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18 – 20 ST. MAURICE'S ROAD, YORK.

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REPORT ON AN ARCHAEOLOGICAL EVALUATION.  
OSA REPORT No: OSA05EV04.

JULY 2005.



**OSA**

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**Report Summary.**

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**REPORT NO:** OSA05EV04.**SITE NAME:** 18-20 St. Maurice's Road, York**COUNTY:** North Yorkshire.**NATIONAL GRID REFERENCE:** SE 6067 5221.**PLANNING APPLICATION No:****COMMISSIONED BY:** David Chapman Associates  
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YO10 3EP*tel* (01904) 411673*fax* (01904) 414522*mobile* (07767) 385766*e-mail* mail@onsitearchaeology.co.uk**PERIODS REPRESENTED:** Romano British, Medieval, Post-Medieval and  
Early Modern

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## 1.0 Abstract.

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*An archaeological evaluation was carried out by On-Site Archaeology at 18-20 St. Maurice's Road, York on behalf of MODA Developments Ltd. The evaluation comprised excavation of two trial trenches in order to determine the character and date of archaeological deposits on the development site. This was followed by a more extensive ground reduction around one trench to determine whether burials were present. The evaluation took place over seven days from the 22<sup>nd</sup> to 29<sup>th</sup> March, the 25<sup>th</sup> and 26<sup>th</sup> April and the 13<sup>th</sup> May, 2005.*

*Significant archaeological stratigraphy was revealed during the evaluation, to a depth of 2.6metres. Romano-British structures, pits, and one burial as well as possible medieval structures, pits, and a ditch were sealed by thick deposits of organic soil. An assemblage of Romano-British, Medieval Post-Medieval and Early Modern finds was collected.*



