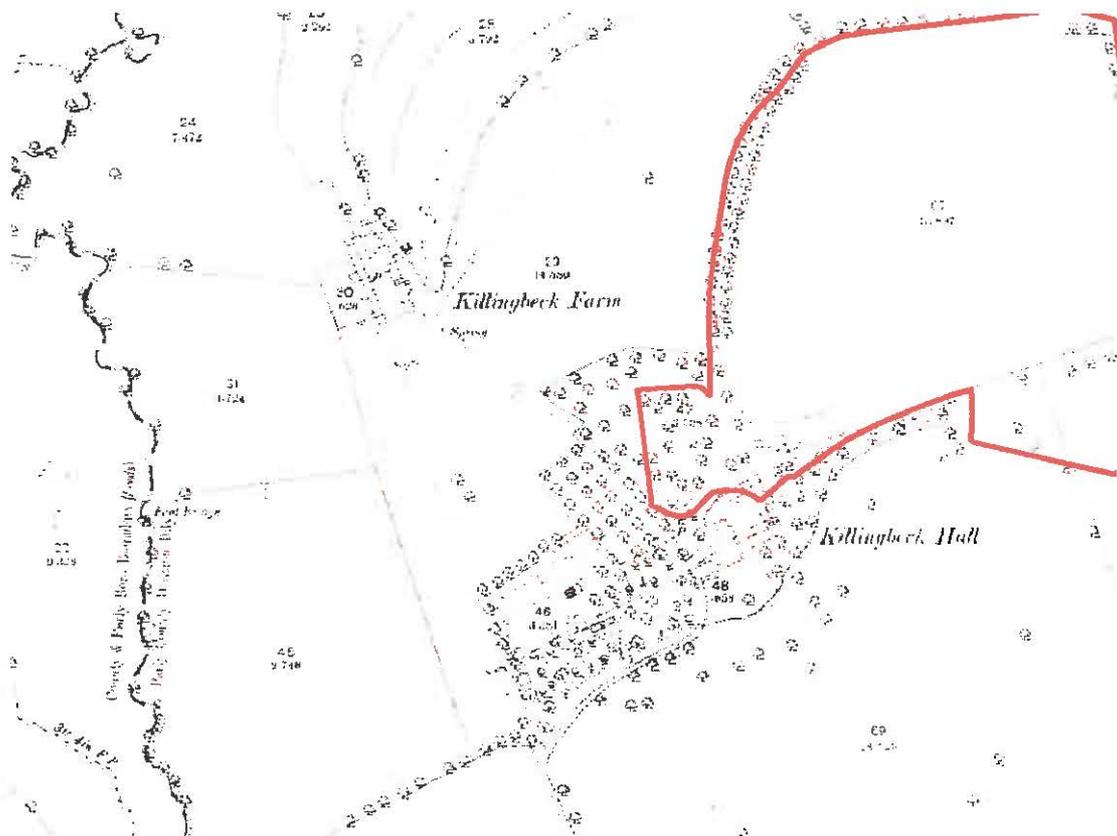


Figure 3 2nd Edition OS (1893)

Other evidence for post-medieval activity in the Killingbeck area can be found in the cartographic evidence. An iron foundry was apparently situated to the northeast of the site, within an area still referred to as Foundry Lane. By the later 18th century, however, this had been superseded by a windmill (Jeffreys, 1775).

By 1797, the windmill had gone, but the 1840 tithes still list the field to the northeast of the site as 'Mill Hill' (Wakefield SMR). The area of land immediately to the south of the present site is detailed as gardens associated with Killingbeck Hall. This was reinforced in 1835 when the Leeds to Selby railway opened, 'passing through the waving woods of Temple Newsam and the pleasing plantations of Killingbeck' (quoted in Broadhead 1990, 72).

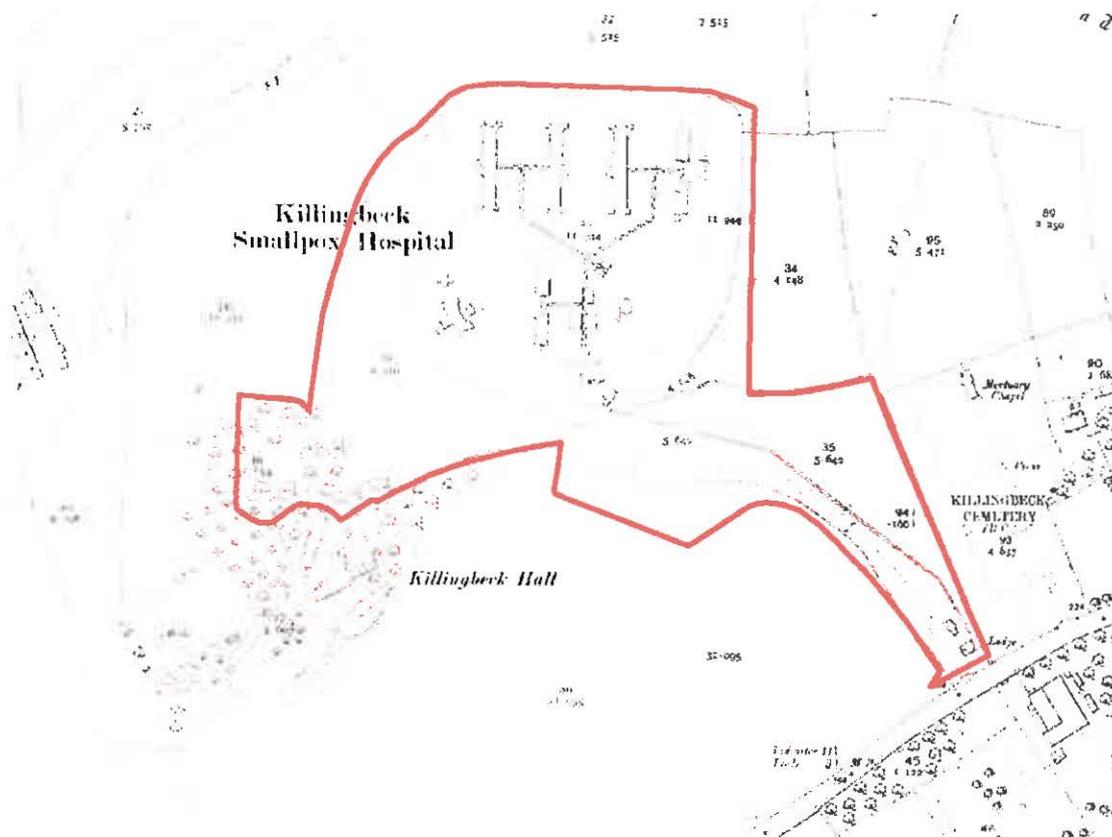


Figure 4 3rd Edition OS (1908)

In the 20th century the Killingbeck Hall became the location for Killingbeck Hospital. The original layout of the smallpox hospital is clearly shown in the 1908 OS (Figure 4). It comprised a series of pavilions and wards constructed within a loop road that was accessed by a single lane running from York Road. Heating and power were provided via a conduit from Seacroft Hospital. A mortuary was located on the western side of the main loop beyond which was parkland. Accommodation blocks for nursing staff were also built around Killingbeck Hall itself.

The tuberculosis wing was opened in 1936 to the south of the main hospital building to the design of the Leeds City Council Engineer, J. Ackfield. The building was given grade II listed status in 1997.

The development of the site and its relevance to the listed building are summarised in the building report (Jones 2005).

2 The Development Proposal and Archaeological Approach

2.1 Initial Assessment

With the exception of the tuberculosis wing and one other structure, the Killingbeck hospital complex had been demolished prior to any archaeological involvement. At the time of the initial survey the northern part of the site was characterised by large areas of building rubble while the western and eastern parts were relatively clear.

The site was initially subdivided into seven separate zones on the basis of observed levels of disturbance, current character and known history (Figure 5).

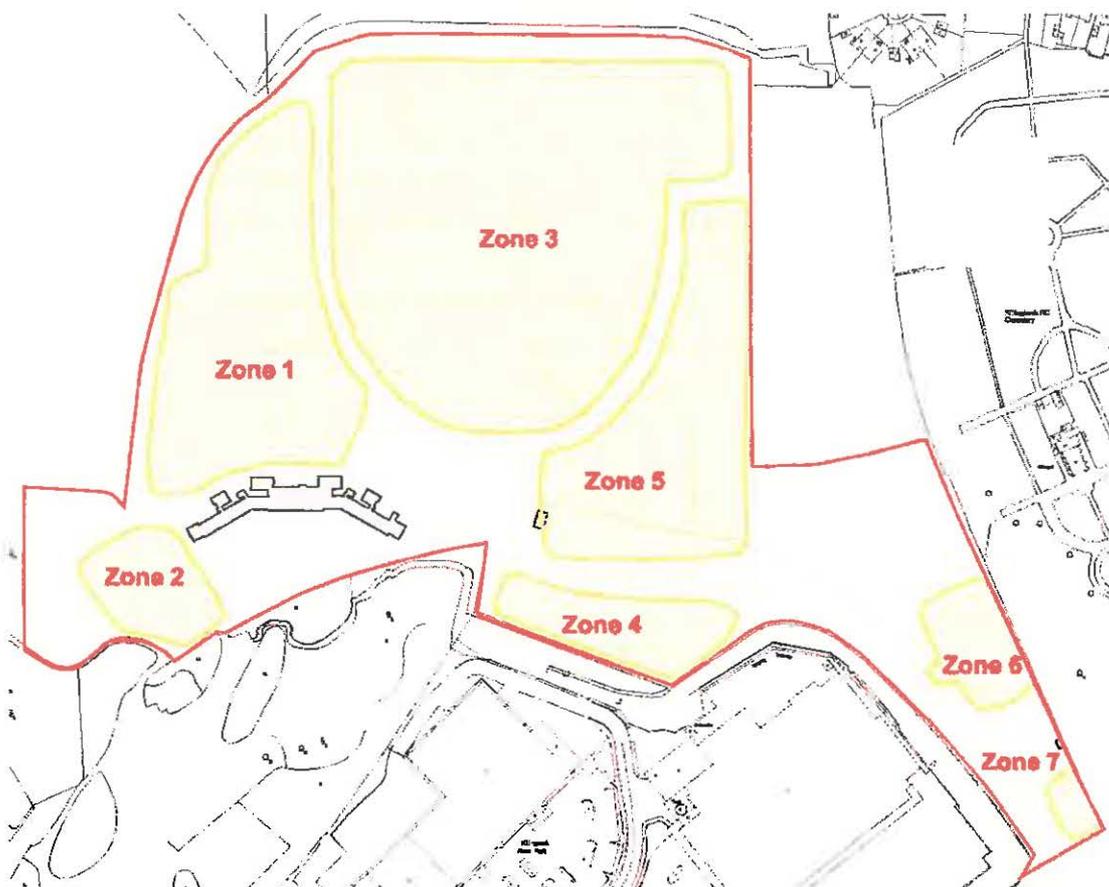


Figure 5 Killingbeck Hospital Zones

Of the seven zones two were characterised by large quantities of made ground (Zones 2 and 4) while a further four (Zones 3, 5, 6 and 7) had all been affected to a greater or lesser degree by the construction the hospital. Zones 2 and 3 were also subject to contamination. Only Zone 1 was undisturbed and had the greatest potential to contain *in situ* archaeology.

2.2 *Development Proposal*

The Killingbeck site comprised a mixed development of houses and apartments arranged around the existing road network. In some areas new properties were constructed in short cul-de-sacs that ran off the loop road.

The main impacts from the proposal were identified as originating from drainage, services and foundations for the new buildings. Following meetings with WYAS a mitigation strategy was designed and agreed which comprised a multi level approach.

For the purpose of the mitigation the site works were split into three separate areas (Figure 6).

2.2.1 *Area A*

Area A comprised the location of what was Killingbeck Hall. This area had the potential to contain not only the remains of the 18th century building but also any earlier structures and deposits relating to the grange. Of particular interest was the building that was demolished when the original hall was built.

The development proposed to insert a new sewer southwards through Area A exiting the site at Killingbeck Drive.

Due to this impact, the line of the sewer was excavated in advance of groundworks over an area of 70m by 2m. The remaining route to the south was monitored as part of the watching brief.

2.2.2 *Area B*

Area B was located in the former gardens of the tuberculosis hospital on the southern side of the demolished building. The gardens were believed to have escaped the truncation and disturbance seen elsewhere on the site and were considered to be a southern extension of Zone 1. Area B had the potential to contain *in situ* archaeological deposits should they be present.

The development proposed to construct a number of new houses and roadways across Area B. As a result an area of 80m by 35m was a subject to a strip map and sample methodology in advance of construction.

2.2.3 *Area C*

Area C was located along the western section of the site in Zone 1 in with what was formerly a field and garden to the north of the mortuary at Killingbeck. As with Area B, Area C had escaped the disturbance associated with the rest of the hospital and had the potential to contain *in situ* archaeological deposits should they be present.

The development proposed to construct a series of properties, roads and drains across Area C. As a result, the strip map and sample approach was taken to record and characterise any

archaeological features or deposits that would be affected by the development. In total an area of 130m by 75m was subject to archaeological investigation in Area C.

2.2.4 Archaeological Watching Brief

An archaeological watching brief was maintained across other areas of the development site. These mainly comprised the new drainage along the existing road lines which sought to locate and record evidence for the Roman Road which was believed to be near by.

The topsoil stripping of the contractor's compound in Zone 5 (80m by 60m) and an area to the north were also monitored at the beginning of the project under watching brief conditions.

The area central to the site (Zone 3) was also subject to intermittent monitoring where possible as part of the archaeological approach. The presence of asbestos within the demolition rubble proved to be a constraint and large areas of the site had been disturbed by the construction of the hospital.

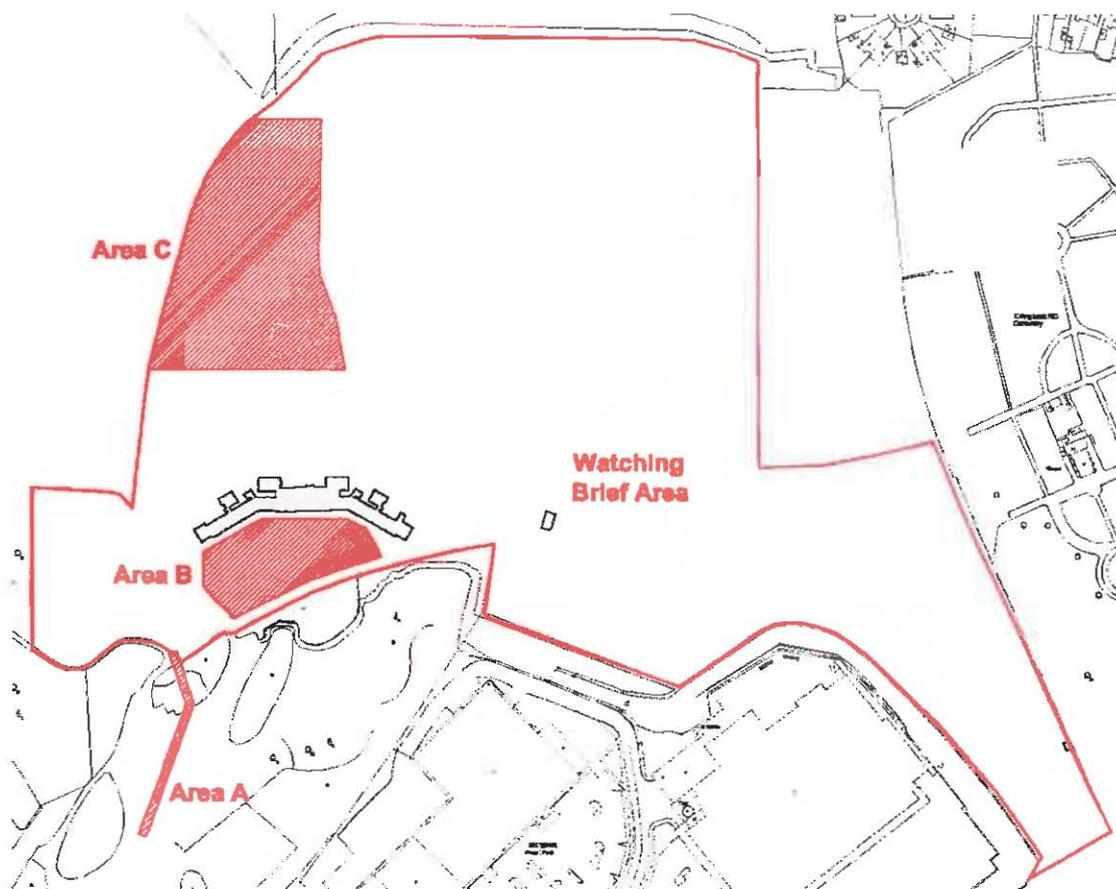


Figure 6 Killingbeck Hospital mitigation areas A to C (WYAAS)

Each element of the fieldwork was subject to a separate specification issued by West Yorkshire Archaeological Advisory Service (WYAAS). The specifications are included in Appendices 5 to 7.

2.2.5 *Timescales*

The bulk of the archaeological investigation at Killingbeck was completed by the end of 2005. The northern half of Area C, however, was located under a large bund of soil which had been stockpiled for use in gardens. Due to the phasing of the development this part of the site was not accessible until October 2010. The strip map and sample investigation for Area C was completed in December 2010.

The watching brief was also concluded in 2005.

3 Results

The investigation of Areas A, B and C succeeded in recording archaeological features that could be securely dated to the Roman and post medieval periods. A number of other, undated features were also recorded during the excavation. Where possible these have been phased by stratigraphic relationships, physical associations or similarity with dated features on the basis of form or composition.

The results of the investigation are presented by period below.

3.1 Prehistoric

No archaeological features on the site could be securely dated to any prehistoric period by cultural material alone. A single ring ditch and two pits were recorded in Area C that are considered to be of a pre-Roman date.

3.1.1 The Ring Ditch

The ring ditch was excavated in the southern section of Area C. It comprised an annular ditch 8.7m in diameter which proved to be between 1.0 and 1.2m wide with a u-shaped profile, and up to 0.4m deep (Figure 9 and 10). The southern edge of the feature had been truncated by a later east –west aligned boundary ditch [1000] of Roman or possibly Iron Age origin and the western edge by a probable grave dated by pottery to the 2nd century AD [1011].

The ditch was excavated and recorded in five segments (Plate 1). Its earliest backfill comprised a compact deposit of orange brown silty clay with occasional sandstone fragments (1033).



Plate 1 Ring ditch [1009] looking northeast

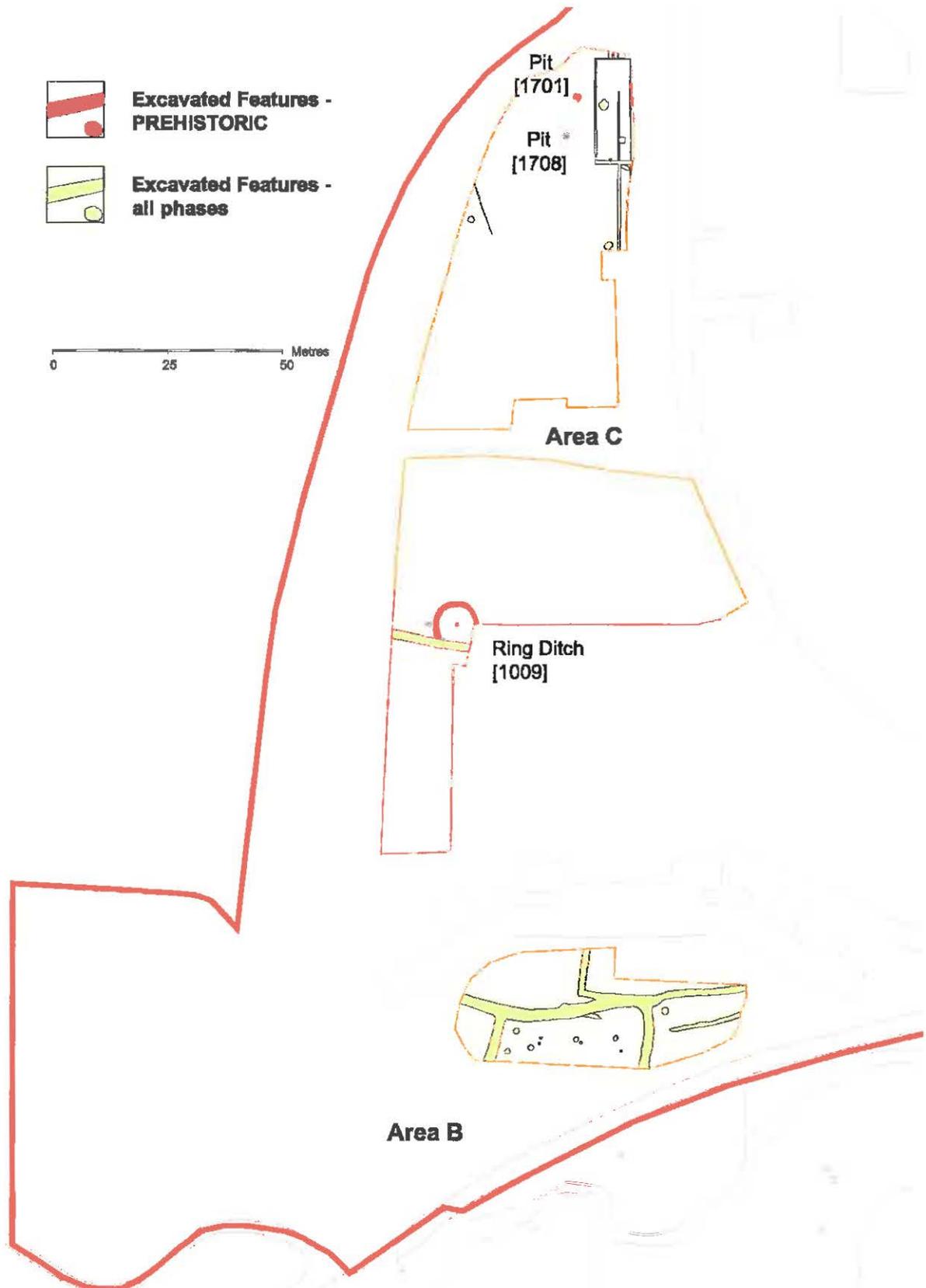


Figure 7 Prehistoric Features

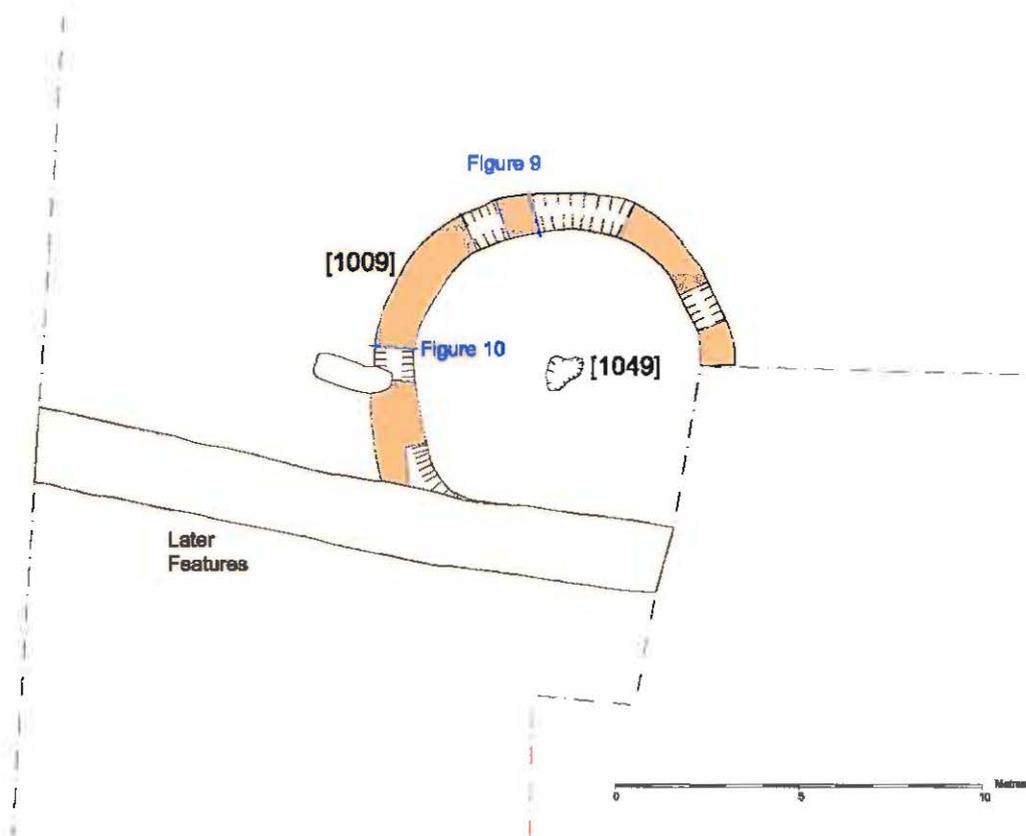


Figure 8 Possible Bronze Age ring ditch [1009] and feature [1049]

scale 1:200

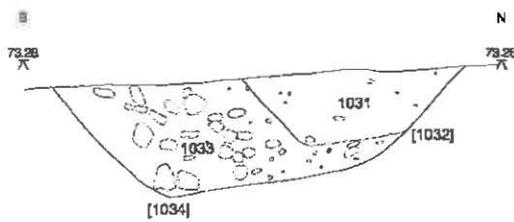


Figure 9 E. facing section of [1009] - ([1034]) scale 1:20

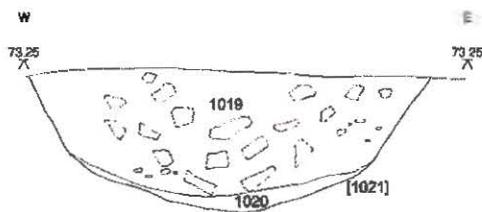


Figure 10 S. facing section of [1009] - ([1021]) scale 1:20

A possible recut [1032] was identified in two of the five excavated segments. This proved to be 0.25m deep with a regular u-shaped profile and had been excavated to redefine the ring ditch after it was almost fully backfilled (Plates 2 and 3).



Plate 2 E. facing section of [1009] - ([1034])



Plate 3 S. facing section of [1009] - ([1021])

Environmental samples taken from the backfill (1028) were largely inconclusive and did not provide sufficient material to recover a secure AMS date (Appendix 3).

The form of the feature and nature of the ditches suggest that ring ditch is likely to be the truncated remains of a small round barrow occupying a prominent location on the top of the plateau. Such features were a common form of burial in the early Bronze Age (2500BC to 1500BC) and were often located on the edge of territorial boundaries. This being said no evidence for a contemporary burial or cremation was identified during the excavation. Instead only a single irregular feature [1049] was recorded in its centre.

[1049] comprised an irregular shallow scoop 1.2m long, 0.75m wide and 0.2m deep. Although this has been interpreted as a probable tree bowl its location central to the ring ditch may be indicative of the long lived nature of the barrow within the landscape. Similar shaped pits have been identified elsewhere as truncated cremation pits (Roberts et al.2005) although no material was found within [1049] to support this interpretation.

After its construction the ring ditch was cut by two later features; a ditch and possible grave (which are discussed in more detail below). Its reuse as a reference point in the landscape suggests that the ring ditch and barrow were still visible features in the late Iron Age/ Roman period and focus for later activity.

3.1.2 Pits

Two pits were identified and recorded 105m to the north of the ring ditch during the 2010 investigation of Area C (Figure 7). Although neither contained any dating material by virtue of their character and backfills they are considered to be pre-historic in date.

3.1.2.1 Pit [1708]

The smaller and southern most feature comprised a sub-oval pit 1.4m by 1.1m cut into the natural subsoil. Upon excavation [1708] proved to be 0.65m deep with steeply sloping sides and a wide concave base. In its disuse the pit was backfilled with two distinctive deposits (1709) and (1710); the earlier of which comprised a deposit of mid yellowish brown clay sand

and was largely sterile. The latest backfill was characterised by a series of large rounded cobbles within its matrix and was very similar to (1702) in pit [1700] to the north. An environmental sample of (1709) included trace remains of hammer scale and cereal grain but was insufficient to provide material suitable for a secure AMS date (Appendix 3).

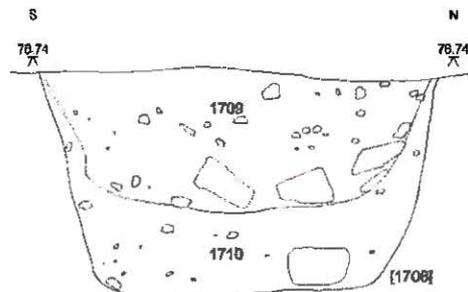
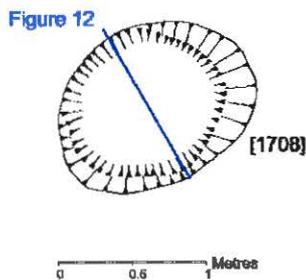


Figure 11 Pit [1708] (scale 1:50)

Figure 12 E Facing section of Pit [1708] (scale 1:20)



Plate 4 E facing section of pit [1708]

3.1.2.2 Pit 1700

The second pit [1700] was circular in plan and 1.4m in diameter (Figure 13). Unlike [1708], it had vertical sides and was cut into the bedrock to a depth of 1.1m. The pit bottomed onto a solid sheet of limestone and in places the lower edges were undercut. This seemed to be the result of collapse rather than by deliberate design, as evidenced by redeposited subsoil in the base of the feature (1707).