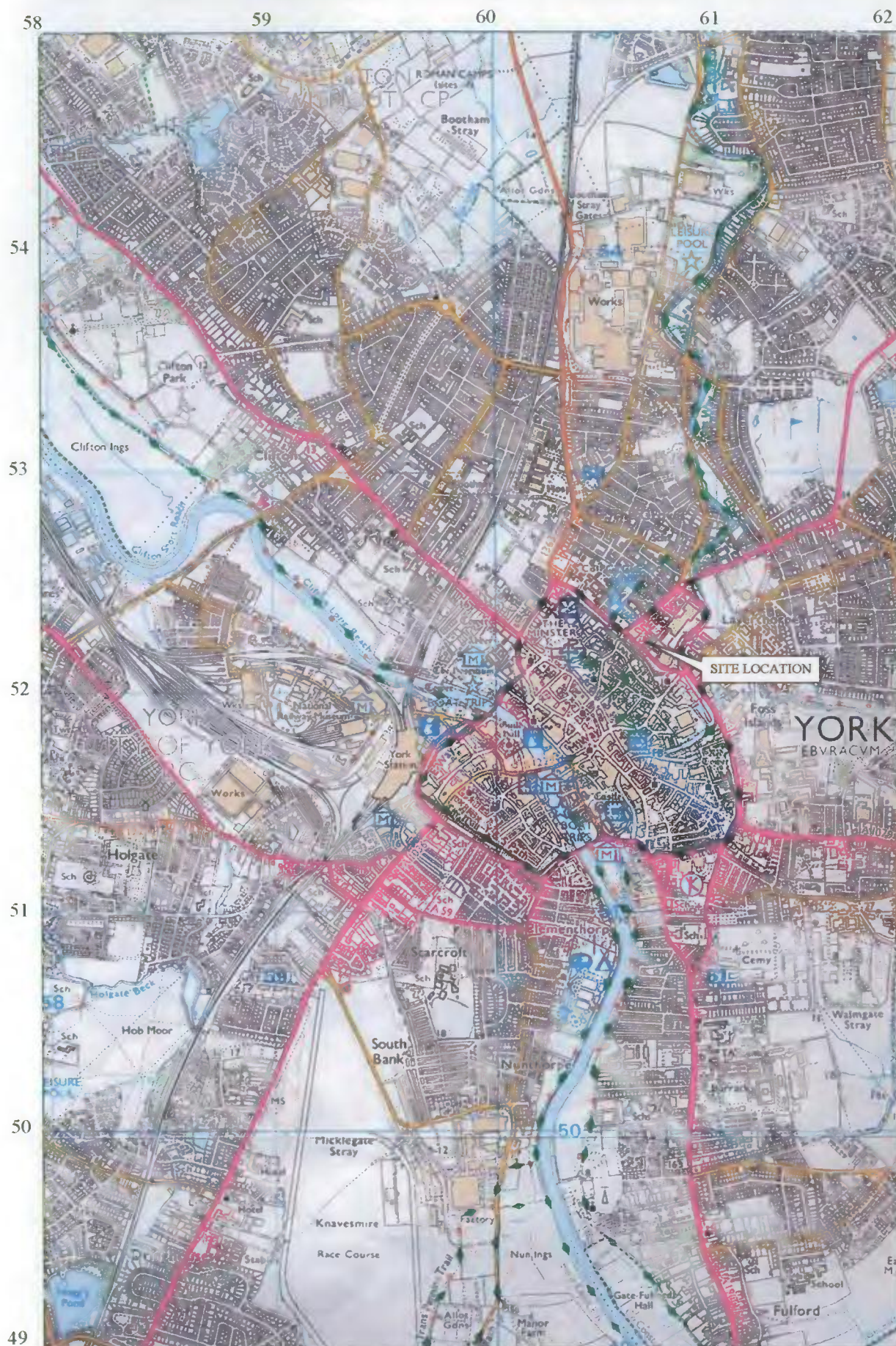


Figure 1. Site Location (NGR SE 6067 5221).

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## 2.0 Site Location, Geology, Topography and Land Use.

The development site is located immediately outside the walled centre of the City of York. It comprises a rectangular plot measuring approximately 25m by 15m, centred on National Grid Reference SE 6067 5221.

The site is bounded to the southwest by St. Maurice's Road, to the southeast by Cloister Walk and to the northeast and northwest by residential properties. Prior to the evaluation the site was occupied by two residential properties and an attached warehouse structure. The warehouse was demolished prior to the archaeological work.

The site was relatively level with the ground surface at 14.33m AOD at the St. Maurice's street front and at 14.40m AOD at the rear of the property. The drift geology was glacial sand and clay.

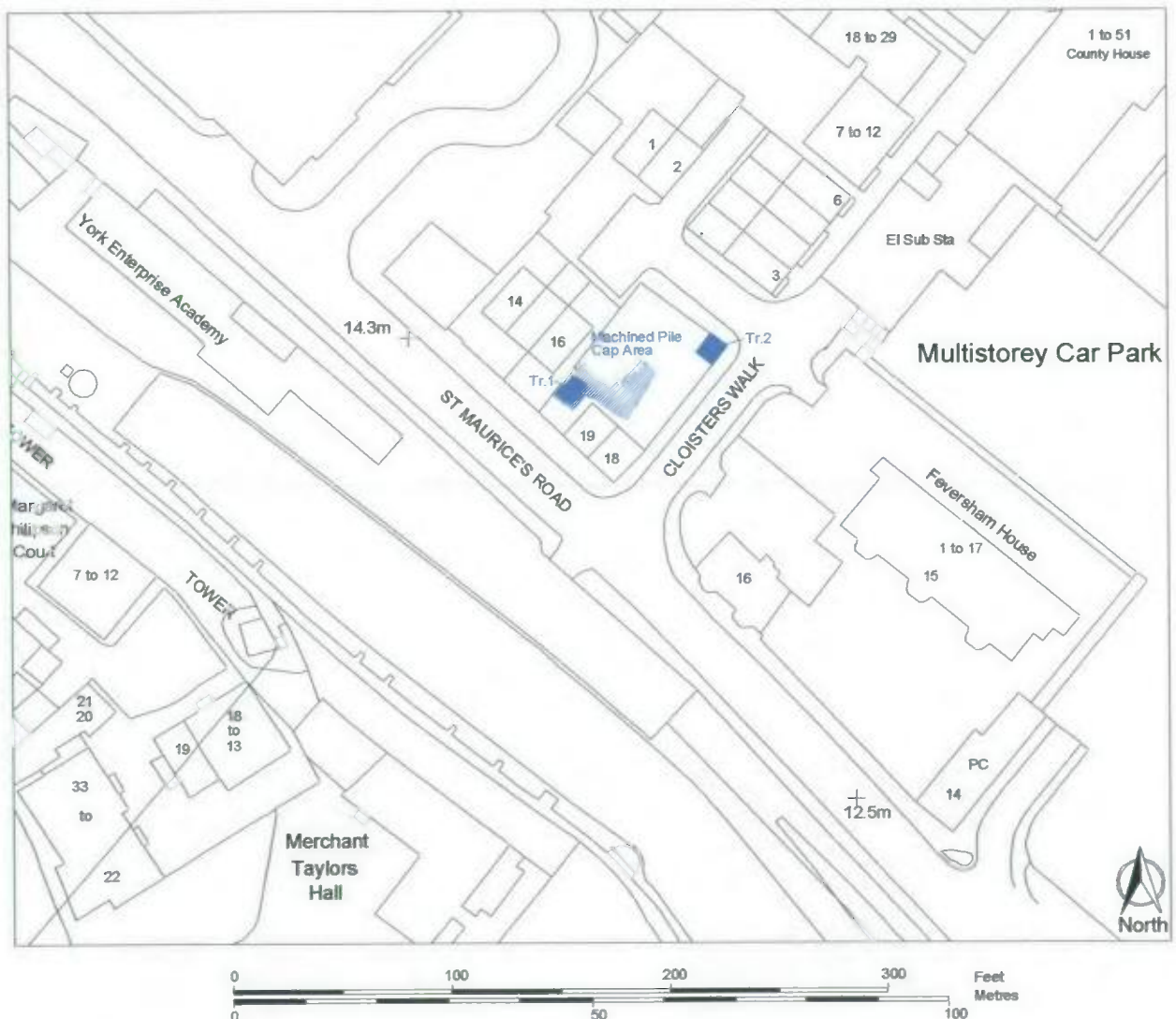


Figure 2. Trench location plan. (Scale 1:1000).

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### 3.0 Archaeological Background.

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Evidence for prehistoric activity in the vicinity of the development site is limited to a single ring-ditch feature recorded during excavations to the east of the County Hospital, to the east of the development site, in 1982 (Turnbull, 1983).

In the Roman period the development site is located to the northeast of what would have been the Legionary Fortresses East Angle Tower. The area between the Legionary Fortress and the River Foss appears to have been differentially utilized during this period. Archaeological work in the area to the southeast of the fortress, in the *Canabae* or civilian settlement, suggests the area was quite intensively occupied. Work at the Ebor Brewery site in Aldwark recorded a timber frame structure with a mosaic floor and associated structures at the junction of two roads (Magilton, 1980). Earlier work suggests a network of streets and buildings, of both timber and stone, which may have extended up to the river where possible warehouses and wharves were located (RCHME, 1962. Monuments 36, 38, 39, 40, 41, 52, 55).

By contrast, the area to the northeast of the legionary fortress, in the vicinity of the development site, appears to have been less intensively occupied, but this may be an effect of the type of archaeological work conducted so far in the area. A number of burials dating to this period were discovered in the 19<sup>th</sup> century, including two inhumations outside Monk Bar, and two stone coffins at the junction of Monkgate and Lord Mayors Walk (RCHME, 1962). More recently, an excavation at this junction in 1972 recorded disturbed human remains of probable Roman date, as well as occupation evidence. (YAT Gazetteer, 2005) The same site produced a single inhumation burial during a watching brief conducted by On-Site Archaeology in 2004 (G. Bruce Pers. Comm.).

The excavation to the east of the County Hospital revealed Roman period ditches and a rectilinear enclosure, as well as four burials and one cremation. Subsequent excavations to the west of the County Hospital fronting Monkgate revealed a Roman cobbled surface and potential road, pits, and three inhumation burials (Turnbull, 1983) and (Clarke, 1983). A similar cobbled road, thought to be Roman in date, was seen in a similar position with respect to the fortress as the development site, along Lord Mayors Walk at NGR SE 60535235 (YAT Gazetteer, 2005).

Closer to the development site, along the northeast side of St. Maurice's Road, a tessellated paved area was recorded in 1911. Two finger rings, one inscribed DEO SUCELO, also found in the vicinity, may indicate a shrine to that God nearby (RCHME, 1962. Monument 56). More recent archaeological work along the northeast side of St Maurice's Road has failed to find similar remains. Watching Brief work at along the street at NGR SE60625226, SE 60625227, and SE 60645227 did not encounter any Roman period remains (YAT Gazetteer, 2005).

One site along St. Maurice's Road has revealed significant Roman archaeology. Evaluation work at Number 2, St. Maurice's Road (NGR SE 60635224) revealed ditches, drains and possible foundations, along with cobbled surfaces and post-holes. The remains were limited to



two trenches closest to St. Maurice's Road, while a third trench, further back from the road, was empty (Lilley, 1992). The development site at 18-20 St. Maurice's Road lies a similar distance from the road as the trenches containing Roman occupation evidence.

Evidence for the area to the northeast of the fortress, points to a mixture of burials, buildings, and roads; in many ways similar to the *Canabae* to the southeast of the fortress. Occupation of this type appears to extend at least 150 metres out from the fortress wall, and extends up to the presumed position of the River Foss.

The development site in the medieval period was also situated just outside the city wall, as the medieval defences coincide with the Roman fortress defences at this point. The major activity in the area occurs to either side of the site, with the Church and associated cemetery of St Maurice at the junction of Lord Mayors Walk and Monkgate, and the Jewish cemetery at Jewbury to the southeast.

Post Roman activity in the area was recorded during the Jewbury cemetery excavations, where both Anglian and Anglo-Scandinavian occupation was present (YAT Gazetteer, 2005). This activity may have been limited to the area near the River Foss, as no similarly dated activity has come to light elsewhere in the area.