In places the bottom of [1700] was covered by a deposit of “dirty” compact silty clay and gravel (1706). This appeared to be the possible remains of tread.

[1700] was filled with a series of silty clay deposits ((1705) to (1702)) with varying amounts of stone and gravel inclusions. All the fills were devoid of finds and contained little in the way of charcoal or other inclusions. The upper fill (1702) was characterised by the high number of large rounded cobbles (0.4m+) and fragments of angular sandstone that were concentrated in the middle of the deposit. These appeared to have been dumped into the feature possibly in an initial attempt to backfill it. As with (1709) the sandstone cobbles were all stained red.

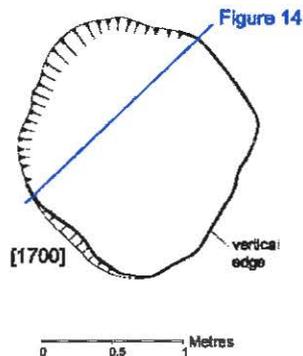


Figure 13 Pit [1700] (scale 1:50)

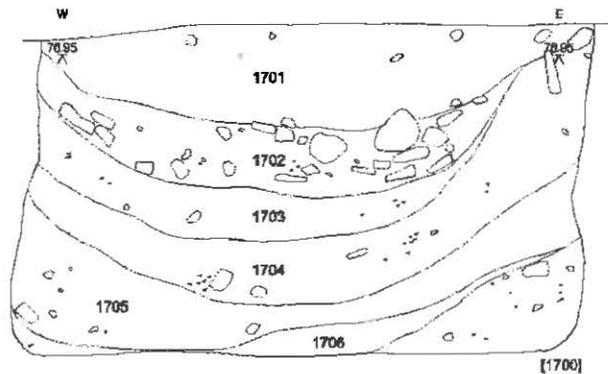


Figure 14 SE facing section of pit [1700] (scale 1:20)

Nothing within the pit alluded to its specific function or purpose. Environmental samples recovered taken from (1703) again proved to be inconclusive (Appendix 3) and insufficient to provide material for a secure radio carbon date. It is likely that [1700] was some form of storage feature.



Plate 5 SE facing section of pit [1700]

The final backfill of [1700] comprised a 0.3m thick deposit of greyish brown silty clay (1701).

3.2 Roman

The majority of dated features recorded in the investigation are of a Roman date and relate to a series of ditches and pit features located in Area B. The pottery suggests there were at least two phases of occupation on the site during the period (Appendix 2).

A number of pits and other features were excavated in Area B which did not contain any dating material. Their form, character and location indicate that they are, in all probability, related to one of the main phases of Roman occupation. Where they cannot be assigned to a specific phase they are discussed separately in the text below.

The presence of other features alludes to the possibility of a late Iron Age element to the initial enclosure. A suggested phasing is summarised below;

- Phase 1a - Late Iron Age/early Roman boundary
- Phase 1b - Late 1st/early 2nd century occupation characterised by a ditched enclosure and possible burial.
- Phase 2 - Late 2nd to late 3rd century occupation characterised by a reorganisation of the enclosure ditches and a possible pit alignment

3.2.1 Phase 1a- Late Iron Age/Roman

3.2.1.1 Boundary Ditch

The initial phase of Iron Age/Roman activity on the Killingbeck plateau comprises a NW-SE aligned boundary across the southern part of Area C (Figure 15). This ditch [1007] was cut across the southern side of the barrow ring ditch [1009] suggesting that this was used as a reference point in the landscape possibly reinforcing an existing boundary.

A comparison of the sections shows that to the west of the barrow, after a period of silting (1017), the ditch [1018] (Plate 6) was deliberately backfilled by pushing deposits of silty clay (1016) and redeposited natural sandstone (1015) into it from the north. The feature then survived in a much shallower form before being fully backfilled (1012) at a later date. The section clearly shows that the feature originally had a bank on its northern side which was slighted at the end of its use (Figure 17).

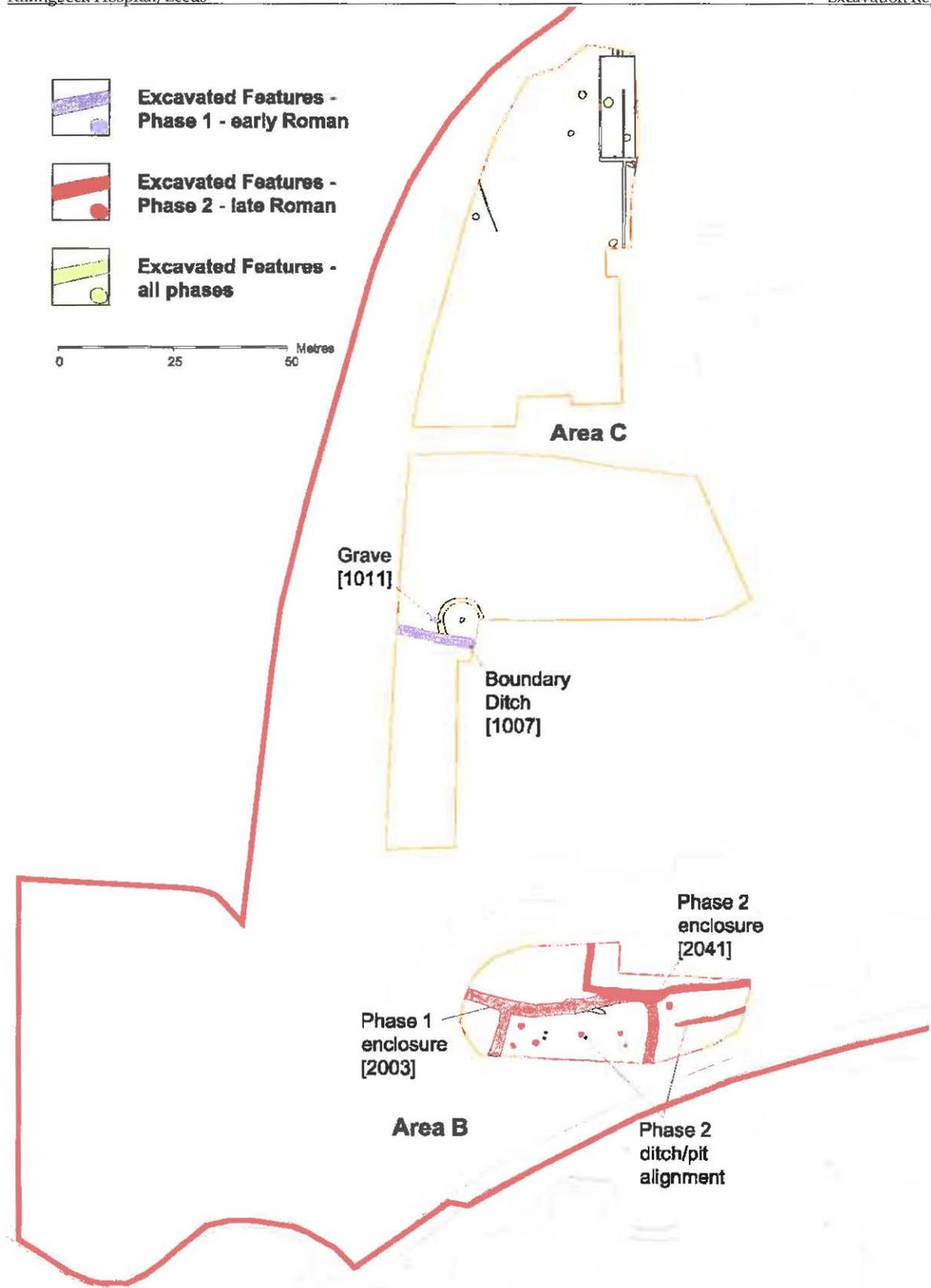


Figure 15 Roman Features

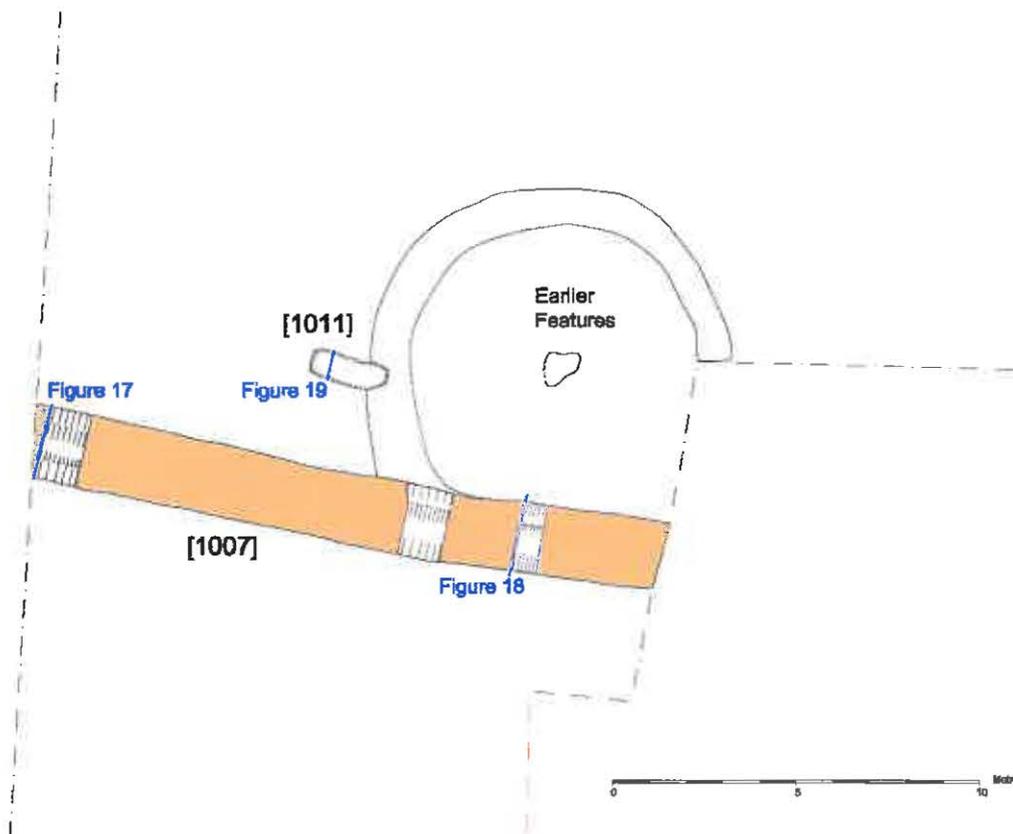


Figure 16 Area C Late Iron Age/Early Roman boundary ditch [1007] and grave [1011]

scale 1:200



Plate 6 E facing section of ditch segment [1018]

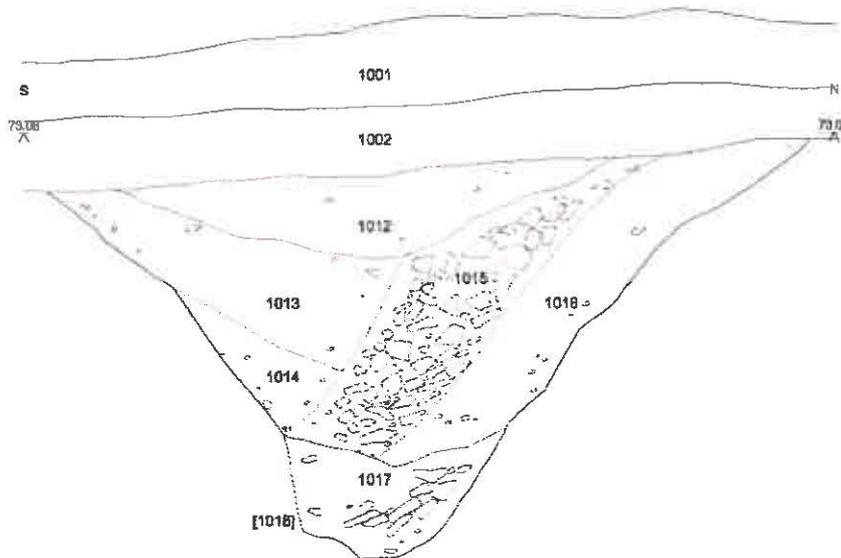


Figure 17 E facing section of ditch [1007] - (segment [1018])

(scale 1:20)

A different sequence of deposits was recorded further to the east where the ditch was cut through the ring ditch of the barrow (Figure 18). Here there was no evidence for a separate bank in section which could indicate that the barrow mound was itself incorporated into the bank of the later boundary.

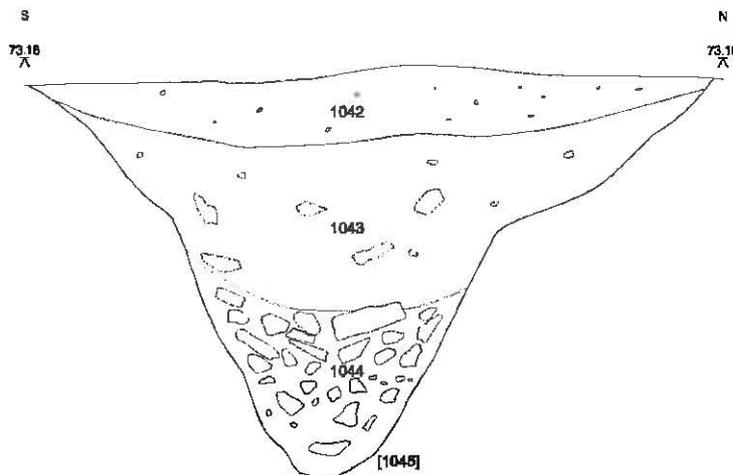


Figure 18 E facing section of ditch [1007] - (segment [1045])

(scale 1:20)

As with other features on the site environmental samples taken from the ditch's backfill (1017) proved inconclusive and failed to provide any meaningful information on environmental conditions or material suitable for a secure AMS date (Appendix 3).

Whilst this ditch is clearly in use during the Roman period it is entirely possible that its origins are earlier and it may represent a later prehistoric or Iron Age boundary.

3.2.2 Phase 1b Early Roman

3.2.2.1 Area C 2nd Century Grave

A sub-rectangular pit [1011] was identified 2.4m to the northeast of [1007] cutting through the western side of the ring ditch [1009] (Plate 7). This feature measured 2.1m by 0.75m and was aligned parallel to the main boundary. Upon excavation it proved to be a 0.25m deep with vertical sides and a flat base (Figure 19) and was backfilled with a single deposit of sandy silt with rare occasional sandstone inclusions (1010). Although no skeletal remains were found in the feature it is considered that [1011] is most likely a grave.



[1009] looking west

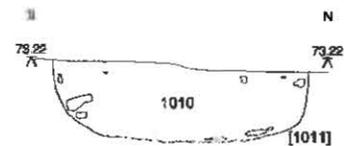


Figure 19 E facing section of [1011] (scale 1:20)

Plate 7 Grave [1011] and ring ditch

The lack of bone is not surprising in this context. No bone artefacts - animal or otherwise, were found anywhere on the site during the investigation. The lack of survival appears to be the result of the soil chemistry on the site.

A small burnished Grey ware jar was recovered from (1010). This was probably deposited as a grave good and securely dates the feature to the beginning of the 2nd century AD (*circa* 120AD) (Appendix 3, Figure 1)

The location of the grave in relation to the earlier barrow is worthy of note. The distance of the grave from the edge of the main ditch also supports the notion that there was a bank between the two.

3.2.2.2 Area B Enclosure

The earliest Roman activity in Area B comprised a small enclosure formed at the western end of a large boundary ditch (Figure 20). The boundary ditch was 75m to the south of [1007] and parallel on the same NE-SW alignment. It was recorded running across Area B for a distance of 40m before turning south and continuing beyond the area of investigation.

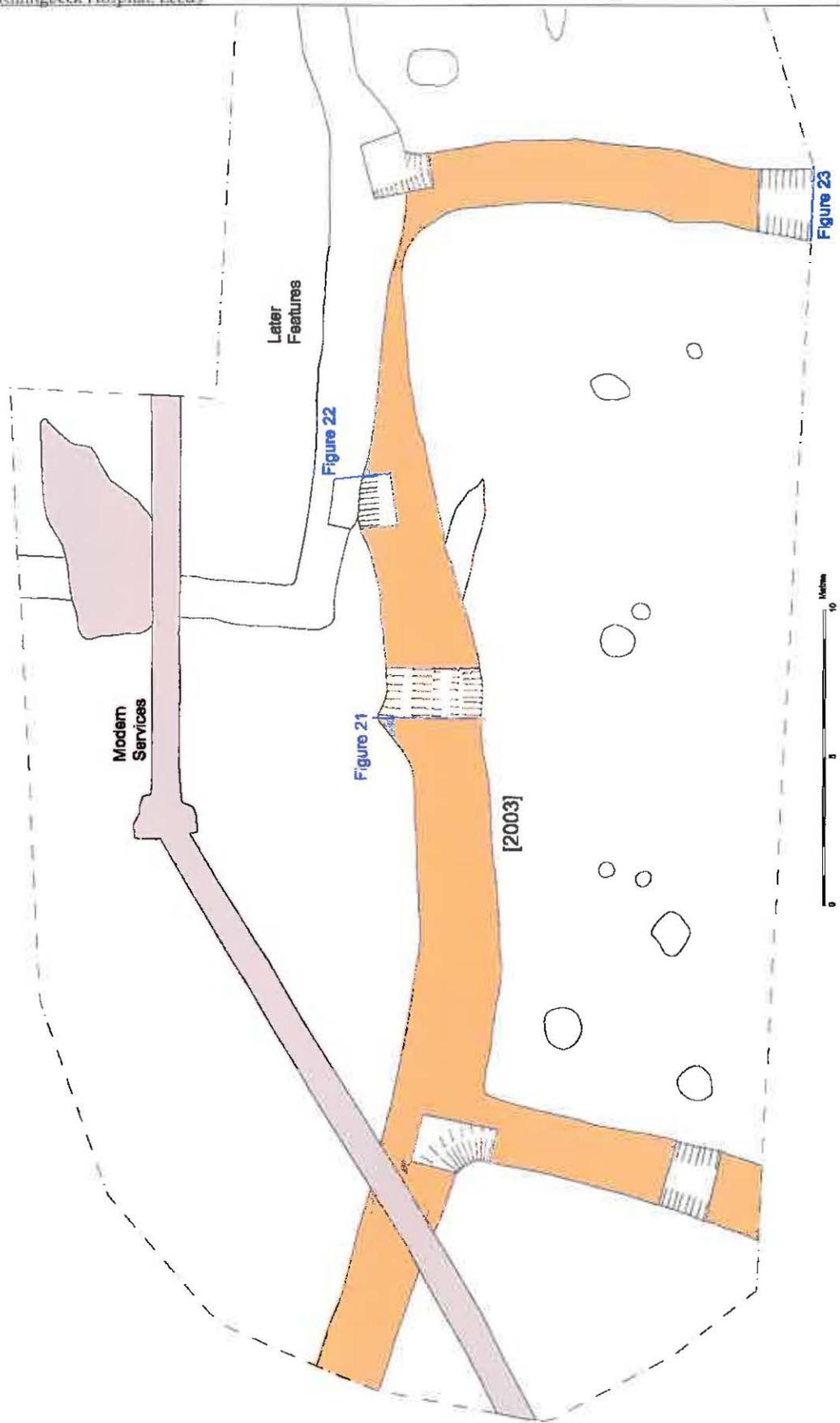


Figure 20 Area B Phase 1b Enclosure [2003]

(scale 1:200)

The enclosure was 34m wide and formed within the dog leg by a second ditch running south from the main boundary. The investigation showed that this was the original arrangement and the enclosure was not a later subdivision of a larger system.

The boundary ditch [2003] was excavated in six separate sections. It proved to be between 3.1m and 2.5m wide and up to 1.3m deep. Along its northern section it had an irregular V-shaped profile where it had been hewn into the natural bedrock (Figures 21 and 22) (Plate 8).

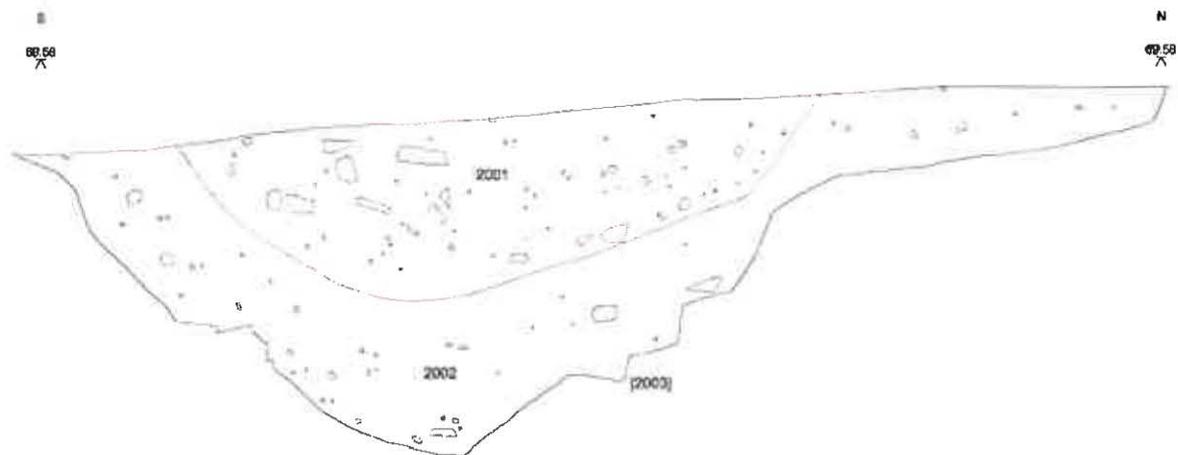


Figure 21 E Facing section of ditch [2003]

(scale 1:20)

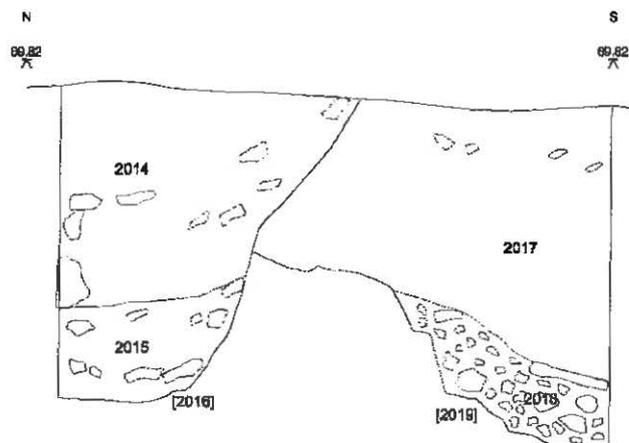


Figure 22 W facing section showing relationship between Phase 1 enclosure [2019] and Phase 2 enclosure [2016]

Along its eastern section the ditch had a good V shaped profile with a narrow flat base which was 0.4m wide (Figure 23). No evidence for a bank was recorded in any of the sections.

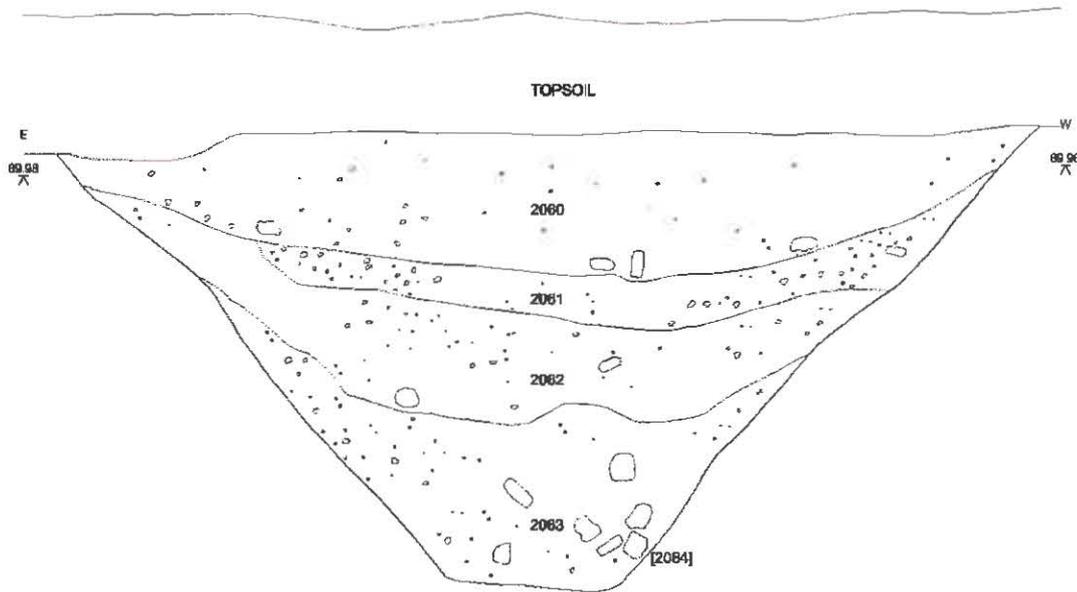


Figure 23 N facing section of Phase 1 enclosure ditch [2003] - (segment [2064])

(scale 1:20)

The ditch was backfilled with a sequence of sterile silty clay deposits containing varying amounts of sandstone fragment inclusions. As with elsewhere on the site no animal bone was observed in any of the deposits and the backfill was devoid of visible organic remains or charcoal.

The profile of deposits recorded in [2064] suggest the ditch was recut at least once in its lifetime (see interface (2000) and (2001)) indicative of the limited management of the boundary during its use (Plate 9).

Only six sherds of pottery were recovered from the six excavated sections of the Phase 1b ditch [2003]. The material which included small fragments of Ebor ware and Black Burnished suggest that the enclosure ditch was backfilled at some point in the 2nd Century AD (Appendix 3).



Plate 8 E facing section of Ditch [2003]



Plate 9 N facing section of ditch segment [2064]

A number of pits were recorded within the limits of the enclosure. Due to their spatial relationship with another ditch feature it is considered that formed part of a pit alignment associated with Phase 2. As a result they are discussed separately below.

The only other possible feature from this period comprised a short length of SW-NE aligned gully recorded in Area A [5012] (Figure 36). This feature proved to be 0.45m wide and 0.25m deep and terminated within the excavation area. A single small abraded sherd of Roman White ware (1st to 3rd century) was recovered from its backfill (1511) but this could be residual.

Whilst an isolated feature within Trench A, [5012] if it is Roman would be indicative of the extent of Romano British features across the southern slope of the plateau.

3.2.3 Phase 2 mid to late Roman period

Phase 2 was allocated to a pair of ditches and pit group that were recorded within Area B. The exact arrangement of features suggests that they potentially formed a trackway or avenue (Figure 24).

3.2.3.1 Ditch [2041]

The phase 1 ditches appear to have been completely backfilled before a second enclosure was excavated on the site. Within Area B the southwest corner of a larger ditch system was recorded cutting through the northeast corner of ditch [2003]. The later ditch entered the site from the north before turning 90 degrees to the east. Much of the interior of this system lay beyond the edge of excavation.

The ditch [2041] was excavated in four sections where the relationship between it and [2003] was also tested. The feature comprised a well defined U-shaped cut up to 1.6m wide and up to 0.7m deep (Figure 25). It was backfilled with a series of silty clay deposits with varying amounts of sandstone inclusions. The earliest backfill was characteristically stony in all of the excavated segments. In the easternmost section (Figure 25) it included a number of large angular stone fragments which appeared to have been tipped/slumped into the feature from the south (2040), suggesting the possibility that there may have been an external bank at this point.

The recorded sections also suggest that the feature had a complex history. While the profile in the eastern segments suggest that the ditch was recut on one occasion (Figure 25) the results from the excavation of the southwest corner indicate it may have been formed by the joining two separate ditches. (Figure 26 and Figure 27) (Plate 10). The north south aligned element of the Phase 2 enclosure [2035] may, therefore, have been a later extension.

Most of the pottery from Area B came from the excavation of a single section across the central segment of the ditch [2045]. Sixty five sherds were recovered from two backfills (2043) and (2042). The pottery was predominantly of locally produced Dales-type shell tempered ware (fifty two sherds). The date of this material indicated that the feature was backfilled in the second half of the 3rd century AD.