Development through the medieval period seems to have occurred along the major roads such as Monkgate, and some may have occurred at the junction of Cloister Walk and St. Maurice's Road. There is little evidence for medieval occupation from the evaluation at number 2 St. Maurice's Road, but that may be due to trench positioning too far back from the road (Lilley, J, 1992). Work to the east of the County Hospital however, did reveal medieval cess-pits; possibly relating to buildings fronting Cloister Walk (Turnbull, 1983).

The consistent finding of archaeological work conducted in the vicinity of the development site is a build up of organic soil to a depth of as much as 2 metres. This has been interpreted as garden or orchard soil, an idea supported by the known presence of orchards here throughout the 19<sup>th</sup> century.

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## 4.0 Methodology.

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Two evaluation trenches were laid out on the site; Trench 1 was located along the St. Maurice's Road street front, while Trench 2 was located in the area of the recently demolished building, in the easternmost corner of site. The overburden was removed by a 360° mechanical excavator fitted with a toothless bucket down to the level of the first significant archaeological horizon. Trench 1 measured 3.8m by 2.6m and was a maximum of 1.4m deep, while trench 2 measured 3.3m by 2.8m and was at most 2.6m deep. The depth of Trench 2 necessitated stepping in of the sides resulting in a base measuring approximately 3.1m by 1.7m.

All exposed surfaces were then cleaned by hand in order to detect archaeological features revealed through textural or colour changes in the deposits. All further excavation was conducted by hand in accordance with stratigraphic principles.

Standard *On-Site Archaeology* techniques were followed throughout the evaluation. This involved the completion of a context description for each deposit or cut encountered, along with plans and/or sections drawn to scale. Heights above Ordnance Datum (AOD) were calculated by taking levels from a Temporary Benchmark (TBM), which was then tied in with an existing Ordnance Survey Benchmark (14.72m on the side of County House building to the north of the site). A full photographic record of the deposits and features was also maintained.

A second phase of work involved re-excavation of Trench 1 and an adjacent area, by mechanical excavator, to the first archaeological horizon. This irregular Z-shaped area had a maximum length of 11.9m southwest to northeast and maximum width of 10.0m northwest to southeast, and incorporated the positions of pile caps 1-5, 9-22, 28-29, and 32. This area was cleaned by hand to detect archaeological features; in this case, specifically burials. The burial in Trench 1 was lifted at this time. A token record of exposed archaeological features was made when it was determined that no further archaeological excavation would take place.



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## 5.0 Results.

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### 5.1 Trench 1.

Natural geology was not seen in this trench. This is perhaps not surprising as the trench was only excavated to a depth of 1.4m. By comparison, the natural was seen in Trench 2 at a depth of 2.06m. The deepest deposit (1028) was a dark grey brown sand clay silt that contained a decayed timber, and was seen in only a small area. It was unclear whether this was a deposit or a fill within a large feature. This was sealed by a possible make-up deposit (1027) comprising a mid brown clay silt, that was 0.18m thick.

Deposit (1027) was cut by an inhumation burial aligned parallel to St Maurice's Road. Grave [1009] had steep sides and a flat base, measuring >1.7m by >0.55m and >0.09m deep. The grave cut was incomplete, being truncated by later features, partially along the northeast side and completely along the southwest side. Skeleton (1008) within the grave cut, was supine with the head at the southeast end of the grave. The skeleton was incomplete, with portions of the upper and lower right leg, both hands and lower arms, the entire pelvis, and the left leg all missing due to later truncations. Also within the grave was a dark brown grey sand clay silt fill (1007). From fill (1007) a small assemblage of 15 sherds of pot dating to the late 2<sup>nd</sup> century or later was recovered.

Sealing deposit (1027), and possibly also grave [1009] was deposit (1026) made up of mid grey brown clay silt that was 0.26m deep. A line of post-holes, on the same line as the rear of the 19<sup>th</sup> century buildings was cutting deposit (1026). Post-hole [1021] held fill (1020), post-hole [1015] held fill (1014), post-hole [1017] held fill (1016), and post-hole [1019] held fill (1018). Post-hole [1021] may have been replaced because it was cut by a similar post-hole [1023] containing fill (1022). All fills of these post-holes were made up of dark grey brown clay sand silt. Two sherds of pot dating to the late 3<sup>rd</sup> century or later were recovered from fill (1018). The burial and skeleton were truncated to the southwest of post-hole [1019], thus removing the top of the right femur and the entire pelvis. The truncating feature was not identified during excavation, probably because its fill was similar to the grave fill. The missing skeletal components however suggest the feature was slot-like, and at right angles to the post-hole line. Almost certainly this indicates the feature was part of that structure.

Two large pits were located to the southwest of the post-line, truncating the earlier grave. These were pit [1013] holding fill (1012), and pit [1011] holding fill (1010). The pit fills were both made up of dark grey brown clay sand silt. Nine sherds of pot dating to the early 2<sup>nd</sup> century or later were recovered from fill (1012). Stratigraphically however, the pits must date to the late 2<sup>nd</sup> century or later, because they cut grave [1009].

Post-holes [1015] and [1017] were truncated slightly by a long oval pit, or potential terminal end of a linear feature [1030], that held fill (2029). Fill (2029) was made up of dark grey brown clay sand silt, from which fourteen sherds of late 3<sup>rd</sup> century pot and one sherd of 11<sup>th</sup> century pot were recovered. One interesting find was recovered from this feature in the form of a blank from the production of a jet bracelet that had been turned on a lathe. Production of

jet objects has been recognized on other York sites, notably near the railway station, however with the exception of one possible item in the Yorkshire museum, evidence for lathe turned bangle production is rare (RCHME, 1962). Feature [1030] may have been a boundary to the rear of the structure represented by the line of post-holes, although the finds evidence may indicate they belong to two separate phases of occupation.

Pit fill (1012) was cut by a smaller pit [1025] containing fill (1024), a very dark brown grey clay sand silt. This feature was only seen in the section edge, and may have been a tree throw related to the post-medieval orchards. The trench was sealed by a thick deposit of organic very dark grey brown clay sand silt garden/orchard soil (1006). This deposit was 0.67m thick within Trench 1, and may represent intentional dumping of organic soil in an orchard or area used for horticulture, or it may be an accumulation over long periods of such activity.

The organic deposit (1006) was overlain by a yellow brown sand and gravel make-up layer (1005). This was cut by [1031] containing red brick foundations (1001), which probably pre-date the existing buildings on the site. To the northwest of this foundation was cut [1033] holding mixed brick rubble and gravel fill (1002). Deposit (1005) was sealed by mid brown grey silt with stone and brick rubble make-up layer (1004), overlain by dark brown silt sand and brick rubble topsoil (1003), and creamy brown gravel surface (1032).

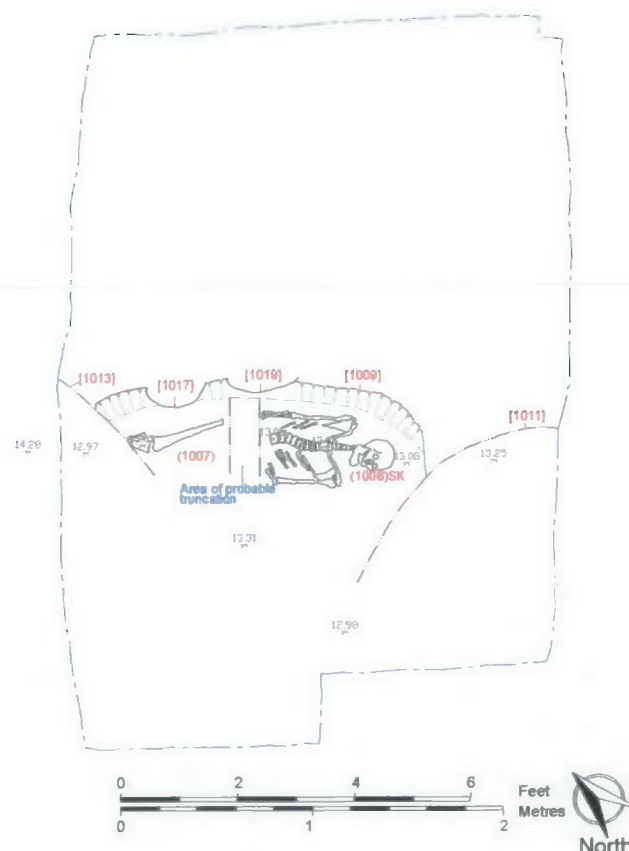


Figure 3. Post excavation plan of Trench 1, showing grave [1009] & skeleton (1007). (Scale 1:40).