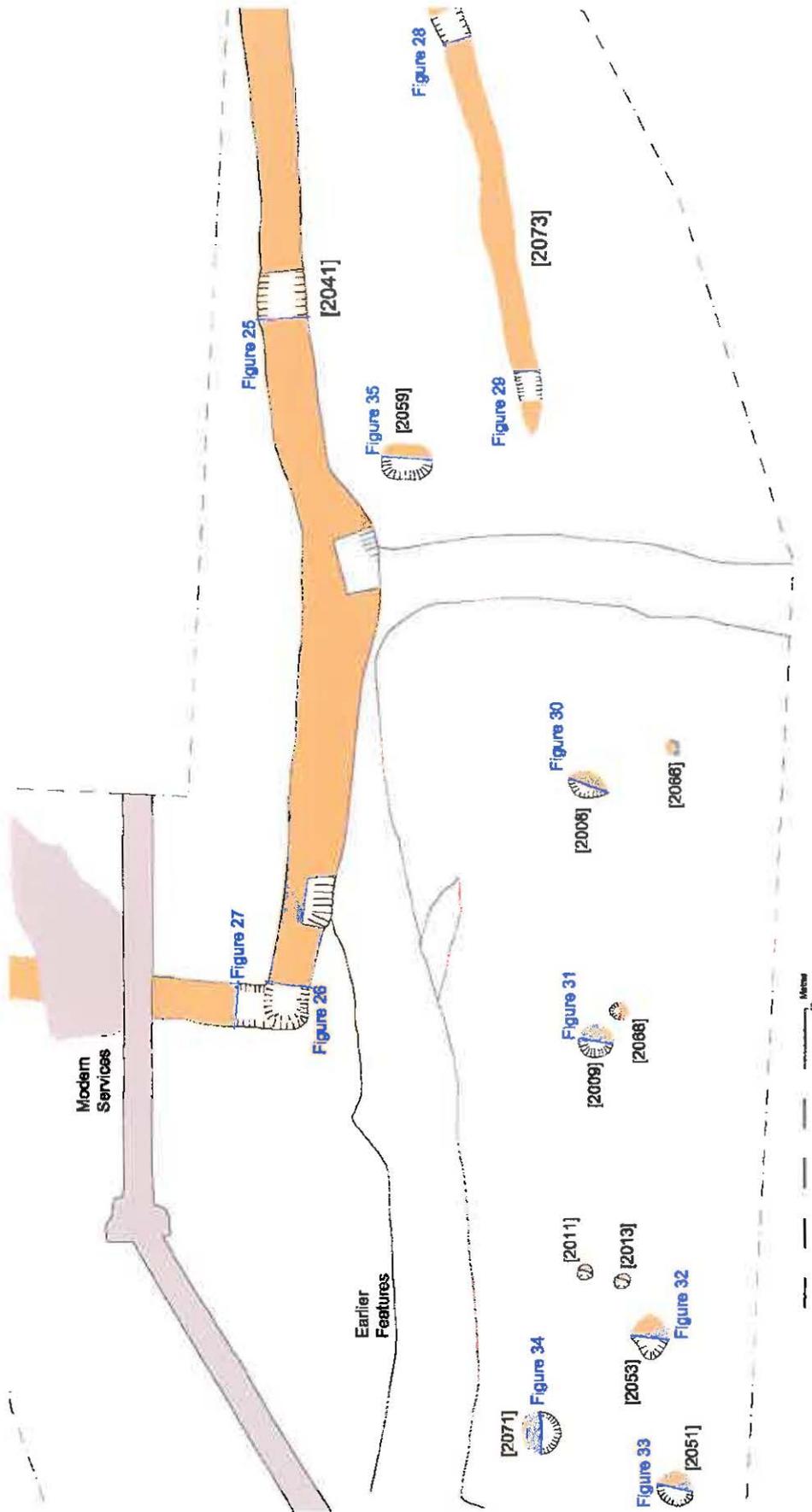


Figure 24 Area B Phase 2 Enclosure [2041], ditch [2073] and pit group

(scale 1:200)

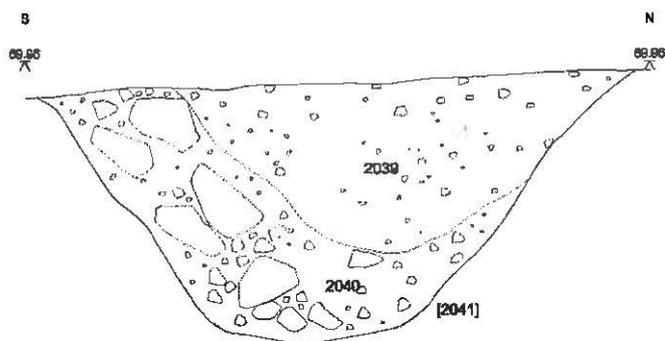


Figure 25 W facing section of ditch [2041] (scale 1:20)

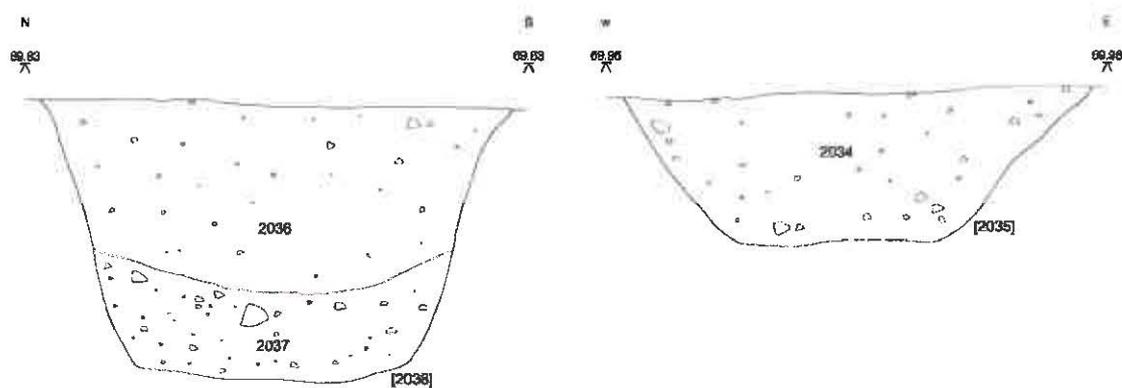


Figure 26 W. facing section of ditch [2041] (segment [2038]) Figure 27 S facing section of ditch [2035]



Plate 10 S facing section of ditch [2035]

3.2.4 Ditch [2072]

Ditch [2073] was aligned west east and terminated at its western end in Area B. Upon excavation it comprised a relatively shallow u-shaped cut 0.2m deep and 1.05m wide backfilled with a single deposit of mid brown sandy clay with sandstone inclusions (2072) (Figures 28 and 29). The four sherds of Dales-type shell tempered ware recovered from the feature suggesting it was backfilled some time in the late 3rd century AD.

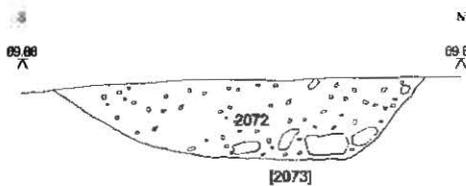


Figure 28 E facing section of ditch [2073]

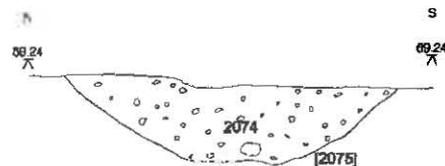


Figure 29 W facing section [2073] (segment [2075])

3.2.5 Pit Group

A group of four pits were recorded to the west of ditch [2073] potentially extending its alignment across Area B. The group, comprising [2006], [2009], [2053] and [2051] were between 1.4m and 1.2m in diameter and spaced at intervals of between 9m and 4.5m (Figures 30 to 33). With the exception of [2053] the pits had similar profiles and contained two separate fills. The earliest comprised a deposit of dark grey sandy silt with frequent sandstone fragments ((2005), (2008), and (2050)). The later was characteristically darker and contained fewer inclusions ((2004), (2007), and (2049)).

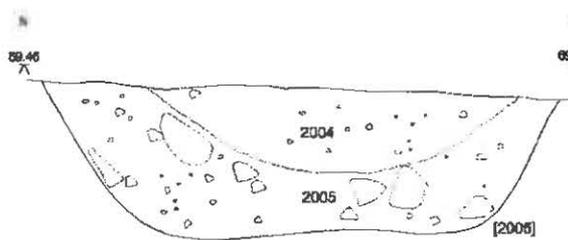


Figure 30 W facing section of pit [2006]

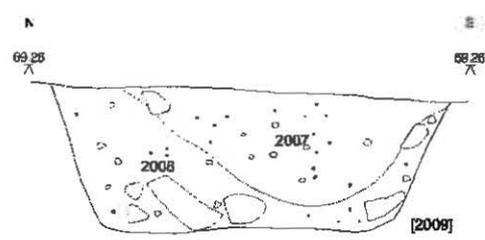


Figure 31 W facing section of [2009] (scale 1:20)

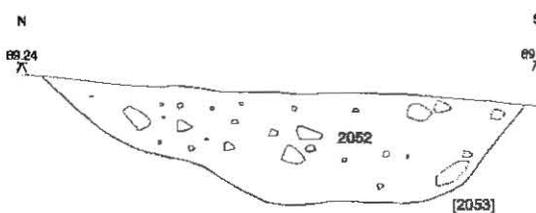


Figure 32 W facing section of Pit [2053]

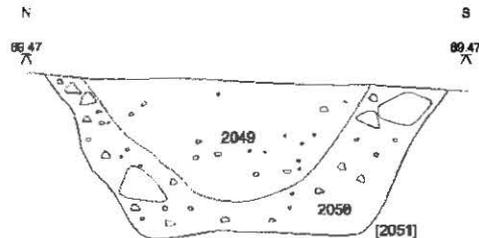


Figure 33 W facing section of Pit [2051]

Pit [2053] only had one backfill (2052). This comprised a deposit of orange brown sandy silt with frequent sandstone pebble inclusions. It also contained the only dating material within the group – a single small abraded sherd of late 2nd century Dales-type sandy Grey ware.



Plate 11 W facing section of Pit [2006]



Plate 12 W facing section of Pit [2009]

Nothing was recovered from the pits that's was indicative of their function. The lack of pottery and other artefacts would suggest that they were not used for the disposal of domestic rubbish. Their alignment and location would suggest that former an extension of the boundary recorded to the east. The pit alignment could also conceivably continue westward beyond the edge of investigation.

In addition to the pit group a further four post holes and another pit were also recorded within this part of Area B. The post holes ([2011], [2013], [2060] and [2066]) were between 0.5m and 0.6m in diameter and between 0.1m and 0.6m deep with vertical sides and single fills. None of the features contained any dating material.

Pit [2071] was located to the north of the possible pit alignment. It comprised a sub-circular cut, 1.4m in diameter and 0.4m deep with a wide shallow u-shaped profile (Figure 34). Its earliest backfill consisted of a firm deposit of brown clay silt with frequent sandstone pebbles (2070). Its latest backfill (2069) contained a number of burnt stones and possible coal. An assessment of the (2069) for charred or biological remains again proved rather inconclusive (Appendix 3).

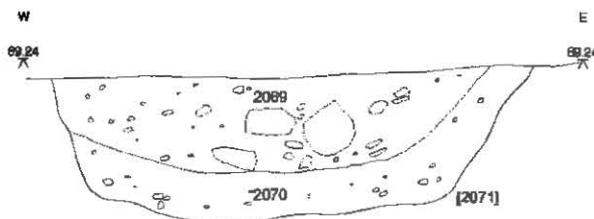


Figure 34 S facing section of Pit [2071]

The final feature within Area B was large sub-rectangular pit [2059] located on the southern side of ditch [2041]. This feature was 1.7m long and 1.2m wide and upon excavation proved to be 0.35m deep with a flat base and concave sides (Figure 35). Its earliest backfill comprised a deposit of yellow brown clay silt (2058) which was located around the edge and the base of the cut. It was covered by a sequence of ash rich, burnt deposits (2057), (2056) and (2055). (2056) and (2055) appeared to have been discoloured through heat and (2057) was blackened by high ash content. In its disuse the pit had been backfilled with a deposit of stony grey brown sandy silt (2054).

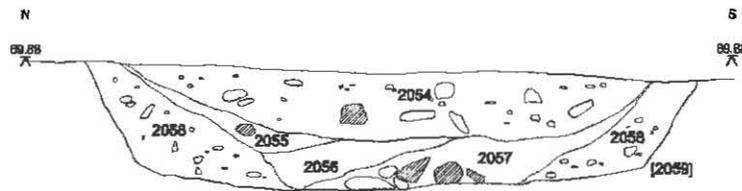


Figure 35 W facing section of pit/oven [2059] (scale 1:20)

It is not clear whether the pit was the subject of *in situ* burning or whether material had been raked into the feature. Either way it appears to have been related to some form of heating activity and may have been a simple oven. A single cereal grain was the only charred remain recovered from a sample of (2057) in amongst the ash (Appendix 3).

3.2.6 Medieval

Three shallow NW-SE aligned furrows were recorded on the main plateau in Area C ([1004] to [1006]), two in Area B ([2021], [2023]) and one in Area A ([5040]) and are assumed to be medieval or post medieval in date. Due to later ploughing and landscaping these features were heavily truncated and only traces survived across the investigation area. The only dating material recovered from the furrows comprised two fragments of a post medieval Black ware jar from (1005) suggesting that the features were still in use in the post medieval period (1600 – 1800AD).

The furrows are indicative of the agricultural use of the plateau at this time.

The only evidence for other activity from this period is a small assemblage of residual medieval and post medieval pottery recovered from later features in Area A. This included two fragments of York Gritty ware (11th to 13th century) which were found in a later service trench (5038).

A few sherds of Black glazed ware (16th century onwards), Brown earthen ware and Midlands Purple from later post holes (5014) and pits (5020) in Area A again in later features.

3.2.7 Post Medieval and Early Modern

Post Medieval and Early Modern archaeological deposits were found in Area A and Area C. In Area A the investigation recorded a sequence of structural deposits relating to Killingbeck Hall in addition to a large number of modern services and post holes (Figure 36).

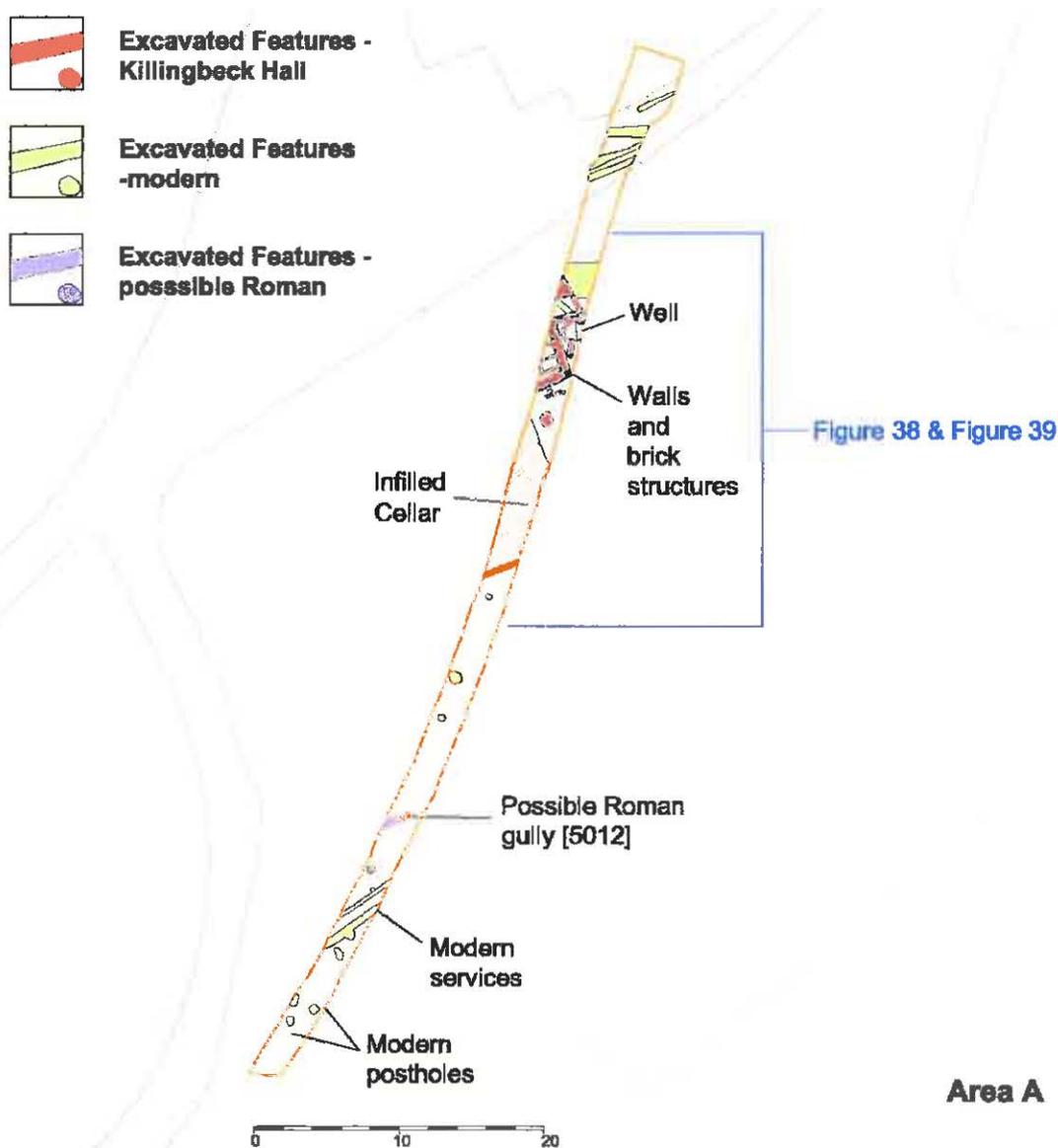


Figure 36 Area A Post Medieval Features – Killingbeck Hall

(scale 1:500)

In Area C the archaeological deposits comprised three circular shafts and the foundations of an early 20th century hospital building (Figure 37).

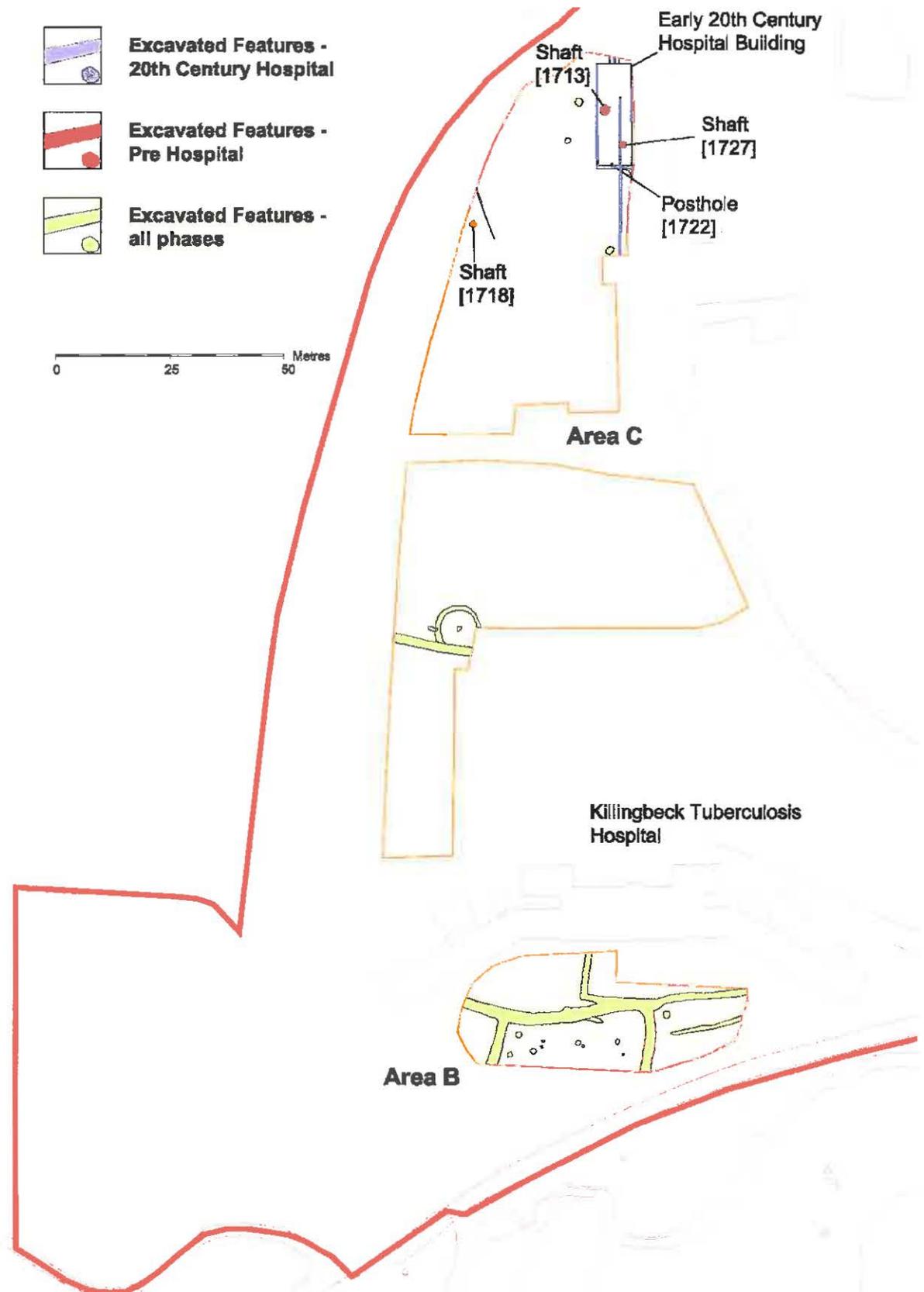


Figure 37 Post Medieval Features in Area C

3.2.7.1 Area A Killingbeck Hall

The central part of Area A was dominated by the remains of Killingbeck Hall. This comprised a large cellar, walls and brick lined well which had been backfilled with demolition rubble in their disuse.

The cellar was formed by a vertical sub-rectangular cut more than 1.5m deep. Its southeastern wall was faced with brick while its northeastern wall was formed by a face of natural clay (Plate 13). Due to the depth of the cellar the floor was not exposed during the excavation and a sondage was excavated across it with the machine for health and safety reasons.



Plate 13 clay face of cellar wall and sandstone foundation (5049) looking north

The southeastern wall of the Hall was recorded running 1.0m to the southeast and parallel to the cellar (5055). It comprised a 0.5m wide foundation built of rubble sandstone within a 0.5m deep trench.

Structural remains corresponding to several phases of the building were located immediately to the north. The earliest comprised the sandstone foundations for an internal wall (5049) that ran along the northern edge of the cellar (Figure 38). A second sandstone wall (5047) with evidence for a possible doorway was recorded running perpendicular to this. The two walls formed a possible room with its own cobbled floor (5058).

A brick lined well (5061) was recorded to 2m to the north of this structure (5047) (Plate 14). It was 1.2m in diameter and was excavated to a depth of 0.5m. Originally the well appeared to be a stand alone feature that was external to Killingbeck Hall.

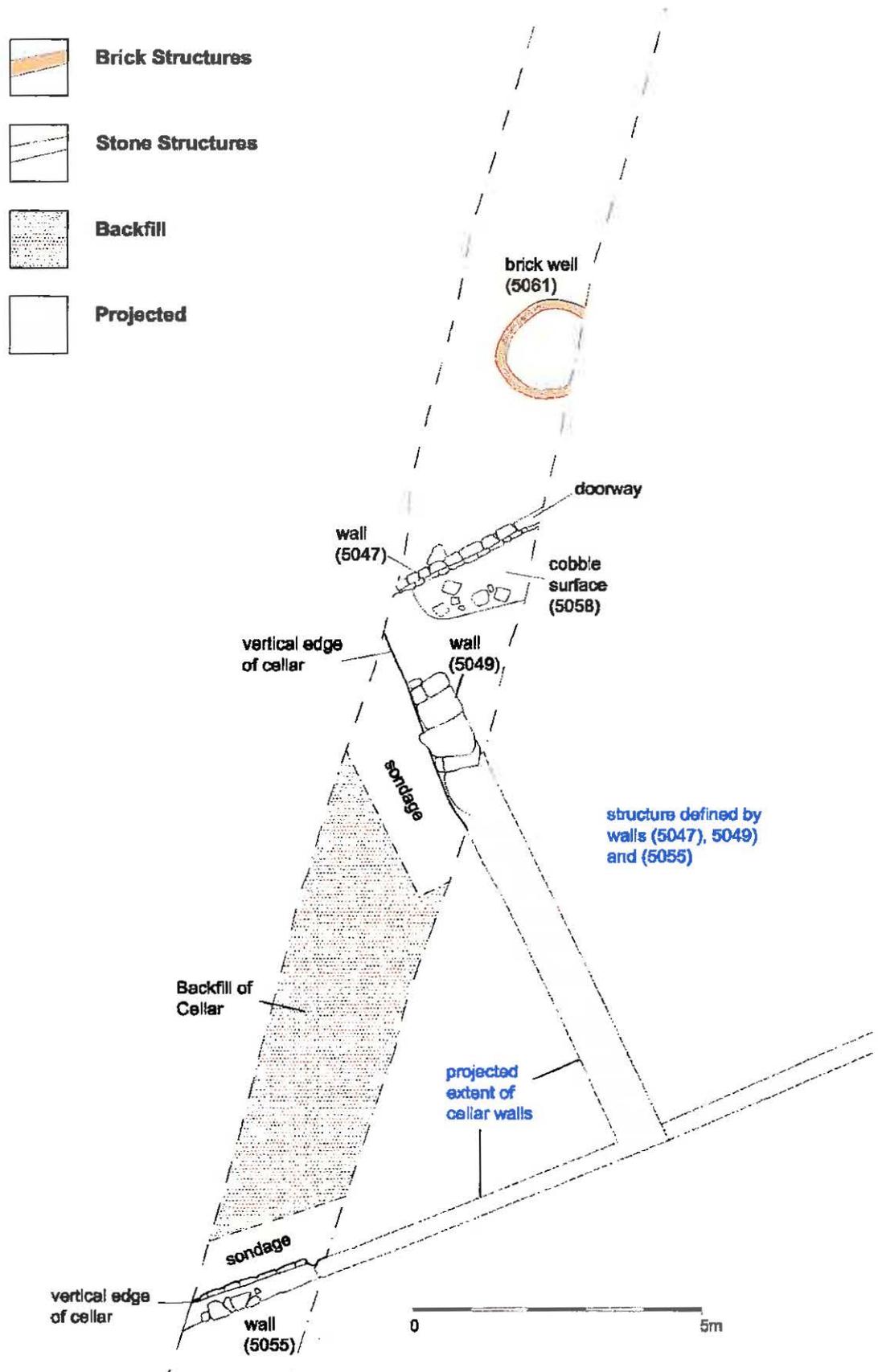


Figure 38 Area A Killingbeck Hall Phase 1 structures

(scale 1:100)

At some point between 1852 and 1893 the cellared building was extended to the north (Figure 39). The extension comprised a series of brick walls on sandstone foundations (5063), (5046), (5069), (5043) to create a further two possible rooms. One of these enclosed the brick well.

Two brick lined chambers (5064) were recorded against the southwestern side of wall (5063). Each was 1.2m long and 0.8m wide and built within a single rectangular cut. The chambers were excavated to a depth of 0.75m but were not bottomed. They appeared to form deep tanks that were originally accessed by ladder. The well appears to have been enclosed within the extension and reused as a cess pit or sump fed by a ceramic pipe from the new structure.



Plate 14 brick lined well (5061) and wall (5046) looking south

The area to the northeast of the cellar and extension that would have originally been internal to Killingbeck Hall was devoid of feature indicating that it had been badly truncated by later landscaping in this area.

In the southern part of Trench A, a series of post holes and shallow pits were recorded. These appear to be unrelated to the hall and are modern.

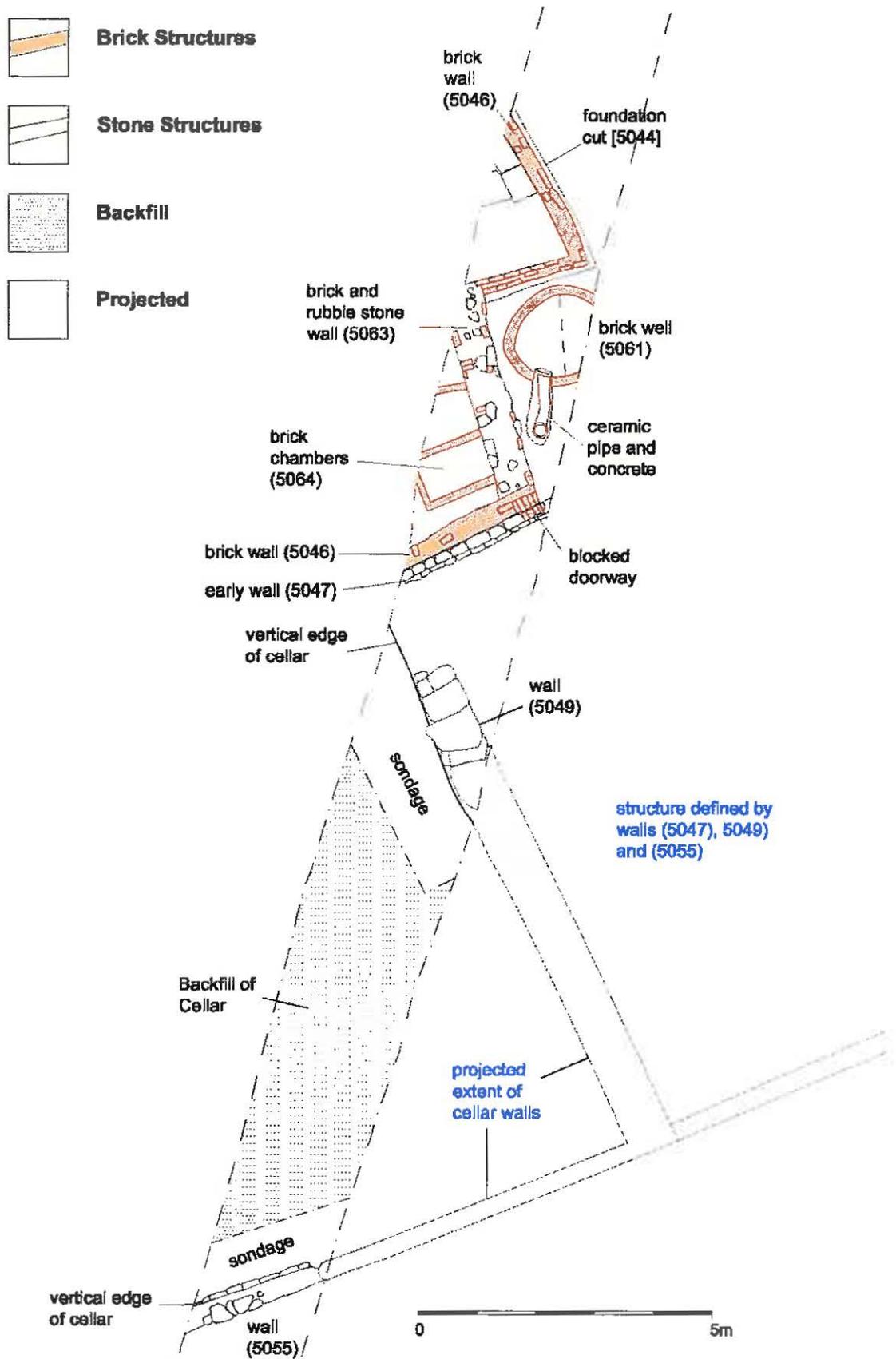


Figure 39 Area A Killingbeck Hall – post 1852 extension

3.2.7.2 Area C

A group of three circular vertical sided pits were recorded at the northern end of Area C cut into the bedrock ([1713], [1718] and [1727]). In plan they measured between 1.45m and 1.55m in diameter. Each pit was half sectioned to a safe depth and recorded. One of the pits [1718] was then excavated by machine to expose its base and record its full depth.