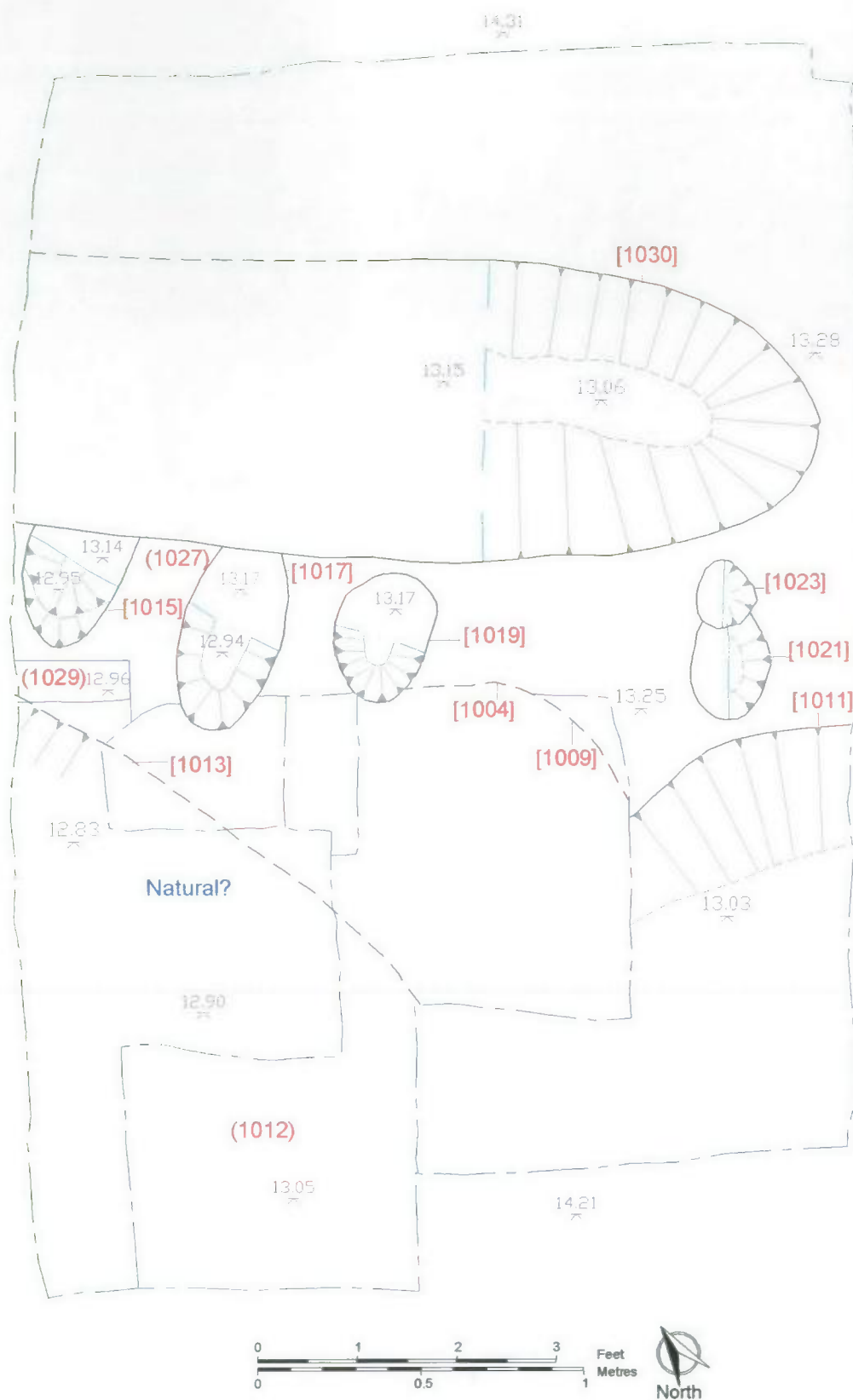


Figure 4. Post excavation plan of Trench 2 showing ditch [1030] and pits [1011] & [1013]. (Scale 1:20).