The first pit [1713] was located close to the eastern edge of Area C where it had been cut by the foundation trench for a later building (Figure 40) (Plate 15). Its latest backfill comprised a deposit of compact yellow brown silty clay with evidence of roots (1714). This sealed a sequence of backfills, the latest of which comprised a distinctive deposit of compact dry grey clay with frequent coal fleck and fragment inclusions (1715). Beneath this the pit was backfilled with a 0.35m thick deposit of compact crushed coal (1716) overlying a thick deposit of mid brown silty clay with stone fragments (1717) (Figure 41). The shaft was not bottomed.

The feature was post-medieval in date and with the exception of a small fragment of brick (1715) and a brass button (1716) was largely devoid of finds.



Plate 15 E facing section of shaft [1713]

The characteristic grey clay backfill in [1713] was also recorded in the other two pits. Pit [1727] was excavated to a depth of 1.2m and not bottomed (Figure 42). It was backfilled with a similar sequence to that recorded in [1713] (Figure 43).

Pit [1718] (Figure 44) was located toward the western edge of Area C some distance from the other features (Figure 37). Its latest backfill (1719) was very similar to that recorded in [1713] and sealed a deposit of mottled greenish blue clay with coal inclusions (1720). This in turn covered a coal rich deposit of greyish brown clay silt (1721). Unlike the other pits, the edges of [1718] were undercut where the bedrock had collapsed and voids were visible in the backfill (Figure 45).

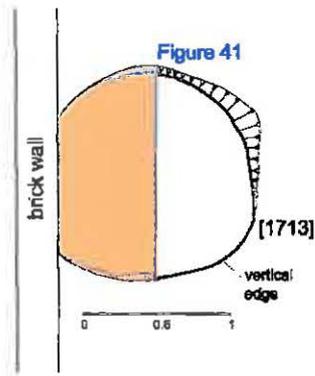


Figure 40 Pit/shaft [1713] (scale 1:50)

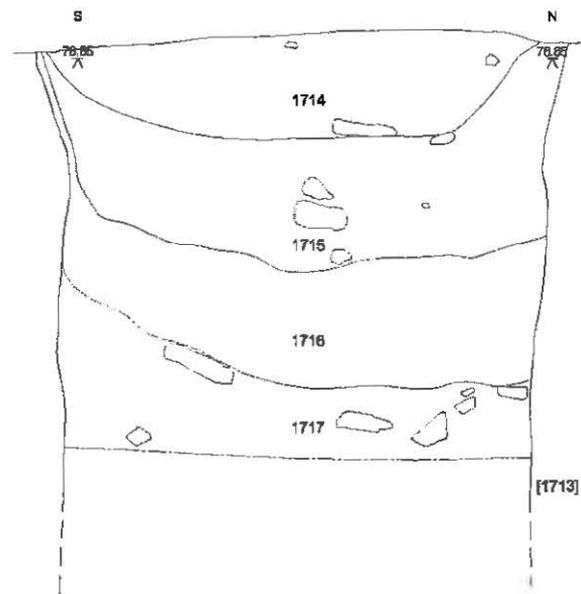


Figure 41 E. facing section of pit/shaft [1713] (scale 1:20)

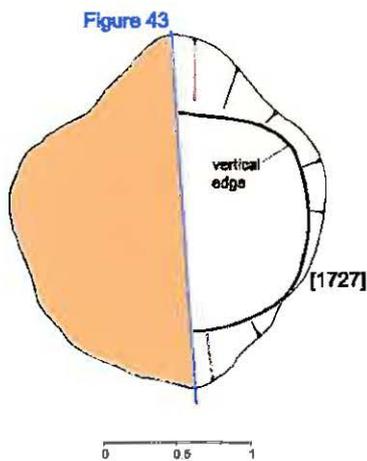


Figure 42 Pit/shaft [1727] (scale 1:50)

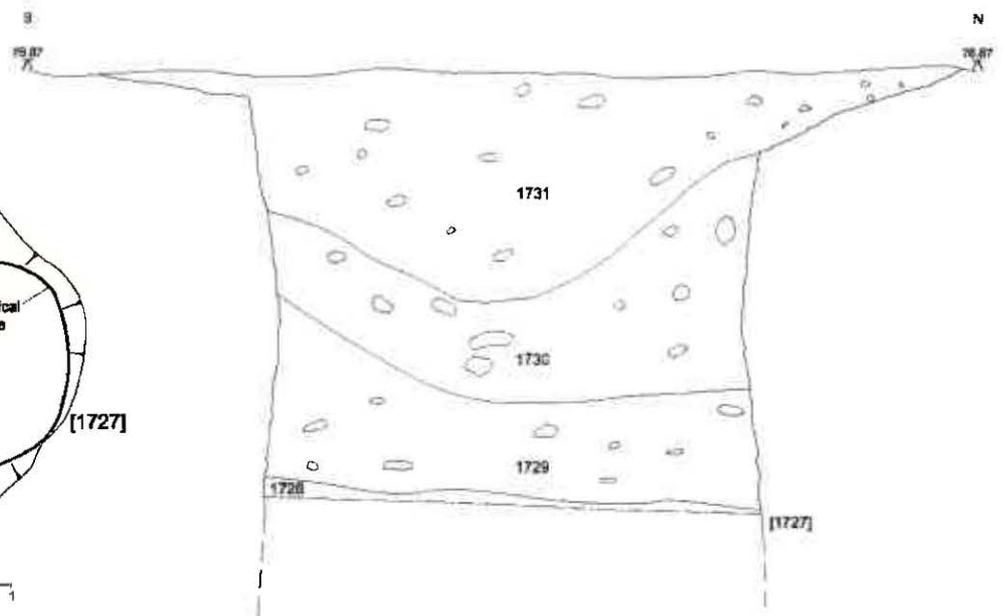


Figure 43 E. facing section of pit/shaft [1727] (scale 1:20)

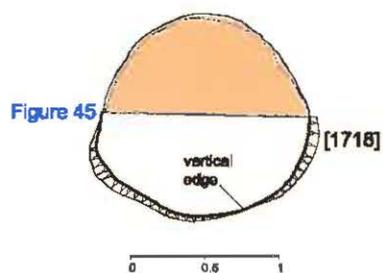


Figure 44 Pit/shaft [1718] (scale 1:50)

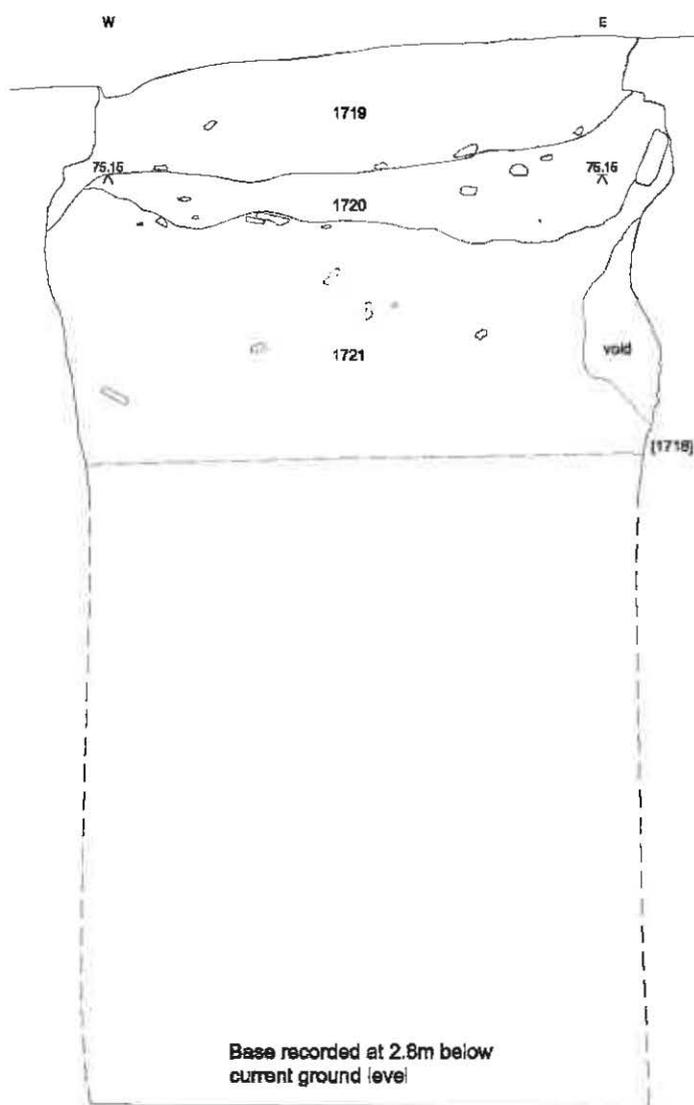


Figure 45 S facing section of pit/shaft [1718] (scale 1:20)

The western edge of pit [1713] was cut by the foundations for an extensive brick building. The historic Ordnance Survey maps show that this was constructed between 1908 and 1932.

4 Discussion

The investigation succeeded in meeting its main aims and objectives of the project. The mitigation work was effective in identifying and preserving by record archaeological remains on the site that stood to be affected by the development. By doing so they project has added to our knowledge of the occupation of this area in the Romano-British Period and alluded to the presence of early activity in the landscape.

4.1 Distribution

The results of the archaeological investigation clearly show that the plateau at Killingbeck contains important archaeological deposits. These appear to be predominantly on the southern side of the plateau with only isolated features located to the north. The watching brief area on the eastern side which corresponded with the developer's compound was clear of archaeology and no linear features corresponding with ditches or boundaries were identified during the watching brief on the main drainage runs across the site.

4.2 Preservation

The archaeological remains on the site were predominantly cut features, all of which appeared to have suffered a degree of truncation from later activity. There was also a notable lack of animal bone from any of the excavated features. This included deposits in Area C where bone might have been expected associated with possible domestic waste. Similarly there were no remains of a skeleton in the grave in Area C. While empty graves are known from other sites (particularly in York) the absence of bone on this site would appear likely to be the result of their poor survival in the soil conditions. A similar phenomenon was recorded to a greater or lesser degree during investigations carried out on the A1/M1 link road (Roberts *op cit.*).

The palaeo-environmental potential of deposits on the site was also particularly poor. Sampled material from ditches and pits was generally devoid of organic remains and of limited analytical value. None of the samples provided suitable carbonised material to provide a reliable, secure radiocarbon date. The presence of single cereal grains from secondary deposits within features raised the problem of residuality and intrusion.

The lack of survival of animal bone and poor preservation of organic remains has affected the overall potential of the archaeological remains. The issue of poor preservation of deposits on coal measures and magnesium limestone is well known a particular problem in understanding the archaeology of this area (Chadwick 2009). Similar problems were experienced by the author of this report at Normanton Golf Course where only teeth or calcined bones survived (Timms 2005).

4.3 Prehistoric

Prior to the investigation evidence for prehistoric activity in the Killingbeck area has been particularly elusive. Medieval linchets observed on the slopes of the hill had previously been interpreted as the remains of a possible fort and the nearest excavated site lay at Colton some 3km to the southeast.

The presence of a ring ditch and other features highlight the significance of the location during the early Bronze Age. The plateau at Killingbeck would have been a highly prominent topographical feature offering potentially good views across the valley to the north and west. It is generally understood that forest clearance was well underway by the 3rd millennium BC and accelerated into the Iron Age.

Barrows were a common aspect of the early Bronze Age landscape. They often occurred in small cemeteries on the periphery of territory identifying and reinforcing political or tenurial boundaries. Physical remains in West Yorkshire are, however, less common than in North or East and on the Coal Measures and Magnesium Limestone they often survive only as ring ditches (Vyner 2008).

In wider area around Killingbeck excavated examples are known from sites at Manor Farm and at Ferrybridge while another group of three ring ditches has been recorded from aerial photographs close to Swillington Common.

The Manor Farm ring ditch was a similar size to that in Area C (7.5m in diameter). It contained a central cremation within an inverted collared urn and was radiocarbon dated to 2117-1750BC. A series of other pits containing pottery and flint were also associated with the feature. All of the remains had been heavily truncated by later agriculture.

At Ferrybridge a series of larger ring ditches were excavated which measure between 15m and 28m in diameter (Barrows 113, 114, 135 and 154) and were associated with a large number of inhumations and cremations. Their association with Ferrybridge Henge and the ritual focus of this area may account for their larger size.

A catalogue of 175 excavated round barrows in northeast Yorkshire was compiled by M. Smith in 1994. In the 115 cases where it is recorded the diameter of the barrows varied between 5.5m and 37m. Of these only twenty six were less than 10m (23%) with the average barrow being approximately 15m across. In comparison the Killingbeck ring ditch falls within the smaller category.

The notion that the ring ditch at Killingbeck is located at some form of territorial boundary is supported in the later archaeology on the site. The ring ditch is respected by a later boundary ditch and possibly even incorporated into its bank. While no dating material was recovered from the ditch it is likely to be Iron Age or early Roman in origin. As such it may correspond with a more formal and permanent subdivision of the landscape at this time.

This phenomenon is known from a number of other sites. Recent work at Nosterfield Quarry has identified at least two ring ditches that were deliberately incorporated into an Iron Age field system which was subsequently subdivided in the Roman period (Hopkins 2011). This pattern is also evident at Ferrybridge.

The significance of the barrow as a visible feature within the landscape clearly continued into the Roman period. A 2nd century grave was cut through the ring ditch again emphasising the

value given to this location. The reuse of Bronze Age barrows for later burials is also a common phenomenon although perhaps better known associated with the Anglo Saxon period.

The pits recorded at the northern part of Area C have been given a provisional prehistoric date based on their form and character. They may have been storage features or rubbish pits that was associated with settlement activity on the northern side of the plateau. The poor soil conditions mean that even if these features once contained organic material such as animal bone, then this will not have survived.

4.4 Roman

The investigation at Killingbeck Hospital has provided unexpected evidence for Roman activity at this location. Prior to this development the nearest comparable material was located several kilometres to the southeast at Stile Hill near Colton and other sites along the A1/M1 link corridor.

The landscape at this time would have been heavily cleared into a patchwork of field system, waste and woodland (Chadwick op cit.). East of Leeds this distribution of fields and enclosures has been recorded in aerial photographs (Roberts op cit).

At Killingbeck it is likely that the area to the north of the plateau would have been unmanaged waste or woodland while that at the top with potentially freer draining soils would have been cultivated and occupied. This being said the extent and nature of the activity at Killingbeck is far from clear. The archaeology is limited to a series of ditches and pits without evidence for contemporary settlement or structures.

The earliest phase comprises a rectilinear enclosure across the southern part of the plateau to the south of the round barrow. Such enclosures were a common element in the Romano British period where ditches were used to parcel up land for stock, agriculture or settlement and fields were often linked by a series of integrated ditched trackways. Similar field systems and enclosures have been excavated at Manor Farm, Bullerthorpe Lane, Swillington Common and Colton (Roberts op cit). At Killingbeck only a small portion of any of the enclosure was recorded offering a tantalising glimpse at what must have been a much larger field system.

What we can say is that the initial enclosure was set out in a single event rather than having being created by the subdivision of a larger field. It is not clear from the archaeological evidence what activity was taking place inside it. The first phase of Roman activity is also characterised by only a few sherds of pottery. Due to the small size of the assemblage and lack of contextual information this material was limited to merely spot dating the features.

The archaeological evidence suggests that the Phase 1 enclosure was almost entirely backfilled before a second was excavated. The reorganisation of the site at this time appears to reuse part of the main NW-SE aligned ditches to create an enclosure on its northern side. The function of the later enclosure is not known. Evidence from the excavations of the sections however does suggest that it was excavated in a series of separate episodes rather than a single event and may have had a more complex history of recutting and cleaning.

A larger assemblage of pottery was recovered for this phase. This predominately comprised of Dales type grey ware and shelly ware fabrics which dated to the latter part of the third century.

Thin section analysis of the material confirmed that the Grey ware was consistent with local production and that the Shelly ware was more likely to have been transported from Humberside. The pottery was predominately from jars and unsurprisingly indicative of limited domestic use.

Even the Phase 2 pottery was of insufficient quantity to be of much analytical value. Its deposition in the backfill of ditches was uneven with most coming from a single excavated section perhaps indicative of a midden nearby.

A series of pits and a second ditch were recorded on the southern side of the Phase 2 enclosure. These features share the same NE-SW alignment and run parallel to the boundaries. The only dating evidence recovered from the ditch was a small quantity of 3rd century pottery. It is tempting to see this group of features as defining a trackway on the southern side of the enclosure, possibly defining another enclosure to the south.

Evidence for the Roman Road was not recorded in any part of the watching brief indicating that it was either located further to the east of the site or its projected direction is incorrect.

4.5 Medieval

The very limited archaeological evidence of a medieval date merely alludes to the rural character of the site at this time. Furrows recorded in Area A, Area B and Area C indicate that much of the area was cleared and given over to agriculture. Evidence for the Grange and associated buildings must lie elsewhere in the vicinity of Killingbeck Hall probably in the woodland that covers this part of the site.

4.6 Post Medieval

The sequence recorded at Killingbeck Hall provides little meaningful information about the origins of the manor. The investigation failed to locate any remains of an earlier building or any earlier activity. The structures that were recorded relate to two main phases of the hall itself.

The investigation recorded the foundations for the main south eastern wall of the Killingbeck Hall and established that the cellar would originally have occupied its south western half. The area to the northeast was devoid of features relating to the interior building. This was probably due to later landscaping of the site following the demolition of the building in 1977.

The historic Ordnance Survey shows that between 1852 and 1893 the building was extended to the northwest. An overlay of the map evidence indicates that the brick and sandstone walls in Area A correspond with these extensions (Figure 46). Despite providing further evidence for the development of the building the results add only a little new knowledge to the origins or layout of the building.

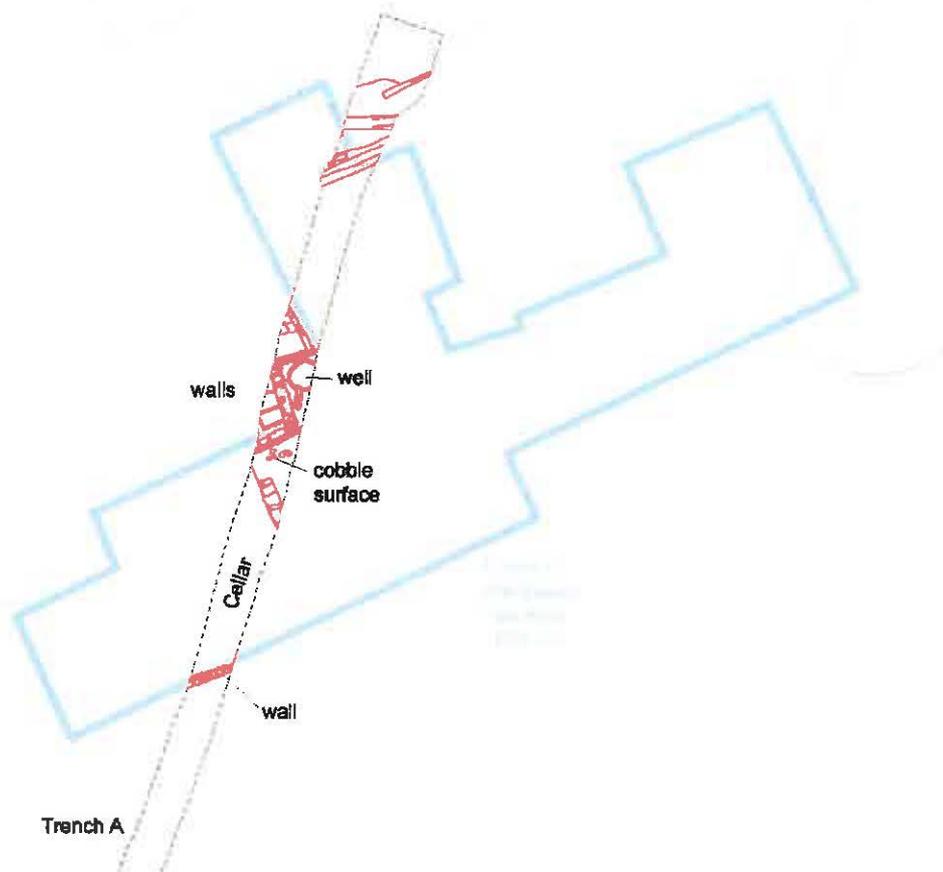


Figure 46 Structures in Trench A superimposed over 1893 OS map

(scale 1:400)

The purpose of the three shafts recorded in the northern part of Area C is not clear. Stratigraphically the features predate the hospital and are likely to be 18th or more likely 19th century in date. They do not appear to be associated with any other structures and may represent exploratory shafts cut into the bedrock looking for mineral. All appear to have been backfilled quickly and with distinctive coal rich deposits probably originating somewhere on the site.

5 Conclusions

The archaeological fieldwork has added to our understanding of the extent and nature pre-medieval Killingbeck and Seacroft. In particular it has provided welcome evidence for Bronze Age burial practice and later Iron Age and Roman land management in an area largely devoid of archaeological finds.

Unfortunately due to the heavily built up nature of the immediate area this evidence is largely isolated and it is clear that opportunities for further discoveries will be limited. This is particularly the case to the south of the site where the land has been developed as an industrial estate and for residential housing. Archaeological remains of a Roman date must, however, extend westward beyond the current development into areas of woodland and fields. The area immediately to the north of the site is also open space at present and worthy of further investigation if the opportunity presents itself in the future.

6 References

Burgess, A 2005a Specification for an archaeological excavation (area A) at the former Killingbeck Hospital site, Leeds. WYAS Advisory Service, Wakefield.

Burgess, A 2005b Specification for an archaeological strip and record (areas B and C) at the former Killingbeck Hospital site, Leeds. WYAS Advisory Service, Wakefield.

Burgess, A 2005c Specification for an archaeological watching brief at the former Killingbeck Hospital site, Leeds. WYAS Advisory Service, Wakefield.

Chadwick, A. 2009 The Iron Age and Romano British Periods in West Yorkshire; Research Agenda WYAAS

Hopkins, G. 2011 Holes in the Landscape; Seventeen Years of Archaeological Investigation at Nosterfield Quarry, North Yorkshire

Jones, A 2005 Killingbeck Hospital, Leeds Building Recording

Manby, T. et al 2003 The archaeology of Yorkshire : an assessment at the beginning of the 21st century ; papers arising out of the Yorkshire Archaeological Resource Framework Forum Conference at Ripon, September, 1998 CBA

Pinnock, D. 2006 OSA05WB11 Killingbeck Hospital, Leeds Archaeological Assessment Report

Roberts, I. et al (eds.) 2001 A New Link to the Past. The Archaeological Landscape of the M1-A1 Link Road Yorkshire Archaeology 7

Roberts, I. (eds.) 2005 Ferrybridge Henge; The Ritual Landscape Yorkshire Archaeology 10

Smith, M 1994 Excavated Bronze Age Round Barrows of Northeast Yorkshire

Spratt D 1993 Prehistoric and Roman Archaeology of North-East Yorkshire

Vyner, B 2008 The Neolithic, Bronze Age and Iron Age in West Yorkshire; Research Agenda WYAAS

Timms, S and Jones, A 2003 Killingbeck Hospital, Leeds, West Yorkshire: Desk-Based Assessment. Field Archaeology Specialists Ltd., University of York.

Timms, S 2005 Normanton Golf Course, Normanton, West Yorkshire, Evaluation and Excavation (<http://www.archaeologicalplanningconsultancy.co.uk/mga/projects/normant/normanton.pdf>)

APPENDIX 1- Pottery Assessment by Alan Vince (2005)

Summary.

The pottery from archaeological excavations on the site of the former Killingbeck Hospital was submitted to the authors for identification and assessment.

The finds come from three areas and consist of 55 sherds of pottery ranging in date from the Roman to the early modern periods.

Pottery.

The pottery was identified and recorded using the classifications of Roman and medieval pottery used in the City of York (1997; 1993; 1990; 1987; 1978). However, without the use of scientific techniques, such as thin section and chemical analysis, there cannot be any certainty that the wares found at Killingbeck Hospital are from the same sources as those supplying York.

Roman.

One hundred and eighteen sherds of Roman pottery were recorded, representing no more than 19 vessels and weighing 1.335 Kg (Table 1). Nine ware groups were recognised (Appendix A). Four of these cannot be closely dated, or were current in the later 1st to early/mid 3rd centuries (YATE1, YATG0, YATG1, YATP1); two are imitations of Dorset Black Burnished ware and therefore date to c.120 or later (YATB0, YATB7); Dales-type shelly ware is only common in Yorkshire in the earlier part of the 3rd century (YATH1) whilst the other two wares, YATB12 and YATK1, are mainly of later 3rd and 4th century date (K1 was produced in the Vale of Pickering from the Bronze Age onwards, but is rarely found outside of the Vale until the later 3rd century).

Only two forms were represented, the bowl and the jar. The four bowl sherds come from a single vessel whose rim survives. All the other sherds are either body sherds or bases, with no typological features which might be useful for dating.

Table 1.

cname	Data	?	BOWL	JAR	Grand Total
YATB00	Sum of Nosh		1	12	13
	Sum of NoV		1	1	2
	Sum of Weight		93	90	183
YATB07	Sum of Nosh			2	2
	Sum of NoV			1	1
	Sum of Weight			6	6
YATB12	Sum of Nosh			6	6
	Sum of NoV			2	2
	Sum of Weight			72	72
YATE01	Sum of Nosh		4	1	5
	Sum of NoV		1	1	2
	Sum of Weight		21	1	22
YATG00	Sum of Nosh			1	1
	Sum of NoV			1	1
	Sum of Weight			10	10

cname	Data	?	BOWL	JAR	Grand Total
YATG01	Sum of Nosh			22	22
	Sum of NoV			5	5
	Sum of Weight			707	707
YATH01	Sum of Nosh			63	63
	Sum of NoV			4	4
	Sum of Weight			289	289
YATK01	Sum of Nosh			5	5
	Sum of NoV			1	1
	Sum of Weight			45	45
YATP01	Sum of Nosh	1			1
	Sum of NoV	1			1
	Sum of Weight	1			1
Total Sum of Nosh		1	5	112	118
Total Sum of NoV		1	2	16	19
Total Sum of Weight		1	114	1220	1335

Six of the vessels present consist of groups of joining sherds and substantial parts of the vessels could be reconstructed on paper. These include a YATB0 bowl, a YATB0 jar, a YATE1 bowl and three YATH1 jars. The YATB0 vessels could probably be identified using thin section and chemical analysis whilst confirmation of the identity of the Dales-type shelly ware could also be provided using the same methods.

Medieval.

Two sherds of York Gritty ware (YG) were found. These were probably produced locally, perhaps at Potterton, and date between the mid 11th and the mid 13th centuries. Both come from jars.

Post-Medieval.

A single sherd of Midlands Purple ware was found (MP). This ware was produced at numerous centres in the north midlands/Yorkshire in the later medieval and early post-medieval period and is characterised by the presence of a brown glaze on a Coal Measures red- or white-firing body which has been fired at a high enough temperature to vitrify the body and cause the glaze to become vesicular.

Sherds of Black-glazed ware (BL) and Brown-glazed earthenware (BERTH) date to the later 16th century or later. Most came from jars.

Two sherds of a slipped red earthenware (SLIP) bowl were present. This type is current from the mid 17th century into the 19th century.

Early Modern.

Three sherds of 19th or 20th-century date were recorded. They consist of a sherd of Chinese Export Porcelain (CHPO) of unknown form; a 19th-century buff ware bowl (NCBW) and a fragment of salt-glazed stoneware drainpipe (ENGS).

Assessment.

The pottery suggests that there was occupation on the site in the Roman period, probably extending from the 1st/3rd centuries into the 3rd/4th centuries. No precise dating can be given on the basis of this small collection. The finds of medieval and post-medieval pottery probably come from ploughsoil and are likely to be present as a result of manuring of the fields whilst the 19th-century finds may be associated with Killingbeck Hospital or Killingbeck Hall.

Area A.

Five features in Area A produced pottery. That from feature 5038, a service trench, dates between the late 11th and the mid 13th centuries, but is clearly residual. The pottery from posthole 5004 and pit 5020 dates to the post-medieval period. The pottery from posthole 5014 includes a 19th-century sherd and the brick lining of well 5062 produced a fragment of stoneware drain pipe and is therefore of 19th or 20th-century date.

Table 2.

context group	cname	?	BOWL	DRAIN	JAR	Grand Total
5004	SLIP		2			2
5014	CHPO	1				1
	MP				1	1
	NCBW		1			1
5020	BERTH				1	1
5038	YG				1	1
5062	ENGS			1		1
Grand Total		1	3	1	3	8

Area B.

Most of the pottery from Area B was of Roman date. That from ditches 2003, 2014, 2019, 2064 and pit 2053 cannot be closely dated but is probably of 1st to 3rd century date. It includes joining sherds from ditches 2014 and 2019.

The filling of ditch 2046 probably dates to the early 2nd century or later.

That from ditches 2041, 2073 and 2045 probably dates to the mid/late 3rd century, since it includes large numbers of sherds of Dales-type shelly ware together with types which first appear in the later 3rd century.

Finally, sherds of a post-medieval Black ware jar were recovered from furrow 2023. Joining sherds are rarely found in ploughsoil and it is likely that these sherds represent a single sherd broken during excavation.

Table 3.

context group	cname	BOWL	JAR	Grand Total
Ditch 2003	YATB00	1		1
Ditch 2014	YATG01		2	2
Ditch 2019	YATG01		9	9
Ditch 2041	YATB12		3	3
	YATK01		5	5

Ditch 2045	YATB12		3	3
	YATH01		52	52
	YATG01		9	9
	YATH01		6	6
	YATE01		1	1
	YATH01		1	1
Ditch 2046	YATB07		2	2
	YATG00		1	1
	YATG01		1	1
Pit 2053	YATG01		1	1
Ditch 2064	YATE01	4		4
Gully 2073	YATH01		4	4
Grand Total		5	100	105

Area C.

Grave 1011 produced a small burnished Grey ware jar. This was presumably deliberately placed in the grave and if it could be identified it might be possible to give a closer date than the present "c.120 or later".

Sherds of post-medieval Black ware were recovered from the fill of furrow 1005.

Table 4

context group	cname	Form	Total
1005	BL	BOWL	1
		JAR	1
1011	YATB00	JAR	12
Grand Total			14

Further Work.

The Roman pottery from the site should, where possible, be reconstructed (temporarily using tape) and illustrated. It would be possible to identify the fabrics of some of the vessels using thin section and chemical analysis and it would also be possible to test the identification of the Dales-type shelly ware, whose source is north Lincolnshire, some distance from Leeds, since the site is on the periphery of the known distribution of this ware (Loughlin 1977, Figs 4-6). Thin sections are prepared at the University of Manchester and petrological analysis carried out by Dr Vince at Lincoln. Chemical analysis is carried out at Royal Holloway College, London, under the supervision of Dr J N Walsh, and statistical analysis and comparison carried out at Lincoln by Dr Vince. These results would then have to be integrated with the archaeological data and a report written. Table 5 gives the costings for this work.

Retention.

The Roman to post-medieval finds from stratified contexts should be retained for future study. The material from 19th-century contexts (5013 and 5061) could be discarded, since it adds little to the knowledge of the history of the site, although an unstratified sherd of medieval date should be retained.

Bibliography.

Brooks, C M (1987) *Medieval and Later Pottery from Aldwark and Other Sites*. The Archaeology of York 16/3 London, York Archaeol Trust.

Holdsworth, J (1978) *Selected pottery groups AD 650-1780*. Archaeology of York 16/1 London, Council British Archaeol.

Loughlin, N. (1977) "Dales ware: a contribution to the study of Roman coarse pottery." in D. P. S. Peacock, ed., *Pottery and Early Commerce*, Academic Press, London, 85-146.

Mainman, A J (1990) *Anglo-Scandinavian Pottery from 16-22 Coppergate*. The Archaeology of York 16/5 London, Council British Archaeol.

Mainman, A J (1993) *The pottery from 46-54 Fishergate*. The Archaeology of York 16/6 London, Council British Archaeol.

Monaghan, Jason (1997) *Roman Pottery from York*. The Archaeology of York 16/8 York, Council for British Archaeology.

Watkins, G. (1991) "The Pottery." in P. T. D. Armstrong and D. H. Evans, eds., *Excavations at Lurk Lane Beverley, 1979-82*, Sheffield Excavation Rep 1 J R Collis Publ, Sheffield, 61-103.

APPENDIX 2 - Pottery Analysis – Killingbeck Hospital, Leeds The Romano-British Pottery by (the late) Alan Vince, Kate Steane and Alice Lyons (2011)

Summary

A small quantity of abraded Romano-British pottery was retrieved from stratified deposits during the Killingbeck Hospital excavation, Leeds. The pottery is of coarse ware utilitarian (jar/bowl) type produced locally, but also in York and the surrounding hinterland. Some Dales Ware shell tempered material has also been traded from southern Humberside or north Lincolnshire region.

What pottery can be dated suggests that there was low-grade occupation on the site throughout the Roman (mid 1st to 4th centuries AD) period, although most of the pottery dates to the 3rd and 4th centuries AD.

The Assemblage

A total of 131 sherds, weighing 1.375kg, of Romano-British pottery were recovered, representing no more than nineteen individual vessels. The pottery was moderately-to-severely abraded and had an average sherd weight (ASW) of c. 10.5g.

Nine ware groups were identified (Table 1), the most common of which (representing over half the assemblage by weight) are Sandy Dales-type grey wares (YATG01).

This material consists of jars and bowls produced mostly in reduced (grey/black) sand and grog (crushed pot) tempered wares with a small number of oxidized (red/white) fabrics also found.

Fabric Family	Ware Group	Form	Sherd Count	Sherd Weight (g)	ASW (g)	Sherd Weight (%)
Dales-type grey ware	YATG01		23	711	30.91	51.71
Dales-type shell tempered ware	YATH01	Jar	75	325	4.33	23.64
Sandy grey ware, Black Burnished ware imitation	YATB00	Jar and Bowl	13	183	14.08	13.31
Crambeck Sandy grey ware	YATB12		6	72	12.00	5.24
Shell tempered ware (unsourced)	YATK01		5	45	9.00	3.27
Ebor 1 Red ware	YATE01	Bowl	5	22	4.40	1.60
Grey ware, grog tempered	YATG00		1	10	10.00	0.73

Fabric Family	Ware Group	Form	Sherd Count	Sherd Weight (g)	ASW (g)	Sherd Weight (%)
(unsourced)						
Sandy grey ware, Black Burnished ware 2	YATB07		2	6	3.00	0.44
White ware	YATP01		1	1	1.00	0.06
Grand Total			131	1375	10.50	100.00

Table 1. The Roman pottery assemblage, quantified by fabric and listed in descending order of weight

Methodology

The pottery was processed and recorded in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 1994; Willis 2004).

The sherds were air-dried, washed and marked and are stored in dry environment in plastic bags within closed cardboard boxes. The sherds were then examined using a hand lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types present.

More detailed thin section fabric analysis was undertaken on selected fragments. Eight representative sherds of Romano-British pottery were thin-sectioned (Gribble and Hall 1992, 32-34) and examined under petrological microscope. The thin sections were photographed using a digital camera; each photomicrograph included in this report (polarizing light views only) represents an area of c. 2mm in width or a scale of c. 1:30.

The initial assessment (Vince and Steane 2006, 26) suggested that Chemical Analysis might be necessary to identify the Dales ware material this, however, did not prove necessary.

The total assemblage was studied and a (Microsoft Excel) catalogue prepared (Appendix 1). The sherds were counted and weighed to the nearest whole gram; decoration and abrasion were also noted. The pottery was identified and recorded using the classifications of Roman pottery used in the City of York (Monaghan 1997 and Mainman 1993; 1990).

The report is structured so that the pottery fabrics are consistently described in order of (descending) abundance as shown in Table 1.

Acknowledgements

Thanks to Emillie Sibbesson (PhD candidate Southampton University) for preparing the thin-sections.

The Pottery Fabric Descriptions and associated Ceramic Petrology

By Alice Lyons

Nine ware groups were recognised and are described below. Eight of these fabrics were suitable for thin section analysis, only the unsourced white ware (YATP01) was too scarce and fragile to sample.

DALES-TYPE SANDY GREY WARE

Fabric YATG01 Dales-type sandy grey ware (grog tempered), Jar. Context 2015. 2nd half of the 2nd century.

Poor slide – fabric too soft (even after consolidation)



Light: polarised

Fabric Description:

This slide has a loose matrix, with common silt-sized quartz grains and strands of mica are present as a natural component of the clay.

Common large (0.4-0.6mm) angular quartz and sparse very large (2mm) grog pieces (containing silt-sized quartz) have been added as a deliberate temper.

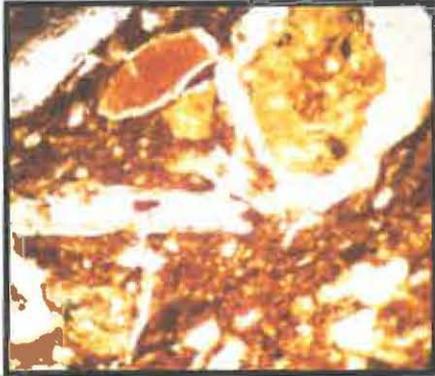
This is a reduced (brown/black) fabric with a lighter (oxidised) orange surface.

Because of the difficulties in preparing this slide there are lots of holes in the matrix which may not relate to its contents, although the laminar tears may relate to wheel production.

Slide: Killingbeck 7

DALES-TYPE SHELL TEMPERED WARE

Fabric YATH01, Dales-type shell tempered ware. Context 2042. Jar (Fig. 1, no 3 and 5). Tyers 1996, 190. Tomber and Dore 1996, 157. *c.* early 3rd century AD



Light: polarising

Fabric Description:

This slide has a dense clay matrix with common fossilised shell and silt-sized quartz grains present as a natural component of the clay. Many holes in this fabric are consistent with missing shell pieces; it is common for the shell to leach out leaving a pitted surface.

Common larger angular quartz grains and common angular large grog (containing silt-sized quartz grains) have been added as a deliberate temper.

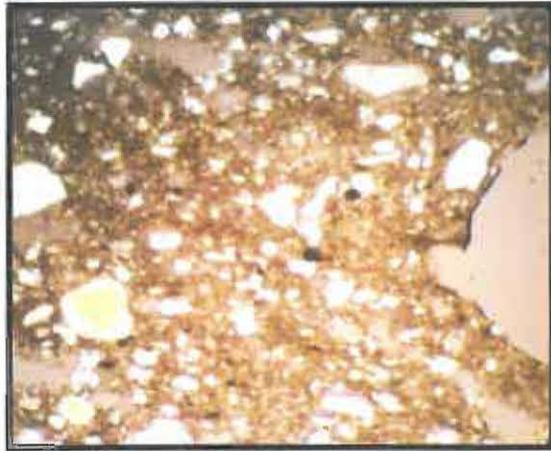
This is a reduced (brown/black) fabric.

No laminar tears can be seen, which is consistent with a handmade fabric.

Slide: Killingbeck 8 (a and b)

SANDY GREY WARE (BLACK BURNISHED WARE IMITATION)

Fabric YATB00, Sandy grey ware (Black Burnished ware imitation) small globular jar (Fig. 1, no 1) with an everted rim. Context 1010 (grave fill). Date c. 120 AD +.



Light: polarised

Fabric Description:

This slide has a dense clay matrix with naturally occurring common silt-sized sandstone and quartz grains. Larger (0.2-0.4mm) angular quartz has been added as a deliberate temper.

Linear tears, consistent with wheel production, are common. Large more circular holes are also common where some temper has fallen or eroded out.

This is reduced (dark grey) fabric.

This fabric is consistent with local production.

Slide: Killingbeck 1

CRAMBECK SANDY GREY WARE

Fabric YATB12, Crambeck sandy grey ware, jar. Context 2039. Tyers 1996, 188-9. Tomber and Dore 1998, 197. Later 3rd and 4th century AD



Light: polarising

Fabric Description:

A hard (very dense) lime-rich fabric with common silt-sized quartz, small quartzite fragments and common strands of silver mica as natural component of the clay.

Abundant fine or small (0.2-0.4mm) angular quartz has been added as a deliberate temper.

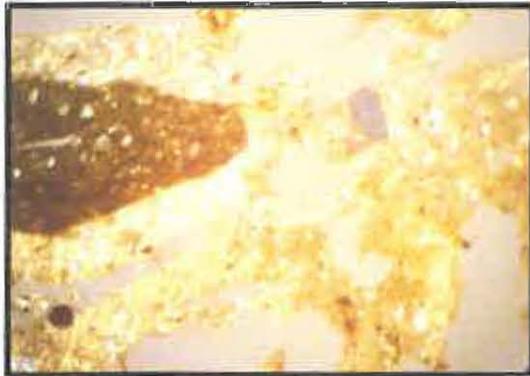
This is a reduced (pale grey) fabric with darker (grey) surfaces.

Slide: Killingbeck 4

UNSOURCED SHELL TEMPERED WARE

Fabric YATK01, unsourced shell tempered ware, Jar. Context 2039.

Poor slide – fabric too soft (even after consolidation)



Light: polarised

Fabric Description:

This slide shows a loose clay matrix with a lime-rich fabric and common silt-sized quartz grains present as a natural component of the clay.

Sparse large angular grog (which also contain silt-sized quartz grains) and common medium angular quartz (0.3-0.6mm) have been added as a deliberate temper.

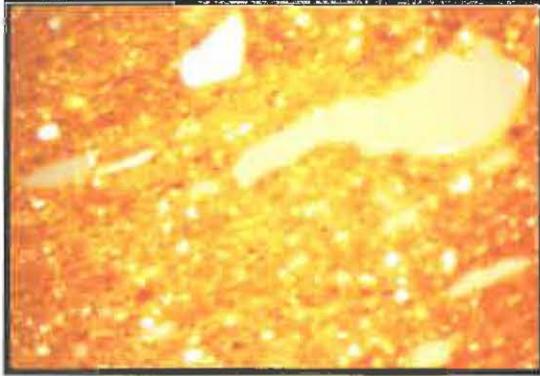
This is a reduced (brown/black) fabric.

*No shell is actually visible on this slide but it is possible the shell is was where the holes are!

Slide: Killingbeck 5

EBOR 1 RED WARE

Fabric YATE01, Ebor 1 Red ware, miniature bowl with a flanged rim. Context 2062. Monaghan 1997, 869 and 1033. Late 1st-early/mid 3rd century AD, ?2nd century AD



Light: polarising

Light: plane

Fabric Description:

Dense lime-rich fabric with very common silt-sized quartz grains and mica strands are present as a natural component of the clay.

Occasional small/medium (0.3-0.5mm) angular quartz grains added as a deliberate temper.

This is an oxidised (orange/red) fabric, it is extremely soft.

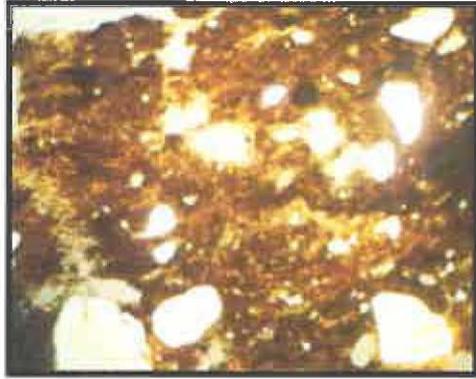
Laminar tears, consistent with wheel production, are also present.

Slide: Killingbeck 6

UNSOURCED GREY WARE

Fabric YATG00, unsourced grey ware (grog tempered), jar. Context 2046.

Poor slide – fabric too soft (even after consolidation)



Light: polarising

Light: plane

Fabric Description:

This slide has a dense clay matrix with naturally occurring common silt-sized quartz grains.

Common larger (0.3-0.6mm) angular quartz has been added as a deliberate temper. Common small to large (0.4-2.4mm) angular grog (which also contains silt-sized quartz grains) has also been added as a deliberate temper.

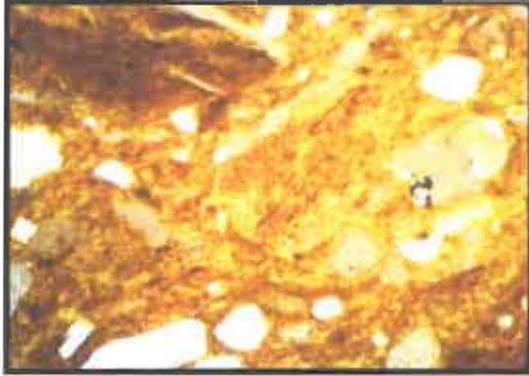
This is a reduced (dark grey) fabric.

Linear tears, consistent with wheel production, are common.

Slide: Killingbeck 3

BLACK BURNISHED WARE 2

Fabric YATB07, Sandy grey ware (Black Burnished ware 2), Jar. Context 2046.



Light: polarising

Fabric Description:

This slide has a dense clay matrix with naturally occurring common silt-sized quartz grains. This is a lime-rich fabric with pieces of limestone and fossilised shell included in the matrix.

Larger (0.2-0.5mm) angular quartz has been added as a deliberate temper.

This is a reduced (mid grey) fabric.

Linear tears, consistent with wheel production, are common. Other small round holes are consistent with quartz temper falling out during the slide preparation.

Slide: Killingbeck 2

FABRIC YATP01, WHITE WARE**Fabric Description:**

This is a fine sandy oxidised (white) ware fabric. Although the sample was too small for effective analysis (1g), it is similar to material produced in the Nene Valley region of Cambridgeshire (Tomber and Dore 1998, 119) and it is possible it originated from there.

Slide: no slide prepared

Observations

This is a very small assemblage and much of the pottery is significantly abraded which has made effective thin section analysis quite difficult. It has been possible, however, to observe that the Dales-type grey ware (YATG01), which was the most common fabric found, was in fact a locally produced grog-tempered Dales ware-type copy and therefore is consistent with production in York during the 2nd half of the 2nd century (Tyers 1996, 190).

The Dales-type shell tempered ware (YATH01), the second most common fabric found (by weight) was, however, consistent with production in south Humberside or North Lincolnshire (Tyers 1996, 190), although this material was not widely traded into Yorkshire until the early 3rd century AD. Moreover, it is noteworthy that the two sherds of Black Burnished ware 2 (YATP01) found, may also have followed the same trade route as the shell tempered Dales ware, as they also contain fossilized shell material.

Thin section analysis of the third most common fabric: the Sandy grey ware (Black Burnished ware imitation) (YATB00), has shown that the fabric contains sandstone fragments and is therefore consistent with local, but as yet unsourced, production. As the underlying geology of the site is sandstone, mudstones and shales of the Lower Coal Measures

Also significant were the small amount of Crambeck grey ware (YATB12) undiagnostic jar sherds that were recovered. Thin section analysis revealed a classic Crambeck fabric (Tomber and Dore 1998, 197) with abundant fine angular quartz grains that were added as a deliberate temper to harden the fabric. This ware was not produced until the end of the Romano-British era (late 3rd to 4th centuries AD) when they were commonly traded in the Malton-York area to the north-east of Leeds (Tyers 1996, 188).

The unsourced shell tempered ware (YATK01), which were only found in very small quantities was produced in the Vale of Pickering from the Bronze Age onwards, but is rarely found outside of the Vale until the late 3rd century. Thin section analysis has shown that this fabric was also tempered with grog and is not dissimilar from the unsourced grey ware grog tempered material (YATG00); it is possible they were both manufactured in the Vale of Pickering.

Analysis of the Ebor 1 red ware fabric (YATE01) has revealed a very fine quartz tempered fabric, possibly consistent with 2nd century production in the city of York.

The single sherd of the fine sandy oxidised white ware fabric found (YATP01), although too small for effective analysis, it is similar to material produced in the Nene Valley region of Cambridgeshire (Tomber and Dore 1998, 119) and it is possible it originated from there.

The Forms

Only two forms were represented, the bowl and the jar. All the other sherds are either body sherds or bases, with no typological features that might be useful for dating.

The pottery is utilitarian more associated with the kitchen, small scale dry food storage and food preparation, than the dining table. The assemblage is notable as it contains no fine wares suitable for use on the table (such as samian or colour-coated material) and no specialist wares such as amphora (wine/fish sauce container) or mortaria (food grinder) that were particularly associated with the Roman way of life. Five of the vessels present are potentially diagnostic; these are described and illustrated below.



Figure 1. Draft version of the illustrated ceramics (Scale 1:4)

- 1. Sandy grey ware, imitation black burnished ware (YATB0) small globular jar with an everted rim. Deposit (1010), fill of grave or pit. Ceramic date: c. 120 AD +.*
- 2. Ebor 1 (YATE1) a soft red ware bowl with concave sides and a flanged rim. Deposit (2062), ditch fill. Ceramic date: Late 1st to early/mid 3rd century AD.*
- 3. Dales-type shell tempered ware (YATH1) jar with a lozenge-shaped rim that forms an internal ledge. Deposits (2042) and (2043), ditch fills. Ceramic date: early 3rd century AD.*
- 4. Sandy grey ware, imitation black burnished ware (YATB0) large bowl with incised wavy decoration below a hooked rim. Deposit (2001), ditch fill. Ceramic date: c. 120 AD +.*
- 5. Dales-type shell tempered ware (YATH1) jar with a lozenge-shaped rim that forms an internal ledge. Deposit (2043), ditch fill. Ceramic date: early 3rd century AD.*

The Pottery by Area

Area B

Most of the pottery from Area B was of Roman date.

That from ditches 2003, 2014, 2019, 2064 and pit 2053 cannot be closely dated but is probably of 1st to 3rd century date. It includes joining sherds from ditches 2014 and 2019. The filling of ditch 2046 probably dates to the early 2nd century or later. That from ditches 2041, 2073 and 2045 probably dates to the mid/late 3rd century, since it includes large numbers of sherds of Dales shelly ware together with Crambeck ware that first appear in the later 3rd century.

Area C

Grave 1011 produced a small Black Burnished ware imitation Grey Ware jar, with a globular body and an everted rim (Fig. 1, no 1). This was presumably deliberately placed in the grave and can be dated to c.120 AD or later".

Conclusion

Although this is a small assemblage, so it is difficult to draw definitive conclusions, what pottery has been retrieved would suggest that a low grade Romano-British settlement, such as a farming community, existed on the site between the mid 1st to 4th centuries AD, with most material deposited (as rubbish in ditches) towards the end of the Roman era. Only one vessel, the mid 2nd century locally produced BB2 imitation globular jar was found in its primary context; where it has been placed as an accessory vessel in a grave.

The Romano-British people who lived at Killingbeck had some surplus goods to exchange for utilitarian non-local pottery but neither the money, or perhaps the desire, to buy high status table and specialist wares.

Bibliography

British Geological Survey Geology of Britain viewer:

http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html (viewed 11/08/2011)

Darling, M. J., 2004 'Guidelines for the Archiving of Roman Pottery'. *Journal of Roman Pottery Studies Vol 11*

Gribble, C. D., and Hall, A. J., 1992 *Optical mineralogy, Principles and practice*, Routledge, London

Loughlin, N., 1977 "Dales ware: a contribution to the study of Roman coarse pottery." in D. P. S. Peacock, ed., *Pottery and Early Commerce*, Academic Press, London, 85-146.

Mainman, A. J., 1990 *Anglo-Scandinavian Pottery from 16-22 Coppergate. The Archaeology of York 16/5* London, Council for British Archaeology

Mainman, A. J., 1993 The pottery from 46-54 Fishergate. The Archaeology of York 16/6 London, Council for British Archaeology

Monaghan, J., 1997 Roman Pottery from York. The Archaeology of York 16/8 York, Council for British Archaeology.

Tomber, R and Dore, J., 1998 *The National Roman Fabric reference collection, A Handbook*. MoLAS Monograph 2

Tyers, P. 1996 *Roman Pottery in Britain*, Batsford

Vince, A and Steane, K. 2006 'Pottery' in Pinnock, D., *Killingbeck Hospital Leeds, Archaeological Assessment Report*. OSA Report Number: OSA05WB11, 20-22

Webster, G., (Ed) 1976 *Romano-British coarse pottery: a student's guide*. CBA Research Report No. 6

Willis, S., 2004 The Study Group For Roman Pottery Research Framework Document for the Study of Roman Pottery in Britain, 2003. *Journal of Roman Pottery Studies Vol 11*

Appendix 1. The Romano-British Pottery

Key: B= body sherd, BS= base sherd, R=rim

Context	Fabric name	Fabric Family	Form	Description	Sherd type	Type	Sherd count	Weight (g)	Number of vessels	Thin section	Illustrate
1010	YATB00	SGW	JAR	SMALL JAR FROM GRAVE	R;BS	small globular jar with an everted rim	12	90	1	1(1x13g)	1
2001	YATB00	SGW	BOWL	POSS MORT; WAVY DEC BETWEEN HORIZ LINES	R		1	93	1		4
2046	YATB07	SGW	JAR		BS		2	6	1	2(1x8g)	
2039	YATB12	SGW	JAR	PALE WITH DARKER SURFACES	B		3	59	1	4(1x13g)	
2043	YATB12	SGW	JAR		BS		3	13	1		

Context	Fabric name	Fabric Family	Form	Description	Sherd type	Type	Sherd count	Weight (g)	Number of vessels	Thin section	Illustrate
2042	YATE01	RED W	JAR		BS		1	1	1		
2062	YATE01	REDW	BOWL	EXTREMELY SOFT AND ABRADED	R;BS	miniature	4	21	1	6(1x6g)	2
2046	YATG00	GW(GROG) (OX SURFACES)	JAR	HORIZONTAL RILLING (ON BODY) UNDER A DEEP GROOVE (ON SHOULDER)	BS		1	10	1	3(1x5g)	
2015	YATG01	SGW(GROG)	JAR	SHL=2017. FLAT BASE, SHOWING SIGNS OF WEAR	B;BS		2	467	1	7(1x50g)	
2017	YATG01	SGW(GROG)	JAR	SHL=2015. SOME	BS		9	194	1		

Context	Fabric name	Fabric Family	Form	Description	Sherd type	Type	Sherd count	Weight (g)	Number of vessels	Thin section	Illustrate
				BODY SHERDS DECORTAE D WITH A DOUBLE GROOVE ON SHOULDER							
2044	YATG01	SGW(GRO G)	JAR		BS		9	36	1		
2046	YATG01	SGW	JAR		BS		2	6	1		
2052	YATG01	SGW	JAR		BS		1	8	1		
2042	YATH01	STW	JAR	POSS SHL=2043; 2044	R;BS	dales ware type	13	45	1		8a(1x6g) 3
2043	YATH01	STW	JAR	POSS SHL 2044 SHL=2044; 2042	R;BS		52	265	1		8b(1x9g) 3 AND 5
2044	YATH01	STW	JAR	POSS SHL=2043;	R;BS		6	14	1		

Context	Fabric name	Fabric Family	Form	Description	Sherd type	Type	Sherd count	Weight (g)	Number of vessels	Thin section	Illustrate
				2042							
2072	YATH01	STW	JAR		BS		4	1	1		
2039	YATK01	STW	JAR		BS		5	45	1	5(1x10g)	
5011	YATP01	WW(?NV)	?	FRAG	BS		1	1	1		

APPENDIX 3 - Assessment of biological remains from archaeological excavations at the former Killingbeck Hospital, Leeds (site codes: KBH10 and OSA05WB11) by John Carrott, James Poland, Alison Foster and Gemma Martin (PRS 2011/49)

Summary

Six sediment samples recovered from deposits encountered during two phases of excavations at the site of the former Killingbeck Hospital, Leeds, were submitted for an assessment of their bioarchaeological potential. Three areas (designated Areas A, B and C) were excavated in 2005, with archaeological features revealed in Area A primarily associated with the 18th century Killingbeck Hall. The excavations in Areas B and C uncovered unexpected evidence for Roman and prehistoric activity. A ring ditch was found in Area C that may suggest an early Bronze Age barrow (although there was no central grave and no dating evidence was recovered). This feature was cut by a grave and a linear ditch, both of probable Romano-British date and there were also several undated postholes in this area. The excavations in Area B revealed two phases of Romano-British enclosure ditches, a pit alignment of Iron Age or Romano-British date and a few associated postholes and gullies. Medieval/post-medieval plough furrows were recorded in Areas A and C. The 2010 excavations were located in the northern half of Area C and encountered two large pits but no artefacts were recovered to provide dating for these.

Ancient biological remains recovered from the sediment samples were largely restricted to small quantities of silted, indeterminate charcoal, with very occasional charred cereal grains and other charred botanical remains, land snails and traces of burnt indeterminate bone. These remains were too few and/or too poorly preserved to be of any interpretative value. Similarly, artefactual material recovered from the samples was restricted to trace levels of hammer scale from three deposits. No identifiable microfossil remains were detected in the 'squash' subsamples; although most appeared to contain traces of microscopic charcoal.

Although small quantities of remains suitable for submission for radiocarbon dating were recovered these could prove to be insufficient for the purpose. Even if dating of the remains were to prove successful, the small quantities recovered, together with the evidence for modern intrusive/contaminant material (e.g. rootlet), would mean that the extension of the dating to the deposits as a whole would have to be viewed with considerable caution.

No further study of the biological remains from the assessed deposits is warranted.