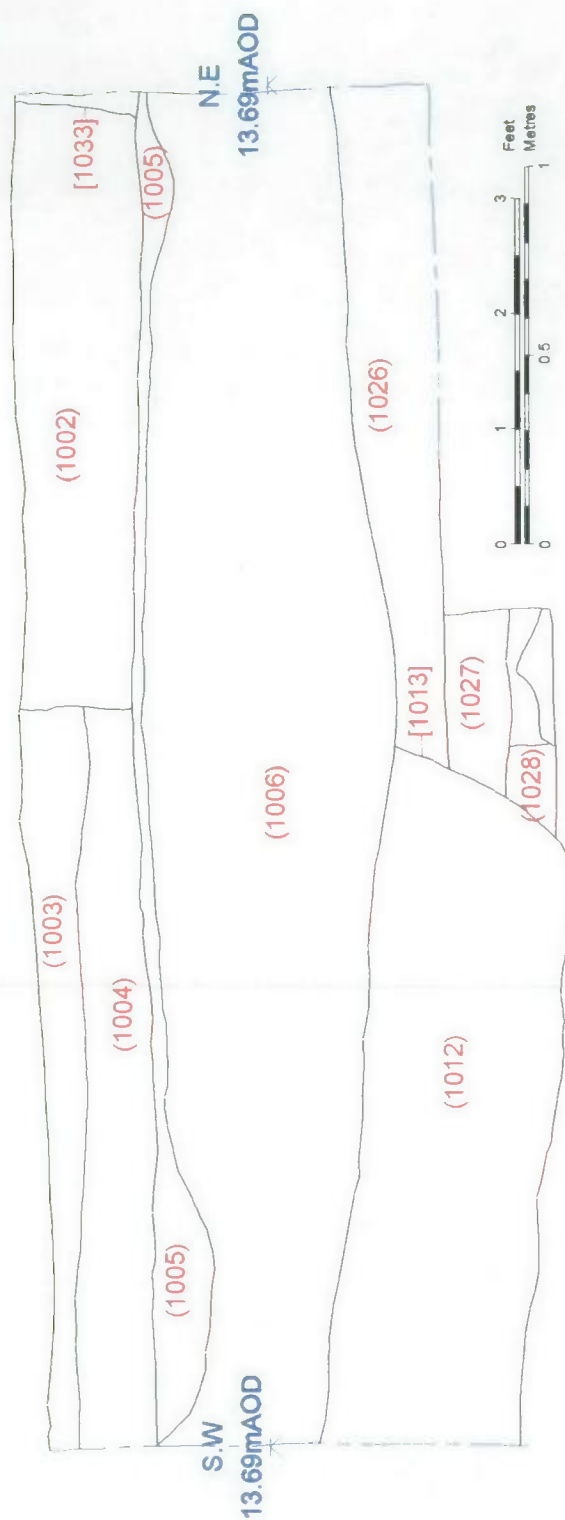


Figure 5. Southeast facing section of Trench 1. (Scale 1:20).



Figure 6. Portion of northeast facing section of Trench 1. (Scale 1:20).

## 5.2 Trench 2.

A possible natural geological deposit was seen at a depth of 2.06m BGL or 12.37m AOD. This deposit was a light yellow brown sandy clay (2037). This deposit was seen in only a small portion of the deepest sondage in trench 2, so it is only tentatively interpreted as geological in nature.

Deposit (2037) was cut by a feature [2036] that was left unexcavated. Feature [2036] had been removed largely by later features, so its function is unknown. It held a mid grey brown clay sand silt fill (2035). This was truncated by a possible pit [2032] with vertical sides and a flat base. Pit [2032] measured over 0.68m by over 0.46m and was 0.28m deep. It held a mid grey brown clay sand silt fill (2031), from which six sherds of pot dating to the early 2<sup>nd</sup> century or later were recovered.

Pit [2032] was cut by a linear feature [2030] that had steep sides and a flat base. Only one side of linear feature [2030] was seen, as it extended beyond the southeastern trench edge. A similar feature was seen in a sondage in the eastern corner of the trench, in line with the southwest to northeast alignment of [2030], and it seems likely that it is a continuation of the feature. Linear feature [2030] therefore was seen over a length of 2.40m with a width over 0.46m and depth of 0.64m. In the central sondage linear feature [2030] had a mid grey brown clay sand silt primary fill (2029), that was 0.46m deep. Two sherds of late 1<sup>st</sup> century or later pot were recovered from this primary fill. In the sondage in the eastern corner of the trench a dark brownish grey clay silt fill (2011) was recorded within [2030]. Fill (2011) was not fully excavated due to space limitations, so it was seen to be over 0.18m deep. Four sherds of pot dating to the early 3<sup>rd</sup> century or later were recovered from the fill. The secondary fill in the central sondage was (2028), a mid brown grey clay sand silt, that was 0.44m deep. Thirty one sherds of pot dating to the mid 3<sup>rd</sup> century or later came from fill (2028). A similar mid brown grey clay silt with yellow brown clay mottles fill, (2009) was seen in the eastern corner



sondage to a depth of over 0.40m. Nineteen sherds of pot dating to the mid 3<sup>rd</sup> century or later were retrieved from fill (2009).

Linear feature [2030] may be a ditch, although its steep sides and flat base and the fact that it is beside and parallel to foundation [2013] perhaps indicate that it too may be structural. The primary fill (2029) contained 2 sherds dating to the late 1<sup>st</sup> century or later, perhaps indicating a very early date for the feature. The bulk of the finds from other fills in the feature date to the early and mid 3<sup>rd</sup> century. If this was a foundation trench the building may date to the early 2<sup>nd</sup> century, and have been demolished and robbed in the mid 3<sup>rd</sup> century. The limestone fragments seen at the interface of fills (2028) and (2029) may indicate that this building was constructed of stone rather than timber.

Sealing feature [2030] was a 0.18m thick mottled light red brown, orange brown and grey deposit of clay (2027). This was recorded along the south-eastern side of the trench measuring over 2.70m by over 0.68m, at a depth of 1.75m BGL or 12.65m AOD. This clay deposit (2027) is similar to natural clay and was initially presumed to be geological. Its deposition in a uniform layer, and its position next to a wall foundation suggests that it was a re-deposited natural clay floor. Two sherds of pot dating to the early 2<sup>nd</sup> century were recovered from this deposit, however they must be residual as the deposit seals a fill producing 3<sup>rd</sup> century wares.