Introduction

An archaeological excavation was undertaken by Mike Griffiths and Associates at the site of the former Killingbeck Hospital, Leeds (NGR SE 348 344), in 2010. The excavation was undertaken in

advance of a residential development, following on from previous works undertaken by On Site Archaeology Ltd in 2005 (OSA report: OSA05WB11).

Three areas (designated Areas A, B and C) were excavated in 2005 (OSA05WB11). Archaeological features revealed in Area A were primarily associated with the 18th century Killingbeck Hall. The excavations in Areas B and C uncovered unexpected evidence for Roman and prehistoric activity. A ring ditch was found in Area C that may suggest an early Bronze Age barrow (although there was no central grave and no dating evidence was recovered). This feature was cut by a grave and a linear ditch, both of probable Romano-British date. The excavations in Area B revealed two phases of Romano-British enclosure ditches, a pit alignment of Iron Age or Romano-British date and a few associated postholes and gullies. Medieval/post-medieval plough furrows were recorded in Areas A and C.

The 2010 excavations (KBH10) were located in the northern half of Area C and encountered two large pits, one sub-circular and the other circular, but no artefacts were recovered to provide dating for these.

Five bulk sediment samples ('GBA'/'BS' sensu Dobney et al. 1992) from deposits encountered during both rounds of excavation were submitted to Palaeoecology Research Services Limited, Kingston upon Hull, for an assessment of their bioarchaeological potential. Some of the samples (from both rounds of excavation) had been subject to previous evaluation (Carrott et al. 2005 for OSA05WB11; Foster and Carrott for KBH2010) and for one of these (from Context 2058; OSA05WB11) the original results are re-presented as the remaining sediment could not be located (taking the total number of samples assessed to six); the other repeat samples reported here are from new, larger, subsamples processed in 2011.

Methods

The bulk sediment samples were inspected and their lithologies recorded following a standard pro forma (see Table 1) prior to processing for the recovery of plant and invertebrate microfossils, broadly following the techniques of Kenward et al. (1980).

Preservation of ancient organic remains in the deposits was predominantly by charring and the wash overs were dried prior to examination.

The residues were primarily mineral in nature and were also dried prior to the recording of their components. The weights and descriptions of the residues were recorded after sorting. Weights and measurements of inorganic and organic material from the residues refer to the larger pieces which have been extracted; smaller fragments remain in the residues and are not included. Charcoal and bone were sorted to 4 mm. Residue less than 1 mm was retained unsorted. The less than 2 mm fraction (including the less than 1 mm fraction) was scanned for magnetic material.

All fractions were examined for their content of macrofossils, and the general character of the material, using low-power (x7 to x45) microscopy. All of the components were recorded using a five-point semi-quantitative scale (on occasion quantitative records were also made). The abundance scale employed was: 1 – few/rare, up to 3 individuals/items or a trace level component of the whole; 2 – some/present, 4 to 20 items or a minor component; 3 – many/common, 21 to 50 or a significant component; 4 – very many/abundant, 51 to 200 or a major component; and 5 – super-abundant, over 200 items/individuals or a dominant component of the whole. Processed sample fractions were scanned until no new remains were observed and a sense of the abundance of each taxon or component (relative to the processed fraction as a whole) was achieved. The abundance of recovered organic and other remains within the sediment as a whole may be judged by comparing the wash over volumes and the quantities of remains recovered from the residues with the size of the processed sediment subsamples.

Plant macrofossil remains were compared with modern reference material (where possible) and with published works (e.g. Cappers et al. 2006 and, for cereal identifications, Jacomet 2006), and identified to the lowest taxon necessary to achieve the aims of the project. Nomenclature for plant taxa follows Stace (1997), with cereal identifications following Jacomet (2006) where nomenclature follows van Zeist (1984).

Land snail remains were identified as closely as possible, within the time constraints of the assessment, with reference to published works (chief sources: Cameron 2003; Cameron and Redfern 1976; Ellis 1969; Kerney 1999; Kerney and Cameron 1979). Nomenclature follows Kerney (1999). Numbers of the burrowing snail *Cecilioides acicula* (Müller) were recorded semi-quantitatively as outlined above but these records are not included in any interpretation because of the likelihood of its being intrusive to the deposits (this species may burrow to depths of 2 metres – Kerney 1999, 168). Minimum numbers of individuals present were determined by numbers of shell apices.

Identifications for vertebrate remains were attempted via comparison with modern reference material at PRS and the use of published works – in the event none of the remains were identifiable, however.

Microfossil ‘squash’ subsamples (of ~1 ml) were taken from three of the deposits. These were examined using the ‘squash’ technique of Dainton (1992), originally designed specifically to assess the content of eggs of intestinal parasitic nematodes; however, this method routinely reveals the presence of other microfossils, such as pollen and diatoms, and, where present, these were also noted. The assessment slides were scanned at x150 magnification and at x600 where necessary.

During recording, consideration was given to the suitability of the macrofossil remains for submission for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS).

Results

Details of the results of the assessment are presented in Tables 1 to 4 and summarised in the following text sections.

[Note: there were two tubs of sediment for Context 1028, Sample 1, but on inspection they appeared rather different and so each tub was processed as a separate subsample and recorded separately]

Most of the sediment samples produced relatively small wash overs, ranging in volume between 10 and 125 ml; the largest was from the smallest quantity of processed sediment, from Context 2058, however (Table 2). Ancient biological remains recovered were largely confined to nominal quantities of small, silted charcoal fragments (largest to 15 mm but mostly less than 4 mm), with some charred root/rhizome in Context 1709 (backfill of large sub-circular pit; Area C), occasional charred cereal and other plant remains, a few land snails and traces of burnt indeterminate bone (Table 2). The fragmented state and general scarcity of charcoal rendered the vast majority unidentifiable and the assemblages unsuitable for any further interpretation; occasional partial identification of a small number of fragments were possible, however (Table 2).

Charred botanical remains other than charcoal were few. Context 1709 gave a single fragment of charred *Prunus* (cherry/plum/sloe) fruit stone, Context 2044 (ditch fill; Area B) a wheat (*Triticum*) grain, an orache/goosefoot (*Atriplex/Chenopodium*) seed and a wild radish (*Raphanus raphanistrum* L.) capsule, and Context 2058 (pit/oven fill; Area B) an emmer/spelt wheat (*Triticum dicoccum* Schübl. /*T. spelta* L.) grain and a brome (*Bromus*) caryopsis. There was also an additional, tentative, record of another possible charred orache/goosefoot seed from Context 1028 (ring ditch fill; Area C). There were no assemblages of charred plant remains of interpretable size.

Other plant remains recorded in varying proportions in the wash overs were uncharred roots, vegetative detritus and wild/weed 'seeds'. Earthworm egg capsules and remains of insects (mostly beetle sclerites) and other non-molluscan invertebrates were also noted in some of the samples which, together with the uncharred botanical remains and the *Cecilioides acicula* (Müller) (a burrowing land snail) from one of the samples (tub 2 of 2) from Context 1028, were considered to be modern intrusions/contaminants and indicated that most of the deposits had been subject to at least some bioturbation (see Table 2).

Other land snail remains more likely to be contemporary with deposit formation were recorded from Contexts 1028 and 2070 (pit fill; Area B); although the latter gave only a single unidentified apex fragment (Table 2). The remains from Context 1028 were also mostly unidentified apex fragments, with a single *Vallonia excentrica* Sterki and a *Vertigo* sp. apex being identified (at least in part); too few records for any interpretation.

Artefactual remains were similarly few and confined to trace levels of hammer scale, two and five flakes from Contexts 1703 (one of six backfill deposits within large circular pit 1700; Area C) and 1709, respectively, and ten flakes and spheroids from Context 1028 (tub 1 of 2), with most of the magnetic material recovered from these and other samples being burnt stone (Table 3).

Each of the 'squash' subsamples (from each sample except Sample 4 from Context 2058 for which no unprocessed sediment was located) was almost entirely inorganic, with no identifiable microfossil

remains seen; although all except that from Context 2044 appeared to contain traces of microscopic charcoal (Table 4).

Discussion and statement of potential

Ancient biological remains recovered from the sediment samples were largely restricted to small quantities of silted, indeterminate charcoal, with very occasional charred cereal grains and other charred botanical remains, land snails and traces of burnt indeterminate bone. These remains were too few and/or too poorly preserved to be of any interpretative value. Similarly, artefactual material recovered from the samples was restricted to trace levels of hammer scale from three deposits (Contexts 1028, 1703 and 1709); hammer scale is produced in large quantities by smithing so here the quantities indicated no more than a 'background' level and were certainly insufficient to suggest metalworking in the immediate vicinity.

No identifiable microfossil remains were detected in the 'squash' subsamples.

Although small quantities of remains suitable for submission for radiocarbon dating (via AMS) were recovered from three of the deposits – charred cereal grains from Contexts 2044 and 2058, and a charred *Prunus* fruit stone fragment and a small fragment of twig charcoal from Context 1709 (there was also a charred oat grain and another indeterminate grain fragment from the evaluation subsample from this context; Foster and Carrott 2011) – these could prove to be insufficient for the purpose.

Even if AMS dating of the remains were to prove successful, the small quantities recovered, together with the evidence for modern intrusive/contaminant material (e.g. rootlet), would mean that the extension of the dating to the deposits as a whole would have to be viewed with considerable caution.

Recommendations

No further study of the biological remains from the deposits reported here is warranted.

Retention and disposal

The remains recovered from the assessment samples should be retained as part of the physical archive for the site. The sorted residue fractions may be discarded.

Unless required for purposes other than the study of ancient biological remains, any remaining sediment samples from deposits at this site may be discarded.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 4, National Industrial Estate, Bontoft Avenue, Kingston upon Hull), pending return to the excavator, along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to Steve Timms, of Mike Griffiths and Associates, for providing the material and supporting archaeological information, and to Oerni Akeret and Stewart Gardner (both formerly of PRS) who contributed to the original evaluation report.

References

Cameron, R. (2003). Keys for the identification of Land snails in the British Isles. Field Studies Council Occasional Publication **79**. Shrewsbury: FSC Publications.

Cameron, R. A. D. and Redfern, M. (1976). British Land Snails. Synopses of the British Fauna (New Series) **6**. London: Academic Press.

Cappers, R. T. J., Bekker, R. and Jans J. E. A. (2006). Digitale Zadenatlas van Nederland. Gronigen Archaeological Studies 4. Gronigen: Barkhuis Publishing and Gronigen University Library.

Carrott, J., Akeret, O. and Gardner, S. (2005). Evaluation of biological remains from excavations at the site of the former Killingbeck Hospital, Leeds (site code: OSA05WB11). PRS **2005/117**.

Dainton, M. (1992). A quick, semi-quantitative method for recording nematode gut parasite eggs from archaeological deposits. *Circaea*, the Journal of the Association for Environmental Archaeology **9**, 58-63.

Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea*, the Journal of the Association for Environmental Archaeology **9** (for 1991), 24-6.

Ellis, A. E. (1969). British Snails: A guide to the non-marine gastropoda of Great Britain and Ireland – Pleistocene to recent. Oxford: Oxford University Press.

Foster, A. and Carrott, J. (2011). Evaluation of biological remains from samples recovered during excavations undertaken at the site of the former Killingbeck Hospital, Leeds (site code: KBH10). PRS **2011/04**.

Jacomet, S. (2006). Identification of cereal remains from archaeological sites – 2nd edition. Basel: IPAS, Basel University.

Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1980). A tested set of techniques for the extraction of plant and animal microfossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.

Kerney, M. (1999). Atlas of the land and freshwater molluscs of Britain and Ireland. Colchester: Harley Books.

Kerney, M. P. and Cameron, R. A. D. (1979). A field guide to the land snails of Britain and North-West Europe. Glasgow: Collins.

On Site Archaeology (2005). Killingbeck Hospital, Leeds: Archaeological Assessment Report. OSA Report No: OSA05WB11 (Version July 2006). Unpublished site report for Shepherd Homes Ltd.

Stace, C. (1997). New flora of the British Isles: 2nd edition. Cambridge: Cambridge University Press.

van Zeist, W. A. (1984). List of names of wild and cultivated cereals. Bulletin on Sumerian Agriculture 1, 8-16

Table 1. Killingbeck Hospital, Leeds: Context information, sediment descriptions and sample sizes. Key: 'Wt/V (kg/l)' = weight/volume of processed sediment sample in kilograms/litres.

Context	Sample	Context description	Sediment description and notes	Wt/V (kg/l)	Sediment remaining (ml)
1028	1 (tub 1 of 2)	Ring ditch fill; Area C -- OSA05WB11 excavations	Moist, light to mid brown to mid orange, soft to sticky (working soft), slightly stony (stones 2 to 60 mm were present), slightly sandy slightly clay silt.	9.1/5	5
1028	1 (tub 2 of 2)	Ring ditch fill; Area C -- OSA05WB11 excavations	Moist to more or less wet, mid to dark brown, soft to crumbly (working more crumbly), moderately stony (stones 2 to 6 mm were common and slightly larger stones of 6 to 20 mm were present), somewhat clay, sandy silt.	9.36/7.5	5
1703	-	One of six backfill deposits within large circular pit 1700; Area C -- KBH10 excavations	Wet, mid brown to mid to dark orange, soft and slightly sticky (working soft), slightly stony (stones 2 to 20 mm were present), slightly sandy slightly clay silt.	20.72/15	5
1709	-	Backfill of large sub- circular pit; Area C -- KBH10 excavations	Moist, mid to dark brown to mid to dark orange, crumbly (working soft), moderately stony (stones 2 to 20 mm were common and larger stones 20 to 60 mm were present), slightly sandy slightly clay silt.	36.26/25	5

Context	Sample	Context description	Sediment description and notes	Wt/V (kg/l)	Sediment remaining (ml)
2044	6	Ditch fill; Area B – OSA05WB11 excavations	Just moist, mid brown to mid to dark orange, crumbly, moderately stony (stones 2 to 6 mm were common and larger stones 6 to over 60 mm were present), slightly clay silt, with a little charcoal present.	10.28/8.5	5
2058	4	Pit/oven fill; Area B – OSA05WB11 excavations	Dry, light grey-brown, crumbly and indurated, slightly sandy silty clay, with abundant cinder/black ash (also some light grey ash), and stones (6 to over 60 mm) and modern roots and rootlets present.	3/2.8	3000
2070	8	Pit fill; Area B – OSA05WB11 excavations	Moist, mid brown to mid orange, crumbly (working soft), moderately stony (stones 2 to over 60 mm were present), silt.	6.8/5	5

Table 2. Killingbeck Hospital, Leeds: Organic remains recovered from the wash overs. Key: 'CN' = context number; 'Wt/V (kg/l)' = weight/volume of processed sediment sample in kilograms/litres; 'WO vol (ml)' = volume of washover in millilitres; 'CPR' = charred plant remains; 'C'coal' = charcoal; 'Unch' = uncharred; 'Moll' = molluscs. Abundance scale: 1 – few/rare, up to 3 individuals/items or a trace level component of the whole; 2 – some/present, 4 to 20 items or a minor component; 3 – many/common, 21 to 50 or a significant component; 4 – very many/abundant, 51 to 200 or a major component; and 5 – super-abundant, over 200 items/individuals or a dominant component of the whole.

CN	Sample	Wt/V (kg/l)	WO vol (ml)	C'coal (>4mm)	C'coal (2-4mm)	C'coal (<2mm)	Charred grain	Charred chaff	Charred seed	Unch seed	Moll	Notes
1028	1 (tub 1 of 2)	9.1/5	10	1	2	4	-	-	-	1	-	Charcoal (to 9 mm) largely silted, indeterminate fragments, largest fragment of a diffuse porous species probably alder (<i>Alnus</i>) or hazel (<i>Corylus</i>). Fibrous modern rootlet score 4. Uncharred seeds; orache/goosefoot (<i>Atriplex/Chenopodium</i>). Coal (to 2 mm) score 2, sand score 2.
1028	1 (tub 2 of 2)	9.36/7.5	10	-	2	2	-	-	?1	2	2	Charcoal (to 4 mm) silted and indeterminate. Charred seed; 1x indeterminate seed fragment. Fibrous modern rootlet score 4. Uncharred seeds; orache/goosefoot, other unidentified taxon. Earthworm egg capsules score 1, other non-molluscan invertebrate fragments (modern) score 1.

CN	Sample	Wt/V (kg/l)	WO vol (ml)	C'coal (>4mm)	C'coal (2-4mm)	C'coal (<2mm)	Charred grain	Charred chaff	Charred seed	Unch seed	Moll	Notes
												Snails; <i>Cecilioides acicula</i> (Müller), <i>Vallonia ?excentrica</i> Sterki, <i>Vertigo</i> sp. (apex fragment), unidentified land snail apices. Indeterminate bone fragment (to 5 mm) x1. Cinder (to 7 mm) score 4, coal (to 5 mm) score 3, sand score 2.
1703	-	20.72/1 5	30	1	3	5	-	-	-	2	-	Charcoal (to 11 mm) silted and mostly indeterminate, largest fragment of a diffuse porous species but not identifiable further. Fibrous modern rootlet score 4, other modern plant detritus (including leaf fragments) score 3. Uncharred seeds; 1x elder (<i>Sambucus nigra</i> L.), 1x winged seed fragment, 2x unidentified seed pods. Earthworm egg capsules score 2, modern mite (Acarina) x1. Coal (to 3 mm) score 3, sand score 2.
1709	-	36.26/2 5	100	2	5	5	-	-	1	2	-	Charcoal (to 12 mm) silted and largely indeterminate, largest fragment and four others (including one small twig fragment of 2 or 3 years growth) all of a diffuse porous species but not identifiable further, also some charred rootlet

CN	Sample	Wt/V (kg/l)	WO vol (ml)	C'coal (>4mm)	C'coal (2-4mm)	C'coal (<2mm)	Charred grain	Charred chaff	Charred seed	Unch seed	Moll	Notes
												<p>present. Charred seed; 1x charred ?<i>Prunus</i> fruit stone. Fibrous modern rootlet score 3, other modern plant detritus (including leaf fragments) score 2. Uncharred seeds; orache/goosefoot, other unidentified taxa. Earthworm egg capsules score 3, modern weevil x1. Burnt (to white) indeterminate bone fragment x1. Coal (to 2 mm) score 3, 'spheres' of glassy slag score 1, fused (heat-affected) sediment lumps (to 3 mm) score 2, sand score 2.</p> <p>Note: one poorly preserved charred oat (cf. <i>Avena</i>) grain and one other indeterminate charred grain fragment were recovered from the evaluation subsample from this deposit – Foster and Carrott (2011).</p>
2044	6	10.28/8.5	20	1	3	4	1	-	1	-	-	<p>Charcoal (to 15 mm) largely indeterminate, largest fragment was roundwood (but lacking the waney edge) of a diffuse porous species but not identifiable further. Charred grain; 1x wheat (<i>Triticum</i>) grain.</p>

CN	Sample	Wt/V (kg/l)	WO vol (ml)	C'coal (>4mm)	C'coal (2-4mm)	C'coal (<2mm)	Charred grain	Charred chaff	Charred seed	Unch seed	Moll	Notes
												Charred seed; 1x orache/goosefoot, 1x wild radish (<i>Raphanus raphanistrum</i> L.) capsule. Fibrous modern rootlet score 3. Silted cinder (to 12 mm) score 4, coal (to 7 mm) score 3, sand score 2.
2058	4	3/2.8	125	-	-	-	1	-	-	-	-	Charred grain; 1x emmer/spelt wheat (<i>Triticum dicoccum</i> Schübl./ <i>T. spelta</i> L.) grain, 1x brome (<i>Bromus</i>) caryopsis. Modern rootlet score 3. Cinder/black ash concretions (to 20 mm) score 5 – mostly thinly coated with adhering sediment sand score 2.
2070	8	6.8/5	20	1	2	4	-	-	-	1	1	Charcoal to 5 mm silted and indeterminate. Fibrous modern rootlet score 5. Uncharred seeds; unidentified. Modern beetle sclerites score 2 (elytra, pronota, undersides and abdominal sclerites – including Staphylinidae and other taxa). Snails; 1x unidentified land snail apex. Cinder (to 14 mm) score 4, fused (heat-affected) sediment lumps (to 4 mm) score 2, sand score 2.

Table 3. Killingbeck Hospital, Leeds: Biological and non-biological remains recovered from sample residues, with additional notes on the mineral fractions of the residues and material remaining after sorting. Key: 'Wt/V (kg/l)' = weight/volume of processed sediment sample in kilograms/litres; 'sq' = semi-quantitative abundance score; '+' = present (1-3); '++' = occasional (4-20); '+++' = common (21-50); '++++' = abundant (51-200); '+++++' = super-abundant (201+); 'mm' = maximum linear dimension in mm; 'g' = weight in grammes; 'h'scale' = number of flakes and/or spheroids of hammerscale.

Context	Sample	Wt/V (kg/l)	Residue weight (g)	Charcoal sq/mm/g	Bone	Magnetic h'scale/g	Mineral residue fraction after sorting
1028	1(tub 1 of 2)	9.1/5	4818	++/7/0.2	-	-/3	Mostly stones (to 94 mm, largely sandstone), with some sand and traces of fine charcoal.
1028	1(tub 2 of 2)	9.36/7.5	1750	+/4/<0.1	+/10/<0.1	10/0.3	Mostly stones (to 45 mm, including angular flint) and sand, with some concreted lumps of undisaggregated sediment and traces of fine charcoal.
1703	-	20.72/15	7130	++/5/<0.1	-	2/4.2	Mostly stones (to 79 mm), with some sand.
1709	-	36.26/25	14440	++/10/1	++/8/1	5/15	Mostly stones (to 65 mm), with some sand and occasional indeterminate burnt bone fragments (<2 mm).
2044	6	10.28/8.5	3756	-	-	-	Mostly stones (to 80 mm), with some sand and a little fine coal.

2058	4	3/2.8	1020	-	-	-	Mostly stones (to 38 mm) and lumps of cinder/black ash (to 35 mm; 64 g), with some sand.
2070	8	6.8/5	3015	-	-	-/1	Mostly stones (to 64 mm), with some sand and a little fine coal.

Table 4. Killingbeck Hospital, Leeds: Microfossil 'squash' subsamples.

Context	Sample	Notes on microfossil 'squash' subsamples
1028	1(tub 1 of 2)	Almost entirely inorganic, with just a trace of microscopic ?charcoal. No identifiable microfossils were seen.
1028	1(tub 2 of 2)	Almost entirely inorganic, with just a trace of microscopic ?charcoal. No identifiable microfossils were seen.
1703	-	Almost entirely inorganic, with the barest trace of microscopic ?charcoal. No identifiable microfossils were seen.
1709	-	Almost entirely inorganic, with the barest trace of microscopic ?charcoal. No identifiable microfossils were seen.
2044	6	Almost entirely inorganic, with a single fragment of ?micro-invertebrate cuticle (?modern). No identifiable microfossils were seen.
2058	4	No unprocessed sediment available for 'squash'.
2070	8	Almost entirely inorganic, with a trace of organic detritus including a little microscopic ?charcoal. No identifiable microfossils were seen.

APPENDIX 4 – Archive Index

The excavations produced a total of 232 contexts. The stratigraphic and structural characteristics of each one were recorded on *pro forma* context sheets. Plans and sections of contexts were drawn and photographs taken as appropriate.

Context Type	Total
Cut	75
Deposit	151
Master/ Feature	6
Skeleton (human and animal)	0
Total contexts	232

Table showing breakdown of context types for the whole site.

Area	Contexts
A	71
B	79
C	82

Table showing the number of contexts for each archaeological area.

The archive has been checked and cross-referenced and indices have been compiled for each individual component (see Appendix 1).

Drawings	
Total drawings	77
Sections and profiles @ 1:10	54
Plans @ 1:20 or 1:50	23
A4 permatrace sheets	4
A3 permatrace sheets	32
Pottery (no. of fragments)	
Roman	118
Medieval	2
Post med	19
Other Finds	
Shell	1
Soil samples for GBA	15 tubs

Table showing the elements of the site archive.

Context	Description (and interpretation)	Extent	Thickness
<i>Area A</i>			
5001	A-Horizon/Topsoil	Trench	
5002	B-horizon/subsoil	Trench	
5003	Posthole fill. Light yellow-brown sandy silt.	0.45m diameter	0.10m
5004	Posthole cut.	0.45m diameter	0.10m
5005	Pit fill. Light yellow-brown silty sand	0.9 x 0.5m	0.18m
5006	Pit cut	0.9 x 0.5m	0.18m
5007	Posthole fill. Dark brown silty sand	0.22m diameter	0.07m
5008	Posthole cut	0.22m diameter	0.07m
5009	Root disturbance fill	0.70 x 0.25m	0.05m
5010	Root disturbance cut	0.70 x 0.25m	0.05m
5011	Gully fill. Light yellow-brown silty sand	1.70 x 0.43m exc.	0.24m
5012	Gully cut	1.70 x 0.43m exc.	0.24m
5013	Posthole fill. Reddish-brown clay-silt	0.40 x 0.45m	0.10m
5014	Posthole cut	0.40 x 0.45m	0.10m
5015	Posthole fill. Mid reddish-brown clay-silt	0.40m diameter	0.08m
5016	Posthole cut	0.40m diameter	0.08m
5017	Posthole fill. Mid reddish-brown clay-sand	0.45m diameter	0.47m
5018	Posthole cut.	0.45m diameter	0.47m
5019	Pit fill. Light brown silty sand	0.90 x 0.27m exc.	0.07m
5020	Pit cut	0.90 x 0.27m exc.	0.07m
5021	Construction cut fill. Dark grey-black silty sand	?	?
5022	Construction cut for modern septic tank	?	?
5023	Posthole fill. Mid greenish-yellow clay	0.57 x 0.55m	0.42m
5024	Posthole cut	0.57 x 0.55m	0.42m
5025	Posthole fill. Light greenish-grey clay-sand	0.50 x 0.43m	0.37m
5026	Posthole cut	0.50 x 0.43m	0.37m
5027	CANCELLED		
5028	CANCELLED		
5029	Fill of service trench	?	?
5030	Cut of service trench	?	?
5031	Modern wall foundation	2.9 x 0.23m	0.08m
5032	CANCELLED		
5033	CANCELLED		
5034	CANCELLED		
5035	Service trench fill	?	?
5036	Service trench cut	?	?
5037	Service trench fill	?	?
5038	Service trench cut	?	?
5039	Furrow fill. Orangey-brown sandy clay	1 x 2.5m exc.	0.25m
5040	Furrow cut	1 x 2.5m exc.	0.25m
5041	Service trench fill	?	?
5042	Service trench cut	?	?
5043	Brick wall	5 x 0.30m	0.30m
5044	Foundation cut	5 x 0.30m	0.30m
5045	Concrete plinth and wall		
5046	Brick wall		
5047	Sandstone wall	2.1 x 0.3m	0.5m

Context	Description (and interpretation)	Extent	Thickness
5048	Concrete floor	3.5 x 3m	0.2m
5049	Sandstone and brick wall	2.5 x 0.7m	0.30m
5050	Foundation cut	2.5 x 0.7m	0.30m
5051	Service trench fill	?	?
5052	Service trench cut	?	?
5053	C-horizon/Natural	Trench	?
5054	CANCELLED		
5055	Sandstone and brick wall	3.35 x 2m	
5056	Brick wall		
5057	Tarmac surface	2 x 2m	0.10m
5058	Paved surface	1 x 2m	0.16m
5059	Levelling deposit. Dark brown-black sandy gravel	3.5 x 3m	0.25m
5060	Well backfill. Mid brown sandy silt	1.20m diameter	0.40m exc.
5061	Brick lining of well	1.20m diameter	0.53m exc.
5062	Well cut	1.20m diameter	0.53m exc.
5063	Sandstone and brick wall	3.6 x 0.6m	0.3m
5064	Brick wall forming bi-partite chamber	1.20 x 0.9m	0.75m exc.
5065	Cut for brick chamber	1.20 x 0.9m	0.75m exc.
5066	Fill of brick chamber. Dark brown sandy gravel.	1.20 x 0.9m	0.75m exc.
5067	Brick floor	1 x 1m	0.3m
5068	Brick wall	0.3 x 0.45m	0.45m
5069	Foundation fill. Reddish brown sandy gravel	5 x 0.3m	0.3m
5070	Foundation cut	5 x 0.3m	0.3m
5071	Foundation cut	2.1 x 0.3m	0.3m
<i>Area B</i>			
2001	Ditch fill. Mid reddish-brown sandy clay	1 x 3.4m exc.	0.5m
2002	Ditch fill. Mid reddish brown with a greenish hue silty clay	1 x 3.4m exc.	0.65m
2003	Ditch cut	1 x 3.4m exc.	1.15m
2004	Pit fill. Greenish blue grey sandy silt	1.4 x 0.8m	0.24m
2005	Pit fill. Blueish grey silty sand	1.4 x 0.80m	0.15m
2006	Pit cut	1.4 x 0.8m	0.40m
2007	Pit fill. Dark blue grey sandy silt	1.02m diameter	0.34m
2008	Pit fill. Blue grey sandy silt	1.02m diameter	0.12m
2009	Pit cut	1.02m diameter	0.45m
2010	Posthole fill. Mid reddish-brown silty clay	0.5m diameter	0.18m
2011	Posthole cut	0.5m diameter	0.18m
2012	Posthole fill. Reddish-brown sandy clay	0.46m diameter	0.12m
2013	Posthole cut	0.46m diameter	0.12m
2014	Ditch fill. Mid grey-brown sandy silt	1.5 x 0.88m exc.	0.63m
2015	Ditch fill. Dark grey clay silt	1.5 x 0.57m exc.	0.3m
2016	Ditch cut	1.5 x 0.88m	0.93m
2017	Ditch fill. Mid yellow-brown sandy silt	1.5 x 0.97m exc.	0.75m
2018	Ditch fill. Mid brown sandy silt	1.5 x 0.6m exc.	0.38m
2019	Ditch cut	1.5 x 1.07m exc.	0.95m
2020	Furrow fill	1 x 1.1m exc.	0.12m
2021	Furrow cut	1 x 1.1m exc.	0.12m
2022	Furrow fill	4.5 x 2m	0.15m
2023	Furrow cut	4.5 x 2m	0.15m

Context	Description (and interpretation)	Extent	Thickness
2024	Ditch cut	1.45 x 1.4m exc.	0.71m
2025	Ditch fill. Slightly grey orange-brown sandy clay	0.9 x 1.4m exc.	0.44m
2026	Ditch fill. Mid orange-brown sandy clay	2.4m x 1.4m exc.	0.41m
2027	Ditch fill. Mid orange-brown sandy clay	2.4 x 1.4m exc.	0.42m
2028	Ditch cut	1.96 x 1.18m exc.	0.74m
2029	Ditch fill. Dark grey-brown sandy clay	2.24 x 0.77m exc.	0.21m
2030	Ditch fill. Mid greyish-brown sandy silt	1.5 x 2.2m exc.	0.4m
2031	Ditch fill. Dark brown sandy silt	1.5 x 1.4m exc.	0.25m
2032	Ditch fill. Light greyish-brown clay silt	1.5 x 1.7m exc.	0.2m
2033	Ditch cut	1.5 x 2.2m exc.	0.8m
2034	Ditch fill. Greyish-brown sandy silt	3 x 1.3m exc.	0.4m
2035	Ditch cut	3 x 1.3m exc.	0.4m
2036	Ditch fill. Mid greyish-brown sandy silt	3 x 1.3m exc.	0.5m
2037	Ditch fill. Light orangey-brown clay silt	3 x 1m exc.	0.3m
2038	Ditch cut	3 x 1.3m exc.	0.8m
2039	Ditch fill. Light greyish-brown sandy silt	1.5 x 1.25m exc.	0.45m
2040	Ditch fill. Dark greyish-brown sandy silt	1.5 x 1.35m exc.	0.55m
2041	Ditch cut	1.5 x 1.6m exc.	0.7m
2042	Ditch fill. Mid yellow-brown clayey silt	2 x 1.56m exc.	0.43m
2043	Ditch fill. Dark grey-brown clayey silt	2 x 1.42m exc.	0.13m
2044	Ditch fill. Mid grey-brown clayey silt	2 x 1.97m exc.	0.21m
2045	Ditch cut	2 x 1.97m exc.	0.69m
2046	Ditch fill. Mid yellow-brown clayey silt	1.05 x 1m exc.	0.55m
2047	Ditch fill. Mid grey brown clayey silt	1.97 x 1m exc.	0.37m
2048	Ditch cut	1.97 x 1m exc.	0.95m
2049	Pit fill. Greyish blue-brown sandy silt	0.7 x 0.8m exc.	0.35m
2050	Pit fill. Greyish orangey-brown sandy silt	0.7 x 1.1m exc.	0.4m
2051	Pit cut	0.7 x 1.1m exc.	0.4m
2052	Pit fill. Orangey-brown sandy silt	1.3m diameter	0.3m
2053	Pit cut	1.3m diameter	0.3m
2054	Pit/oven fill. Mid yellow-brown clayey silt	1.4 x 0.55m exc.	0.17m
2055	Pit/oven fill. Dark grey brown sandy silt	0.56 x 0.55m exc.	0.07m
2056	Pit/oven fill. Cherry red and brown silty clay	0.53 x 0.55m exc.	0.11m
2057	Pit/oven fill. Grey silty sand	0.97 x 0.55m exc.	0.14m
2058	Pit/oven fill. Mid yellow-brown clayey silt	1.65 x 0.55m exc.	0.33m
2059	Pit/oven cut	1.65 x 1.1m	
2060	Ditch fill. Reddish mid brown silty clay	1.27 x 2.18m exc.	0.45m
2061	Ditch fill. Mid grey brown silty clay	1.86 x 1.31m exc.	0.15m
2062	Ditch fill. Mid reddish brown silty clay	1.77 x 1.2m exc.	0.34m
2063	Ditch fill. Grey mid reddish brown	1.69 x 1.04m exc.	0.34m
2064	Ditch cut	2.03 x 2.18m exc.	1.28m
2065	Posthole fill. Mid yellow brown clayey silt	0.4 x 0.34m	0.34m
2066	Posthole cut	0.4 x 0.34m	0.34m
2067	Posthole fill. Mid yellow brown clayey-silt	0.5m diameter	0.06m
2068	Posthole cut	0.5m diameter	0.06m
2069	Pit fill. Dark grey-brown silty sand	1.2m diameter	0.26m
2070	Pit fill. Mid yellow-brown clayey silt	1.32 x 1.2m	0.15m
2071	Pit cut	1.32 x 1.2m	0.42m

Context	Description (and interpretation)	Extent	Thickness
2072	Gully fill. Mid yellowish-brown sandy clay	1 x 1.02m exc.	0.23m
2073	Gully cut	1 x 1.02m exc.	0.23m
2074	Gully fill. Mid yellowish-brown	0.85 x 1.2m exc.	0.19m
2075	Gully cut	0.85 x 1.2m exc.	0.19m
2076	MASTER		
2077	MASTER		
2078	MASTER		
<i>AREA C</i>			
1001	A-horizon/Topsoil	Trench	
1002	B-horizon/Subsoil	Trench	
1003	C-horizon/Natural	Trench	
1004	Furrow cut	?	?
1005	Furrow cut	?	?
1006	Furrow cut	?	?
1007	MASTER		
1008	MASTER		
1009	MASTER (ring ditch)		
1010	Pit backfill. Mid brown sandy silt	2.1 x 0.5m	0.22m
1011	Pit cut. Possible grave??	2.1 x 0.5m	0.22m
1012	Ditch fill. Mid yellowish-brown clayey silt	1 x 1.35m exc.	0.24m
1013	Ditch fill. Light yellow-brown clayey silt	1 x 0.96m exc.	0.33m
1014	Ditch fill. Light yellow-brown clayey silt	1 x 0.45m exc.	0.28m
1015	Ditch fill. Mid brown silty sand	1 x 1m exc.	0.78m
1016	Ditch fill. Light yellowish-brown clayey silt	1 x 1.15m exc.	0.81m
1017	Ditch fill. Light yellowish-brown clayey silt	1 x 0.6m exc.	0.39m
1018	Ditch cut	1 x 2.06m exc.	1.04m
1019	Ring ditch fill. Mid grey-brown sandy silt	1 x 1.12m exc.	0.39m
1020	CANCELLED		
1021	Ring ditch cut	1 x 1.12m exc.	0.39m
1022	Ditch fill. Grey-brown clayey silt	1.5 x 2.12m exc.	0.5m
1023	Ditch fill. Brown clayey silt	1.5 x 0.82m exc.	0.47m
1024	Ditch cut	1.5 x 1.95 exc.	0.97m
1025	Ring ditch fill. Grey-brown sandy silt	1.14 x 0.6m exc.	0.39m
1026	Ring ditch cut	1.14 x 0.6m exc.	0.39m
1027	Ring ditch fill. Mid orange-brown silty clay	1 x 0.86m exc.	0.41m
1028	Ring ditch fill. Mid orange brown silty clay	1 x 0.21m exc.	0.37m
1029	Ring ditch fill. Mid orange brown silty clay	1 x 0.15m exc.	0.41m
1030	Ring ditch cut	1 x 1.12m exc.	0.42m
1031	Recut/pit fill. Mid orange-brown silty clay	2 x 0.61m exc.	0.19m
1032	Recut/pit cut	2 x 0.61m exc.	0.19m
1033	Ring ditch fill. Mid orange-brown silty clay	2 x 1.11m exc.	0.32m
1034	Ring ditch cut	2 x 1.11m exc.	0.32m
1035	Ring ditch fill. Mid orange-brown silty clay	1 x 0.95m exc.	0.26m
1036	Ring ditch fill. Mid orange-grey-brown silty clay	1 x 0.23m exc.	0.36m
1037	Ring ditch cut	1 x 1.05m exc.	0.37m
1038	CANCELLED		
1039	Ditch fill. Mid brown clayey silt	1.5 x 0.62m exc.	0.49m
1040	CANCELLED		

Context	Description (and interpretation)	Extent	Thickness
1041	CANCELLED		
1042	Ditch fill. Mid grey-brown silty clay	0.75 x 1.86m exc.	0.19m
1043	Ditch fill. Mid grey-brown clayey sand	0.75 x 1.75m exc.	0.46m
1044	Ditch fill. Grey-brown clayey sand	0.75 x 0.75m exc.	0.46m
1045	Ditch cut	0.75 x 1.86m exc.	1.1m
1046	CANCELLED		
1047	CANCELLED		
1048	Natural feature fill		
1049	Natural feature cut		
1050	Posthole fill. Orange-brown sandy silt	0.33m diameter	0.34m
1051	Posthole cut	0.33m diameter	0.34m
1052	Posthole fill. Orange brown sandy silt	0.31m diameter	0.2m
1053	Posthole cut	0.31m diameter	0.2m
1054	Posthole fill. Orange brown sandy silt	0.32m diameter	0.19m
1055	Posthole cut	0.32m diameter	0.19m
1700	Pit cut	1.55m in diameter	1.1m
1701	Pit fill. Mid greyish brown silty clay	1.55m in diameter	0.3m
1702	Pit fill. Mid yellowish brown sandy silty clay	1.4m in diameter	0.4m
1703	Pit fill. Mid greyish brown sandy silty clay	1.35m in diameter	0.37m
1704	Pit fill. Mid yellowish brown silty sandy clay	1.5m in diameter	0.7m
1705	Pit fill. Mid greyish brown silty clay	1.5m in diameter	0.5m
1706	Pit fill. Mid yellowish brown clay	1.55m in diameter	0.08m
1707	Pit fill. Mid brownish orange silty clay	0.6m x 0.82m	0.32m
1708	Pit cut	1.3m x 1.1m	0.6m
1709	Pit fill. Mid brownish grey sandy clay silt	1.3m x 1.1m	0.4m
1710	Pit fill. Mid yellowish brown clay sand	1.3m x 1.1m	0.6m
1711	Tree bole cut	1.2m x 0.4m	0.25m
1712	Tree bole fill. Mid greyish brown silty clay	1.2m x 0.4m	0.25m
1713	Pit cut	1.44m in diameter	1.2m+
1714	Pit fill. Mid yellowish brown silty clay	1.44m in diameter	0.29m
1715	Pit fill. Light grey clay	1.44m in diameter	0.65m
1716	Pit fill. Black crushed coal	1.44m in diameter	0.93m
1717	Pit fill. Brownish grey	1.44m in diameter	0.5m+
1718	Pit cut	1.53m in diameter	2.8m
1719	Pit fill. Mid yellowish brown sandy clay silt	1.53m in diameter	0.35m
1720	Pit fill. Mid greenish blue silty clay	1.53m in diameter	0.38m
1721	Pit fill. Mid brownish grey sandy clay	1.53m in diameter	2.38m
1722	Post hole cut	0.45m in diameter	0.12m
1723	Post hole fill. Mid greyish brown sandy silt	0.45m in diameter	0.12m
1724	Tree bole cut.	1.8m x 0.95m	0.6m+
1725	Tree bole fill. Mid greyish brown sandy silt	1.8m x 0.55m	0.25
1726	Tree bole fill. Light brown clay	1.8m x 0.95m	0.6m+
1727	Pit cut	2.36m in diameter	1.2m+
1728	Pit fill. Mid yellowish brown sandy silt	2.36m in diameter	0.64m
1729	Pit fill. Mid bluish grey sandy silt	1.35m in diameter	0.62m
1730	Pit fill. Mid bluish grey silty sand and stone	1.35m in diameter	0.54m
1731	Pit fill. Dark brownish grey sandy clay	1.35m in diameter	0.08m+
1732	Natural subsoil. Bedrock and variable silty clay	Trench	

Drawing No	Section/plan	Contexts	Scale	Sheet size
1	s	1045	1:10	A3
2	s	1021	1:10	A3
3	s	1021/1011	1:10	A3
4	s	1024/1026	1:10	A3
5	s	1018	1:10	A3
6	s	1030	1:10	A3
7	s	1034	1:10	A3
8	s	1037	1:10	A3
9	s	1041	1:10	A3
10	p	area C	1:50	A3
11	p	area C	1:50	A3
12	s	1051	1:10	A3
13	s	1053	1:10	A3
14	s	1055	1:10	A3
15	p	1051-5	1:50	A3
16	s	2003	1:10	A3
17	s	2016/2019	1:10	A3
18	s	2021	1:10	A3
19	s	2024	1:10	A3
20	s	2028	1:10	A3
21	s	2023	1:10	A3
22	s	2033	1:10	A3
23	s	2035	1:10	A3
24	s	2038	1:10	A3
25	s	2041	1:10	A3
26	s	2045/2048	1:10	A3
27	s	2006	1:10	A3
28	s	2009	1:10	A3
29	s	2051	1:10	A3
30	s	2011	1:10	A3
31	s	2013	1:10	A3
32	s	2053	1:10	A3
33	s	2059	1:10	A3
34	p	area B	1:50	A3
35	p	area B	1:50	A3
36	p	area B	1:50	A3
37	s	2064	1:10	A3
38	s	2064	1:10	A3
39	s	2066	1:10	A3
40	s	2068	1:10	A3
41	s	2071	1:10	A3
42	s	2073	1:10	A3
43	p	area B	1:50	A3
44	p	area B	1:50	A3
45	s	2075	1:10	A3
46	p	area A	1:50	A3
47	s	5006	1:10	A3

Drawing No	Section/plan	Contexts	Scale	Sheet size
48	s	5004	1:10	A3
49	s	5012	1:10	A3
50	s	5026	1:10	A3
51	s	5040	1:10	A3
52	s	5049	1:10	A3
53	s	cellar	1:10	A3
54	p	area A	1:50	A3
55	p	Area A	1:50	A3
56	s	5019	1:10	A3
57	s	5014	1:10	A3
58	s	5018	1:10	A3
59	p	area A	1:50	A3
59	p	area A	1:50	A3
59	p	area A	1:50	A3
59	p	area A	1:50	A3
59	p	area A	1:50	A3
61	S	area C	1:10	A3
62	S	area C	1:10	A3
63	S	area C	1:10	A3
64	S	area C	1:10	A3
65	S	area C	1:10	A3
66	S	area C	1:10	A3
67	S	area C	1:10	A3
68	P	area C	1:20	A3
69	P	area C	1:20	A3
70	P	area C	1:20	A3
71	P	area C	1:20	A3
72	P	area C	1:20	A3
73	P	area C	1:20	A3
74	P	area C	1:20	A3

APPENDIX 5 - Specification for an Archaeological Watching Brief at the Former Killingbeck Hospital Site, Leeds (WYAAS 2005)

WYAS ADVISORY SERVICE:

SPECIFICATION FOR AN ARCHAEOLOGICAL WATCHING BRIEF AT THE FORMER KILLINGBECK HOSPITAL SITE, LEEDS.

Specification prepared at the request of Mike Griffiths & Associates Ltd (acting for Shepherd Homes) on behalf of Leeds City Council.

1. Summary

1.1 The former Killingbeck Hospital site contains distinct areas with varying levels of archaeological interest, and correspondingly different levels of archaeological evaluation and recording are proposed. A limited amount of archaeological work (consisting of an excavation, two areas of archaeological stripping and recording, a watching brief and a building record), is proposed to record the surviving below-ground archaeology at the site.

1.2 This specification deals only with the watching brief element of the work. Separate specifications have been prepared for the other elements.

1.3 This specification has been prepared by the curatorial branch of the West Yorkshire Archaeology Service, the holders of the West Yorkshire Sites and Monuments Record.

2. Site Location & Description

Grid Reference: SE 348 344

2.1 The site is situated on the northern side of the A64 York Road on the eastern approach to Leeds, 5km from the city centre. The site is an irregular piece of land covering an area of c. 11.35ha. The site is situated on a plateau which slopes upwards gradually from 63m AOD in the south to 77m AOD in the north. The land falls away steeply to the north, west and south beyond the site boundary. Access is gained from the A64 York Road via a tree-lined avenue.

2.2 The underlying geology comprises sandstones, mudstones and shales of the Lower Coal Measures.

2.3 Prior to the commencement of demolition and site preparation works in March 2005, the land was occupied by concrete foundations, rubble and debris resulting from the hospital demolition in 1997, some areas of small shrubs, grass and scrub, and two standing buildings (a formerly Listed tuberculosis hospital building and a brick electricity sub-station).

2.4 At the time of writing, demolition and site preparation works are underway. The tuberculosis hospital building and the sub-station have been demolished and some areas of the site have been cleared of vegetation or stripped of topsoil.

2.5 The watching brief will cover all areas of the site, excluding Areas A, B and C which are covered by separate specifications (see attached plan).

3. Planning Background

3.1 An archaeological desk-based assessment was undertaken in 2003 by Field Archaeology Specialists (SMR report ref.: 1348), on behalf of Shepherd Homes Ltd, prior to their application for planning permission to develop this site.

3.2 Leeds City Council Planning Authority were advised by the WYAS Advisory Service that there was reason to believe that important archaeological remains may be affected by the proposed development of this site. Planning consent (ref: 34/50/04/FU) for the residential development of the site (143 dwelling houses and 299 flats) was granted to Shepherd Homes Ltd, with an archaeological condition attached.

3.3 Contrary to the planning condition relating to archaeology, Shepherd Homes Ltd commenced site works without having an approved scheme of archaeological investigations in place.

3.4 This specification for the required archaeological recording has been prepared by the curatorial branch of the West Yorkshire Archaeology Service at the request of Mr Steve Timms of Mike Griffiths and Associates, acting on behalf of Shepherd Homes Ltd, to detail the requirements for the necessary archaeological works.

4. Archaeological Interest

4.1 The development site potentially contains below-ground remains relating to the Roman and medieval/post-medieval periods.

4.2 The projected route of a Roman road (Margary 712) is thought to cross the southern part of the development site (SMR ref. PRN 3539). No physical evidence has been found for the road previously but evidence for its continuation into Seacroft has been reinforced by the discovery of two Roman coins in 1858 (SMR ref. PRN 1931; FAS 2003).

4.3 Documentary evidence indicates that the Knights Hospitallers held land in Killingbeck in 1300. A survey of Seacroft in 1341 described Seacroft Manor as having two granges, one of which was located at Killingbeck Farm to the west of the development site.

4.4 Cartographic evidence indicates that Killingbeck Hall lay just beyond the southern boundary of the development site on the route of the proposed sewer and access road (SMR ref. PRN 4984). The building is known to have existed in the 18th century. It was described by Pevsner as '...a minor seven bay house of two and a half storeys...' (1967, 337), recorded by the RCHME in 1976, and demolished in 1978. However, documentary evidence dating to the construction of the hall indicates that the building had an antecedent that survived in the grounds as a ruin until the mid-19th century. The earlier hall may be of medieval origin and it is possible that remains of this structure and ancillary buildings lie within the development area.

4.5 In the post-medieval period the development site appears to have comprised farmland associated with Killingbeck Farm and, ancillary buildings and gardens associated with Killingbeck Hall.

4.6 Killingbeck Hospital was constructed in the grounds of Killingbeck Hall after the latter was sold to the Leeds Corporation in 1898 (SMR ref. PRN 6889). The hall was used as the administration block for the hospital. The hospital was first built as a smallpox hospital in 1899-1904 and subsequently converted to a tuberculosis sanitarium. A new smallpox hospital was built on the site of Killingbeck Farm, to the west of the development site. A further tuberculosis block, a women's ward, was built in 1936. This structure, built in the International Style, was Listed at Grade II in 1997. Killingbeck Hospital closed in 1997 and the buildings, apart from the Listed structure, were demolished. Subsequent vandalism destroyed many of the Listed Building's architectural features and rendered it unsafe to enter; the building was de-listed in February 2004 and demolished without archaeological recording in 2005.

4.7 This specification relates to all parts of the development area apart from Areas A, B and C.

5. Aim of the Watching Brief

5.1 The aim of the watching brief is to identify and record the presence/absence, extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits which are disturbed or exposed as a result of groundworks in the area of interest.

5.2 This work will mitigate the destruction of buried archaeological remains through 'preservation by record'.

6. General Instructions

6.1 Health and Safety

The archaeologists on site will naturally operate with due regard for Health and Safety regulations, and the contractor must ensure that all relevant requirements are met with regard both to site personnel and to members of the public. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations prior to submission of the tender. **The WYAS Advisory Service and its officers cannot be held responsible for any accidents that may occur to outside contractors engaged to undertake this work while attempting to conform to this specification.**

6.2 Confirmation of Adherence to Specification

Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to the WYAS Advisory Service, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WYAS Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. **Modifications presented in the form of a re-written project brief/design will not be considered by the WYAS Advisory Service.**

6.3 Confirmation of Timetable and Contractors' Qualifications

Prior to the commencement of *any work*, the archaeological contractor should provide the WYAS Advisory Service **in writing** with a projected timetable for the site work, and with details regarding staff structure and numbers. The names and *curriculum vitae* of key project members (the project manager, site supervisor, any proposed specialists *etc.*), along with details of any specialist sub-contractors, should also be supplied to the WYAS Advisory Service (if *C.V.s* have not previously been supplied). All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of the WYAS Advisory Service.

6.4 Documentary Research

Prior to the commencement of *fieldwork*, the contractor should obtain a copy of the desk-based assessment for the site. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the SMR makes a charge for consultations of a commercial nature. The results of this exercise should be used to inform the whole project. **Please note, however, that a formal desk-based report is not required and the results of this stage of work should be incorporated in the final report.**

7. Watching Brief Methodology

7.1 An archaeologist should be present on site during the excavation of any area below a depth of 0.15m in the area defined in paragraph 2.1, whether this be for site preparation, foundation trenches, service trenches or landscaping. The archaeologist should view the area as it is being dug and any trench sections after excavation has been completed. Where archaeology is judged to be present, the excavated area should be rapidly cleaned and the need for further work assessed. Where appropriate, any features and finds should then be quickly hand excavated, sampled if appropriate, and recorded, within the confines of the excavated trench. Features of possible archaeological concern should be accurately located on a site plan and recorded by photographs, scale drawings (including height above O.D.) and written description sufficient to permit the preparation of a report on the site.

7.2 Excavated soil should be searched as practicable for finds.

7.3 The actual areas of ground disturbance (even if no archaeological remains are present) will be recorded on a suitable base map/development plan and the stratigraphic sequence and the depth of the excavations will be briefly recorded.

7.4 The intention of the archaeological watching brief is not to unduly delay the work of other contractors on site. This work should not, therefore prejudice the progress of the main or subsidiary contractor's work, except by prior agreement and on-site co-operation. The archaeologist shall not excavate any area beyond those scheduled for destruction by the proposed development.

7.5 If, in the professional judgement of the archaeologist, the watching brief reveals below-ground conditions which indicate that potentially archaeological levels are absent, the archaeologist may contact the WYAS Advisory Service to discuss reducing or curtailing the requirements. The work may only be curtailed with the prior agreement of the WYAS Advisory Service and written confirmation of the agreement of the WYAS Advisory Service to any variations will be provided.

8. Unexpectedly Significant or Complex Discoveries

8.1 Should there be, in the professional judgement of the archaeologist on site, unexpectedly significant or complex discoveries made that warrant more detailed recording than possible within the terms of this specification, then the archaeological contractor is to urgently contact the WYAS Advisory Service with the relevant information to enable the matter to be resolved with the developer.

8.2 Any human remains that are discovered must initially be left in-situ, covered and protected. If removal is necessary, this must comply with the relevant Home Office and any local environmental health regulations.

8.3 The terms of the Treasure Act, 1996 must be followed with regard to any finds, which might fall within its purview. Any such finds must be removed to a safe place and reported to the local coroner as required by the procedures laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

9. Monitoring

9.1 Notification

9.1.1 The project will be monitored as necessary and practicable by the WYAS Advisory Service, in its role as "curator" of the county's archaeology. The Advisory Service should receive as much notice as possible and certainly one week, of the intention to start fieldwork. This notification is to be supplied in writing, and copied to the relevant District Museum (see below). As a courtesy, English Heritage's Regional Science Adviser should also be notified of the intention to commence fieldwork (contact Ian Panter: tel. 01904 601983; email ian.panter@english-heritage.org.uk). A copy of the contractor's risk assessment should accompany notification of intention to commence work.

9.2 Access/Monitoring Methodology

9.2.1 The representative of the WYAS Advisory Service will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The Advisory Service's representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of the Advisory Service's representative, by the next agreed site

meeting. Access is also to be afforded at any reasonable time to English Heritage's Regional Archaeological Scientific Advisor.

10. Archive Deposition

10.1 Before commencing any fieldwork, the archaeological contractor must determine the requirements for the deposition of the excavation archive. Leeds Museums and Galleries do not currently accept archives resulting from archaeological fieldwork and discussions are continuing as to the most appropriate location for the excavation archive. In this instance the WYAS Advisory Service will take the archive but the requirements of the Leeds Museums and Galleries are to be adhered to (see Appendix 1).

10.2 The deposition of the archive must be accompanied by a storage fee, currently £113 per standard box, payable to West Yorkshire Joint Services. This is the current fee charged by Leeds Museums and Galleries. The contractor will be charged the amount correct at the time of deposition.

10.3 The archaeological contractor should give representatives of the Leeds Museums and Galleries sufficient notice of start of works so that they may visit the site to view work in progress, talk to staff and take photographs.

10.4 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with a public body, initially the WYAS Advisory Service, but eventually it is hoped, with Leeds Museum.

10.5 It is the responsibility of the archaeological contractor to meet Leeds Museums' requirements with regard to the preparation of fieldwork archives for deposition (see Appendix 1).

11. Post-excavation Work

11.1 On completion of the fieldwork, any samples shall be processed and all finds shall be cleaned, identified, assessed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Finds of 20th century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date should be retained and archived.

11.2 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, and fully labelled photographs. A quantified index to the field archive should form an appendix to the report. The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see Section 10 below). In the absence of this agreement the field archive (less finds) is to be deposited in the West Yorkshire Sites and Monuments Record (SMR).

11.3 Report Format and Content

11.3.1 A report should be produced to provide background information, a summary of the works carried out, a description and separate interpretation of any features and finds identified. Details of the report's style and format are to be determined by the archaeological contractor, but it should include a full bibliography, a quantified index to the site archive and as an appendix, a copy of this specification. The report illustrations should include, as a minimum, a location map at a reasonable known scale plus any drawings and photographs.

11.3.2 If nothing of archaeological interest is identified during the course of the watching brief, then a summary report will be adequate, as long as sufficient details are supplied for SMR purposes. Illustrations would not be required, although it would be anticipated that black and white prints would form part of the archival record. A summary record should include: (1) details of the commissioning body; (2) the nature of the development and resultant ground disturbance; (3) the approximate position of any ground disturbance viewed with relation to adjacent existing fixed points; (4) the date(s) of fieldwork; (5) name(s) of fieldworker(s); (6) written observations on the nature and depth of deposits observed (this may include annotated sketch sections); (7) the conditions under which they were observed (for example, details of weather conditions, ease of access and views, attitude of other organisations *etc.*); (8) a quantified index to the field archive; (9) details of the archives present location and intended deposition and (10) a copy of this specification.

11.4 Summary for Publication

11.4.1 The attached summary sheet should be completed and submitted to the WYAS Advisory Service for inclusion in the summary of archaeological work in West Yorkshire published biannually by that office within *Archaeology and Archives In West Yorkshire*.

11.5 Report Deposition

11.5.1 A copy of the report is to be supplied to the Sites and Monuments Record held by the WYAS Advisory Service within a period of one month following completion of fieldwork unless specialist reports are awaited. In the latter case a revised date should be agreed with the Advisory Service. The report will be supplied on the understanding that it will become a public document after an appropriate period of time (generally not exceeding six months). A copy shall also be supplied to English Heritage's regional Science Adviser at the same time (Ian Panter, English Heritage, 37, Tanner Row, York YO1 6WP).

11.6 Publicity

11.6.1 If the project is to be publicised in any way (including media releases, publications *etc.*), then it is expected that the WYAS Advisory Service will be given the opportunity to consider whether it wishes its collaborative role to be acknowledged, and if so, the form of words used will be at the Advisory Services' discretion.

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 It should be noted that this specification is based upon records available in the County Sites and Monuments Record and on a brief examination of the site by the WYAS Advisory Service. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or
- iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification,

then it is expected that the archaeologist will contact the WYAS Advisory Service as a matter of urgency.

12.1.2 If contractors have not yet been appointed, any variations which the WYAS Advisory Service considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, the WYAS Advisory Service will resolve the matter in liaison with the developer and the Local Planning Authority.

12.2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained the WYAS Advisory Service's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WYAS Advisory Service being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to the WYAS Advisory Service without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

West Yorkshire Archaeology Service – Advisory Service
Andrea Burgess
Senior Archaeologist

23 May 2005

County Sites and Monuments Record
WYAS Advisory Service
Registry of Deeds
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APPENDIX 6 - Specification for an Archaeological Excavation (Area A) at the Former Killingbeck Hospital Site, Leeds (WYAAS 2005)

[REDACTED]

**WYAS ADVISORY SERVICE:
SPECIFICATION FOR AN ARCHAEOLOGICAL EXCAVATION (AREA A) AT THE
FORMER KILLINGBECK HOSPITAL SITE, LEEDS.**

Specification prepared at the request of Mike Griffiths & Associates Ltd (acting for Shepherd Homes) on behalf of Leeds City Council.

1. Summary

1.1 The former Killingbeck Hospital site contains distinct areas with varying levels of archaeological interest, and correspondingly different levels of archaeological evaluation and recording are proposed. A limited amount of archaeological work (consisting of an excavation, two areas of archaeological stripping and recording, a watching brief and some building recording), is proposed to record the surviving below-ground archaeology at the site.

1.2 This specification deals only with the excavation element of the work. Separate specifications have been prepared for the other elements.

1.3 This specification has been prepared by the curatorial branch of the West Yorkshire Archaeology Service, the holders of the West Yorkshire Sites and Monuments Record.

2. Site Location & Description

Grid Reference: SE 348 344

2.1 The site is situated on the northern side of the A64 York Road on the eastern approach to Leeds, 5km from the city centre. The site is an irregular piece of land covering an area of c. 11.35ha. The site is situated on a plateau which slopes upwards gradually from 63m AOD in the south to 77m AOD in the north. The land falls away steeply to the north, west and south beyond the site boundary. Access is gained from the A64 York Road via a tree-lined avenue.

2.2 The underlying geology comprises sandstones, mudstones and shales of the Lower Coal Measures.

2.3 Prior to the commencement of demolition and site preparation works in March 2005, the land was occupied by concrete foundations, rubble and debris resulting from the hospital demolition in 1997, some areas of small shrubs, grass and scrub, and two standing buildings (a formerly Listed tuberculosis hospital building and a brick electricity sub-station).

2.4 At the time of writing, demolition and site preparation works are underway. The tuberculosis hospital building and the sub-station have been demolished and some areas of the site have been cleared of vegetation or stripped of topsoil.

2.5 The specific area for excavation, as detailed in this document, lies to the south of the main development site, in the area thought to correspond with the site of Killingbeck Hall (SE 3425 3465) and shown as 'AREA A' on the attached plan.

3. Planning Background

3.1 An archaeological desk-based assessment was undertaken in 2003 by Field Archaeology Specialists (SMR report ref.: 1348), on behalf of Shepherd Homes Ltd, prior to their application for planning permission to develop this site.

3.2 Leeds City Council Planning Authority were advised by the WYAS Advisory Service that there was reason to believe that important archaeological remains may be affected by the proposed development of this site. Planning consent (ref: 34/50/04/FU) for the residential development of the site (143 dwelling houses and 299 flats) was granted to Shepherd Homes Ltd, with an archaeological condition attached.

3.3 Contrary to the planning condition relating to archaeology, Shepherd Homes Ltd commenced site works without having an approved scheme of archaeological investigations in place.

3.4 This specification for the required archaeological recording has been prepared by the curatorial branch of the West Yorkshire Archaeology Service at the request of Mr Steve Timms of Mike Griffiths and Associates, acting on behalf of Shepherd Homes Ltd, to detail the requirements for the necessary archaeological works.

4. Archaeological Interest

4.1 The development site potentially contains below-ground remains relating to the Roman and medieval/post-medieval periods.

4.2 The projected route of a Roman road (Margary 712) is thought to cross the southern part of the development site (SMR ref. PRN 3539). No physical evidence has been found for the road previously but evidence for its continuation into Seacroft has been reinforced by the discovery of two Roman coins in 1858 (SMR ref. PRN 1931; FAS 2003).

4.3 Documentary evidence indicates that the Knights Hospitallers held land in Killingbeck in 1300. A survey of Seacroft in 1341 described Seacroft Manor as having two granges, one of which was located at Killingbeck Farm to the west of the development site.

4.4 Cartographic evidence indicates that Killingbeck Hall lay just beyond the southern boundary of the development site on the route of the proposed sewer and access road (SMR ref. PRN 4984). The building is known to have existed in the 18th century. It was described by Pevsner as '...a minor seven bay house of two and a half storeys...' (1967, 337), recorded by the RCHME in 1976, and demolished in 1978. However, documentary evidence dating to the construction of the hall indicates that the building had an antecedent that survived in the grounds as a ruin until the mid-19th century. The earlier hall may be of medieval origin and it is possible that remains of this structure and ancillary buildings lie within the development area.

4.5 In the post-medieval period the development site appears to have comprised farmland associated with Killingbeck Farm and gardens associated with Killingbeck Hall.

4.6 Killingbeck Hospital was constructed in the grounds of Killingbeck Hall after the latter was sold to the Leeds Corporation in 1898 (SMR ref. PRN 6889). The hall was used as the administration block for the hospital. The hospital was first built as a smallpox hospital in 1899-1904 and subsequently converted to a tuberculosis sanitarium. A new smallpox hospital was built on the site of Killingbeck Farm, to the west of the development site. A further tuberculosis block, a women's ward, was built in 1936. This structure, built in the International Style, was Listed at Grade II in 1997. Killingbeck Hospital closed in 1997 and the buildings, apart from the Listed structure, were demolished. Subsequent vandalism destroyed many of the Listed Building's architectural features and rendered it unsafe to enter; the building was de-listed in February 2004 and demolished without archaeological recording in 2005.

4.7 This specification relates to **AREA A** – the site of Killingbeck Hall.

5. Aims of the Excavation

5.1 General Aims

5.1.1 The aim of this project is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the sewer and road route, and to record at an appropriate level, archaeological features encountered in the trench.

5.1.2 This work will serve two purposes:

- To mitigate the destruction of buried archaeological remains within the road and sewer corridor through 'preservation by record'
- The results will help to determine whether significant archaeological remains are at risk from compaction or hydrological changes within the wider easement corridor and will inform the need for additional excavation and recording works

5.2 Specific Aims

The excavation will, where possible:

- Identify and record evidence of any structures, features or deposits, including those of Killingbeck Hall and its service buildings;
- Investigate the date and duration of such finds;
- Interpret and discuss any identified archaeological features within a local and/or regional context as appropriate;
- Assess the potential for significant archaeological remains to extend beyond the excavated area;
- Inform the need for further excavation to ensure 'preservation by record' of any archaeological remains located within either the sewer trench route or the wider easement corridor.

6. General Instructions

6.1 Health and Safety

The archaeologists on site will naturally operate with due regard for Health and Safety regulations, and the contractor must ensure that all relevant requirements are met with regard both to site personnel and to members of the public. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations prior to submission of the tender. **The WYAS Advisory Service and its officers cannot be held responsible for any accidents that may occur to outside contractors engaged to undertake this work while attempting to conform to this specification.**

6.2 Confirmation of Adherence to Specification

Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to the WYAS Advisory Service, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WYAS Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. **Modifications presented in the form of a re-written project brief/design will not be considered by the WYAS Advisory Service.**

6.3 Confirmation of Timetable and Contractors' Qualifications

Prior to the commencement of *any work*, the archaeological contractor should provide the WYAS Advisory Service **in writing** with a projected timetable for the site work, and with details regarding staff structure and numbers. The names and *curriculum vitae* of key project members (the project manager, site supervisor, any proposed specialists *etc.*), along with details of any specialist sub-contractors, should also be supplied to the WYAS Advisory Service (if C.V.s have not previously been supplied). All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of the WYAS Advisory Service.

6.4 Documentary Research

Prior to the commencement of *fieldwork*, the contractor should visit the County SMR, in order to gain an overview of the archaeological/historical background of the site and environs, and to examine plans of Killingbeck Hall. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the SMR makes a charge for consultations of a commercial nature. The results of this exercise should be used to inform the whole project. **Please note, however, that a formal desk-based report is not required and the results of this stage of work should be incorporated in the final report.**

7. Excavation Methodology

7.1 Trench Size and Placement

7.1.1 The work will initially involve the excavation of one trench. **The location of the trench will be in accordance with the enclosed plan and as detailed below:**

Area	Dimensions	Rationale
A	c. 4m x 96m	To fully investigate and record the site of the former Killingbeck Hall and its any earlier buildings.

Total area: 384 square metres

7.1.2 The results of the excavation of Area A will inform the need for any further recording work to be undertaken within the sewer easement or road corridor (see 5.1.2 above). Any such works will be the subject of a separate specification, to be prepared by the WYAS Advisory Service.

7.2 Method of Excavation

7.2.1 The trench may be opened and the topsoil and recent overburden removed down to the first significant archaeological horizon in successive level spits of a **maximum** 0.2m. thickness, by the use of an appropriate machine using a wide toothless ditching blade. **Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits.** Any machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon may be exposed by the machine, but must then be cleaned by hand and inspected for features and then dug by hand.

7.3 Method of Recording

7.3.1 The trenches are to be recorded according to the normal principles of stratigraphic excavation. The complete stratigraphy of each trial trench down to undisturbed natural deposits is to be recorded even where no archaeological deposits have been identified.

7.3.2 All stratified artefacts are to be retained for processing and analysis. Unstratified 20th-century material may be discarded. As a general rule for tendering purposes, it would be expected that all pre-20th century pits would be half-sectioned, recorded, sampled and then fully excavated (subject to over-riding safety considerations); post-holes and linear structural features cut into the natural to be at least half-sectioned, recorded and sampled sufficiently to meet the objectives of the exercise. At least 20% (or a minimum of 1m) of the length of linear boundary features should be excavated. Domestic, agricultural, industrial, funerary or ritual structures and buildings such as huts, barns, houses, kilns, gateways, roads, working hollows, floor levels, hearths *etc.* will be excavated in total or to a degree whereby their extent (within the development area), nature, form, date, function and relationships to other features and deposits can be established.

7.3.3 Suitable samples for dating should be taken if encountered during trenching. In dealing with a project of this nature in which details are unquantifiable at this stage, it is important that a degree of flexibility is retained in the approach to the work. Such flexibility, however, is meant to be applied within the overall bounds of the

investigation recommended by the Advisory Service to the Planning Authority; it should not result in an additional burden on the contracting body, except by prior agreement between all bodies concerned.

7.4 Use of Metal Detectors on Site

7.4.1 Spoil heaps are to be scanned for non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th-century material and earlier should be retained.)

7.4.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not.

7.4.3 To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at [*location of site*] between the dates of [*insert dates*], [*name of person contributing to project*] is working under direction or permission of [*name of archaeological organisation*] and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996."

7.5 Environmental Sampling Strategy

7.5.1 Deposits must be sampled for retrieval and assessment of the preservation conditions and potential for analysis of all bioarchaeological remains. A sampling strategy must be agreed with a recognised bioarchaeologist, and the sampling methods should follow the procedures outlined by the Association for Environmental Archaeology in their Working Paper no.2 (1995), "Environmental Archaeology and Archaeological Evaluations". Provision should also be made for the specialist to visit the site and discuss the sampling strategy, if necessary.

7.6 Conservation Strategy

7.6.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle only artefacts of a "displayable" quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be X-rayed if necessary, and conservation costs should also be included as a contingency.

7.7 Documentation

7.7.1 The actual areas of trenching and any archaeological features within the trenches, should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a report on the material. The site grid is to be accurately tied into the National Grid and located on the largest scale map available of the area (either 1:2500 or 1:1250).

7.8 Location of Services, etc.

7.8.1 The archaeological contractors will be responsible for locating any drainage pipes, service pipes, cables *etc.* which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

7.9 Human Remains

7.9.1 Any human remains that are discovered must initially be left in-situ, covered and protected. If removal is necessary, this must comply with the relevant legislation and any Home Office and local environmental health regulations.

7.10 Treasure Act

7.10.1 The terms of the Treasure Act 1996 must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

8. Monitoring

8.1 Notification

8.1.1 The project will be monitored as necessary and practicable by the WYAS Advisory Service, in its role as "curator" of the county's archaeology. The Advisory Service should receive as much notice as possible and certainly one week, of the intention to start fieldwork. This notification is to be supplied in writing, and copied to the relevant District Museum (see para. 9.1 below). As a courtesy, English Heritage's Regional Science Adviser should also be notified of the intention to commence fieldwork (contact Ian Panter: tel. 01904 601983; email ian.panter@english-heritage.org.uk). A copy of the contractor's risk assessment should accompany notification of intention to commence work.

8.2 Access/Monitoring Methodology

8.2.1 The representative of the WYAS Advisory Service will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The Advisory Service's representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of the Advisory Service's representative, by the next agreed site meeting. Access is also to be afforded at any reasonable time to English Heritage's Regional Archaeological Scientific Advisor.

9. Excavation Archives Deposition

9.1 Before commencing any fieldwork, the archaeological contractor must determine the requirements for the deposition of the excavation archive. Leeds Museums and Galleries do not currently accept archives resulting from archaeological fieldwork and discussions are continuing as to the most appropriate location for the excavation

archive. In this instance the WYAS Advisory Service will take the archive but the requirements of the Leeds Museums and Galleries are to be adhered to (see Appendix 1).

9.2 The deposition of the archive must be accompanied by a storage fee, currently £113 per standard box, payable to West Yorkshire Joint Services. This is the current fee charged by Leeds Museums and Galleries. The contractor will be charged the amount correct at the time of deposition.

9.3 The archaeological contractor should give representatives of the Leeds Museums and Galleries sufficient notice of start of works so that they may visit the site to view work in progress, talk to staff and take photographs.

9.4 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with a public body, initially the WYAS Advisory Service, but eventually it is hoped, with Leeds Museum.

9.5 It is the responsibility of the archaeological contractor to meet Leeds Museums' requirements with regard to the preparation of fieldwork archives for deposition (see Appendix 1).

10. Unexpectedly Significant or Complex Discoveries

10.1 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact the WYAS Advisory Service with the relevant information to enable them to resolve the matter with the developer.

11. Post-Excavation Work

11.1 After Completion of Fieldwork

11.1.1 On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Finds of 20th century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date should be retained and archived.

11.1.2 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints. An index to the field archive is to be deposited with the WYAS Advisory Service (preferably as an appendix in the report). The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see para. 9.4 above). In the absence of this agreement the field archive (less finds) is to be deposited with the WYAS Advisory Service.

11.2 Report Format and Content

11.2.1 A report should be produced. The report should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of results produced. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

11.2.2 Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the site investigated (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Site plans should be at an appropriate scale showing trench layout (as dug), features located and, where possible, predicted archaeological deposits. Upon completion of each trench all sections containing archaeological features will be drawn. Section drawings (at a minimum scale of 1:20) must include heights O.D.. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. Where no archaeological deposits are encountered at least one long section of each trench will be drawn.

11.2.3 Artefact analysis is to include the production of a descriptive catalogue with finds critical for dating and interpretation illustrated. Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, and as an appendix, a copy of this specification.

11.3 Summary for Publication

11.3.1 The attached summary sheet should be completed and submitted to the WYAS Advisory Service for inclusion in the summary of archaeological work in West Yorkshire published biannually by that office within *Archaeology and Archives In West Yorkshire*.

11.4 Publicity

11.4.1 If the project is to be publicised in any way (including media releases, publications etc.), then it is expected that the WYAS Advisory Service will be given the opportunity to consider whether it wishes its collaborative role to be acknowledged, and if so, the form of words used will be at the Advisory Services' discretion.

11.5 Report Deposition

11.5.1 A copy of the report is to be supplied to the Sites and Monuments Record held by the WYAS Advisory Service within a period of two months following completion of fieldwork unless specialist reports are awaited. In the latter case a revised date should be agreed with the Advisory Service. The report will be supplied on the understanding that it will become a public document after an appropriate period of time (generally not exceeding six months). A copy shall also be supplied to English Heritage's regional Science Adviser at the same time (Ian Panter, English Heritage, 37, Tanner Row, York YO1 6WP).

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 It should be noted that this specification is based upon records available in the County Sites and Monuments Record and on a brief examination of the site by the WYAS Advisory Service. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or
- iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification,

then it is expected that the archaeologist will contact the WYAS Advisory Service as a matter of urgency.

12.1.2 If contractors have not yet been appointed, any variations which the WYAS Advisory Service considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, the WYAS Advisory Service will resolve the matter in liaison with the developer and the Local Planning Authority.

12.2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained the WYAS Advisory Service's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WYAS Advisory Service being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to the WYAS Advisory Service without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

West Yorkshire Archaeology Service – Advisory Service
Andrea Burgess
Senior Archaeologist

23 May 2005

County Sites and Monuments Record
WYAS Advisory Service
Registry of Deeds
Newstead Road
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APPENDIX 7 - Specification for an Archaeological Strip and Record (Areas B and C) at the Former Killingbeck Hospital Site, Leeds (WYAAS 2005)

[REDACTED]

WYAS ADVISORY SERVICE:

SPECIFICATION FOR AN ARCHAEOLOGICAL STRIP & RECORD (AREAS B & C) AT THE FORMER KILLINGBECK HOSPITAL SITE, LEEDS.

Specification prepared at the request of Mike Griffiths & Associates Ltd (acting for Shepherd Homes) on behalf of Leeds City Council.

1. Summary

1.1 The former Killingbeck Hospital site contains distinct areas with varying levels of archaeological interest, and correspondingly different levels of archaeological evaluation and recording are proposed. A limited amount of archaeological work (consisting of an excavation, two areas of archaeological stripping and recording, a watching brief and a building record), is proposed to record the surviving below-ground archaeology at the site.

1.2 This specification deals only with the strip and record element of the work. Separate specifications have been prepared for the other elements.

1.3 This specification has been prepared by the curatorial branch of the West Yorkshire Archaeology Service, the holders of the West Yorkshire Sites and Monuments Record.

2. Site Location & Description

Grid Reference: SE 348 344

2.1 The site is situated on the northern side of the A64 York Road on the eastern approach to Leeds, 5km from the city centre. The site is an irregular piece of land covering an area of c. 11.35ha. The site is situated on a plateau which slopes upwards gradually from 63m AOD in the south to 77m AOD in the north. The land falls away steeply to the north, west and south beyond the site boundary. Access is gained from the A64 York Road via a tree-lined avenue.

2.2 The underlying geology comprises sandstones, mudstones and shales of the Lower Coal Measures.

2.3 Prior to the commencement of demolition and site preparation works in March 2005, the land was occupied by concrete foundations, rubble and debris resulting from the hospital demolition in 1997, some areas of small shrubs, grass and scrub, and two standing buildings (a formerly Listed tuberculosis hospital building and a brick electricity sub-station).

2.4 At the time of writing, demolition and site preparation works are underway. The tuberculosis hospital building and the sub-station have been demolished and some areas of the site have been cleared of vegetation or stripped of topsoil.

2.5 The specific areas for the strip and record, as detailed in this document, lie in the western part of the development area and are shown as 'AREA B' and 'AREA C' on the attached plan (SE 3433 3472 and SE 3430 3485 respectively).

3.0 Planning Background

3.1 An archaeological desk-based assessment was undertaken in 2003 by Field Archaeology Specialists (SMR report ref.: 1348), on behalf of Shepherd Homes Ltd, prior to their application for planning permission to develop this site.

3.2 Leeds City Council Planning Authority were advised by the WYAS Advisory Service that there was reason to believe that important archaeological remains may be affected by the proposed development of this site. Planning consent (ref: 34/50/04/FU) for the residential development of the site (143 dwelling houses and 299 flats) was granted to Shepherd Homes Ltd, with an archaeological condition attached.

3.3 Contrary to the planning condition relating to archaeology, Shepherd Homes Ltd commenced site works without having an approved scheme of archaeological investigations in place.

3.4 This specification for the required archaeological recording has been prepared by the curatorial branch of the West Yorkshire Archaeology Service at the request of Mr Steve Timms of Mike Griffiths and Associates, acting on behalf of Shepherd Homes Ltd, to detail the requirements for the necessary archaeological works.

4.0 Archaeological Interest

4.1 The development site potentially contains below-ground remains relating to the Roman and medieval/post-medieval periods.

4.2 The projected route of a Roman road (Margary 712) is thought to cross the southern part of the development site (SMR ref. PRN 3539). No physical evidence has been found for the road previously but evidence for its continuation into Seacroft has been reinforced by the discovery of two Roman coins in 1858 (SMR ref. PRN 1931; FAS 2003).

4.3 Documentary evidence indicates that the Knights Hospitallers held land in Killingbeck in 1300. A survey of Seacroft in 1341 described Seacroft Manor as having two granges, one of which was located at Killingbeck Farm to the west of the development site.

4.4 Cartographic evidence indicates that Killingbeck Hall lay just beyond the southern boundary of the development site on the route of the proposed sewer and access road (SMR ref. PRN 4984). The building is known to have existed in the 18th century. It was described by Pevsner as '...a minor seven bay house of two and a half storeys...' (1967, 337), recorded by the RCHME in 1976, and demolished in 1978. However, documentary evidence dating to the construction of the hall indicates that the building had an antecedent that survived in the grounds as a ruin until the mid-19th century. The earlier hall may be of medieval origin and it is possible that remains of this structure and ancillary buildings lie within the development area.

4.5 In the post-medieval period the development site appears to have comprised farmland associated with Killingbeck Farm and, ancillary buildings and gardens associated with Killingbeck Hall.

4.6 Killingbeck Hospital was constructed in the grounds of Killingbeck Hall after the latter was sold to the Leeds Corporation in 1898 (SMR ref. PRN 6889). The hall was used as the administration block for the hospital. The hospital was first built as a smallpox hospital in 1899-1904 and subsequently converted to a tuberculosis sanitarium. A new smallpox hospital was built on the site of Killingbeck Farm, to the west of the development site. A further tuberculosis block, a women's ward, was built in 1936. This structure, built in the International Style, was Listed at Grade II in 1997. Killingbeck Hospital closed in 1997 and the buildings, apart from the Listed structure, were demolished. Subsequent vandalism destroyed many of the Listed Building's architectural features and rendered it unsafe to enter; the building was de-listed in February 2004 and demolished without archaeological recording in 2005.

4.7 This specification relates to **AREA B** and **AREA C** – which may contain buried archaeological remains relating to the medieval and/or post-medieval periods, prior to the construction of Killingbeck Hospital.

5. Aims of the Excavation

5.1 General Aims

5.1.1 The aim of this project is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits, and to record at an appropriate level, archaeological features encountered in the trenches.

5.1.2 This work will mitigate the destruction of buried archaeological remains through 'preservation by record'.

5.2 Specific Aims

5.2.1 The excavation will, where possible:

- Identify and record evidence of any structures, features or deposits which existed prior to the construction of Killingbeck Hospital in the late-19th century;
- Investigate the date and duration of such finds;
- Interpret and discuss any identified archaeological features within a local and/or regional context as appropriate.

6. General Instructions

6.1 Health and Safety

The archaeologists on site will naturally operate with due regard for Health and Safety regulations, and the contractor must ensure that all relevant requirements are met with regard both to site personnel and to members of the public. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations prior to submission of the tender. **The WYAS Advisory Service and its officers cannot be held responsible for any accidents that may occur to outside contractors engaged to undertake this work while attempting to conform to this specification.**

6.2 Confirmation of Adherence to Specification

Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to the WYAS Advisory Service, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WYAS Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. **Modifications presented in the form of a re-written project brief/design will not be considered by the WYAS Advisory Service.**

6.3 Confirmation of Timetable and Contractors' Qualifications

Prior to the commencement of *any work*, the archaeological contractor should provide the WYAS Advisory Service **in writing** with a projected timetable for the site work, and with details regarding staff structure and numbers. The names and *curriculum vitae* of key project members (the project manager, site supervisor, any proposed specialists *etc.*), along with details of any specialist sub-contractors, should also be supplied to the WYAS Advisory Service (if C.V.s have not previously been supplied). All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of the WYAS Advisory Service.

6.4 Documentary Research

Prior to the commencement of *fieldwork*, the contractor should visit the County SMR, in order to gain an overview of the archaeological/historical background of the site and environs, and to examine plans of Killingbeck Hall. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the SMR makes a charge for consultations of a commercial nature. The results of this exercise should be used to inform the whole project. **Please note, however, that a formal desk-based report is not required and the results of this stage of work should be incorporated in the final report.**

7. Excavation Methodology

7.1 Trench Size and Placement

7.1.1 The work will involve the stripping of the whole of Areas B and C in accordance with the enclosed plan

$$\text{Area B} = 8425\text{m}^2$$

$$\text{Area C} = 2610\text{m}^2$$

The contractor should also allow for a contingency allowance of a further 110 square metres (1% of the total area of Areas B and C). The use of the contingency will depend upon the results from the initial stripping. The use of the contingency will be at the decision of the WYAS Advisory Service, whose decision will be issued in writing, if necessary in *retrospect* after site discussions.

7.2 Method of Excavation

7.2.1 Topsoil and recent overburden should be removed down to the first significant archaeological horizon in successive level spits of a **maximum** 0.2m. thickness, by the use of an appropriate machine using a wide toothless ditching blade. **Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits.** Any machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon may be exposed by the machine, but must then be cleaned by hand and inspected for features and then dug by hand.

7.3 Method of Recording

7.3.1 The stripped areas are to be recorded according to the normal principles of stratigraphic excavation. The complete stratigraphy of each area, down to undisturbed natural deposits, is to be recorded even where no archaeological deposits have been identified.

7.3.2 All stratified artefacts are to be retained for processing and analysis. Unstratified 20th-century material may be discarded. As a general rule for tendering purposes, it would be expected that all pre-20th century pits would be half-sectioned, recorded, sampled and then fully excavated (subject to over-riding safety considerations); post-holes and linear structural features cut into the natural to be *at least* half-sectioned, recorded and sampled sufficiently to meet the objectives of the exercise. At least 20% (or a minimum of 1m) of the length of linear boundary features should be excavated. Domestic, agricultural, industrial, funerary or ritual structures and buildings such as huts, barns, houses, kilns, gateways, roads, working hollows, floor levels, hearths *etc.* will be excavated in total or to a degree whereby their extent (within the development area), nature, form, date, function and relationships to other features and deposits can be established.

7.3.3 Suitable samples for dating should be taken if encountered. In dealing with a project of this nature in which details are unquantifiable at this stage, it is important that a degree of flexibility is retained in the approach to the work. Such flexibility, however, is meant to be applied within the overall bounds of the investigation recommended by the Advisory Service to the Planning Authority; it should not result in an additional burden on the contracting body, except by prior agreement between all bodies concerned.

7.4 Environmental Sampling Strategy

7.4.1 Deposits must be sampled for retrieval and assessment of the preservation conditions and potential for analysis of all bioarchaeological remains. A sampling strategy must be agreed with a recognised bioarchaeologist, and the sampling methods should follow the procedures outlined by the Association for Environmental Archaeology in their Working Paper no.2 (1995), "Environmental Archaeology and Archaeological Evaluations". Provision should also be made for the specialist to visit the site and discuss the sampling strategy, if necessary.

7.5 Conservation Strategy

7.5.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation

potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle only artefacts of a "displayable" quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be X-rayed if necessary, and conservation costs should also be included as a contingency.

7.6 Documentation

7.6.1 The actual areas of trenching and any archaeological features within the trenches, should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a report on the material. The site grid is to be accurately tied into the National Grid and located on the largest scale map available of the area (either 1:2500 or 1:1250).

7.7 Location of Services, etc.

7.7.1 The archaeological contractors will be responsible for locating any drainage pipes, service pipes, cables *etc.* which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

7.8 Human Remains

7.8.1 Any human remains that are discovered must initially be left in-situ, covered and protected. If removal is necessary, this must comply with the relevant legislation and any Home Office and local environmental health regulations.

7.9 Treasure Act

7.9.1 The terms of the Treasure Act 1996 must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

8. Monitoring

8.1 Notification

8.1.1 The project will be monitored as necessary and practicable by the WYAS Advisory Service, in its role as "curator" of the county's archaeology. The Advisory Service should receive as much notice as possible and certainly one week, of the intention to start fieldwork. This notification is to be supplied in writing, and copied to the relevant District Museum (see para. 9.1 below). As a courtesy, English Heritage's Regional Science Adviser should also be notified of the intention to commence fieldwork (contact Ian Panter: tel. 01904 601983; email ian.panter@english-heritage.org.uk). A copy of the contractor's risk assessment should accompany notification of intention to commence work.

8.2 Access/Monitoring Methodology

8.2.1 The representative of the WYAS Advisory Service will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The Advisory Service's representative will be provided with a site tour and an overview of the site by the senior archaeologist

11.5 Report Deposition

11.5.1 A copy of the report is to be supplied to the Sites and Monuments Record held by the WYAS Advisory Service within a period of two months following completion of fieldwork unless specialist reports are awaited. In the latter case a revised date should be agreed with the Advisory Service. The report will be supplied on the understanding that it will become a public document after an appropriate period of time (generally not exceeding six months). A copy shall also be supplied to English Heritage's regional Science Adviser at the same time (Ian Panter, English Heritage, 37, Tanner Row, York YO1 6WP).

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 It should be noted that this specification is based upon records available in the County Sites and Monuments Record and on a brief examination of the site by the WYAS Advisory Service. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or
- iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification.

then it is expected that the archaeologist will contact the WYAS Advisory Service as a matter of urgency.

12.1.2 If contractors have not yet been appointed, any variations which the WYAS Advisory Service considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, the WYAS Advisory Service will resolve the matter in liaison with the developer and the Local Planning Authority.

12.2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained the WYAS Advisory Service's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WYAS Advisory Service being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to the WYAS Advisory Service without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

West Yorkshire Archaeology Service – Advisory Service
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23 May 2005

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