In the northern corner of trench 2 the deepest deposit recorded was a mid grey brown clay sand silt deposit (2033) that was seen over an area measuring 0.36m by 0.38m by over 0.10m deep. Two sherds of pot dating to the late 1<sup>st</sup> century came from this deposit, making it the earliest dated deposit on the site. Sealing it was a mid grey brown and orange brown clay deposit (2034) that was very similar to deposit (2027). Clay deposit (2034) was thinner at 0.06m than deposit (2027), and was slightly deeper, at 1.97m BGL or 12.43m AOD. Deposit (2034) although thinner, may also be a clay floor, possibly related to feature [2030].

Clay deposits (2027) and (2034) were divided by a northeast southwest aligned linear feature [2013]. Cut [2013] had a steep northwestern side and a moderately steep southeastern side, but the base was not reached. It was seen over a length of 0.82m but probably extended the full 3.16m length of the trench, was 0.86m wide and over 0.52m deep. Within [2013] were two similar grey brown clay silt fills (2016) and (2017) that were situated on either edge of the feature. Dividing the fills was cut/interface [2015] measuring over 3.16m in length by 0.38m wide, and was located centrally within cut [2013]. It had straight steep sides and a concave base, and was 0.50m deep on its southeastern side, but only 0.26m deep along its northwestern side. Within [2015], but extending beyond its edge to the north-west was fill (2014), a dark grey clay silt, that was over 0.90m wide, over 3.16m long and 0.50m deep. The upper portion of fill (2014) was assigned context number (2012) because finds may have been mixed during excavation.

Cut [2013] probably represents a foundation for a timber building, while fills (2016) and (2017) were packing material that was set around a sill beam or post line represented by [2015]. Fills (2014) and (2012) represent the backfill of the foundation trench following the removal of the wall. Interestingly, the extension of fill (2012) beyond the foundation trench



edge, and the lower level of the foundation edge to the northwest compared with the southeast, suggest that a floor surface may have been robbed at the same time that the wall was torn down. Fill (2017) produced five sherds of pot dating to the late 2<sup>nd</sup> century, which are likely to be residual. Fills (2014) and (2012) produced 12 and 36 sherds of pot and CBM respectively, dating the demolition of the building to the mid 3<sup>rd</sup> century or later.

In the centre of the trench a rectangular pit [2025] cut foundation [2013]. Pit [2025] was aligned similarly to foundation [2013] and linear [2030]. It was seen over a length of 1.54m by 0.74m wide and 0.18m deep, and had steep, concave sides and a concave base. Held within the pit was a mottled grey brown and grey clay sand silt fill (2024). This pit was seen to be truncating foundation cut [2013], but the relationship between it and the interface [2015] representing the line of the timber wall was not clear. There was a strong suggestion that pit [2025] respected the line of the wall, and therefore is contemporary with it. An assemblage of 33 sherds dating to the late 2<sup>nd</sup> century or later, that was recovered from fill (2024) supports this view.

Pit [2025] was cut along its northwestern edge by a probable post-hole [2023], measuring 0.44m by 0.30m by 0.13m deep. Post-hole [2023] held a dark brown grey clay silt fill (2022), from which a single sherd of residual late 1<sup>st</sup> century pot was recovered. This post-hole was located along the line of foundation trench [2013] and may be a part of that structure or a single representative of a later building phase.

Pit [2025] was also truncated on its southwestern margin by a square pit [2020]. Pit [2020] had vertical sides, and was not fully excavated. The lowest fill recorded was a dark greyish brown clay sand silt that contained frequent charcoal fragments (2019). Overlying (2019) was a dark orange brown ashy silt fill (2018), which also contained frequent charcoal fragments. A single sherd of Roman pot and 4 sherds of Humberware date the fill to the mid 14<sup>th</sup> century or later. Fill (2018) was sealed by a mid grey clay silt fill (2021), from which 3 residual Roman sherds and one medieval sherd were recovered.

The deepest deposit that was removed by machine was deposit (2007), a brown grey clay silt, which was seen only in the northern portion of the trench. Deposit (2007) varied in depth between 0.04m and 0.38m and was seen over 2.88m by 1.56m. One sherd of residual Roman pot and two sherds of Torksey ware came from this deposit, indicating that it was deposited in the late 10<sup>th</sup> century or later. It was cut in the eastern corner of the trench by a semi-circular pit [2010] that measured 0.83m by 0.41m by 0.60m deep, and had steep concave sides and a concave base. Pit [2010] held a dark brownish grey clay sand silt fill (2008) that appeared to have been mounded over the pit. Six sherds of residual late 1<sup>st</sup> century pot came from this fill, and perhaps indicate that the material was brought to the site from elsewhere.

Sealing pit fill (2008) was a deposit of dark brown grey clay silt with red brown clay mottles (2006). This deposit varied greatly in depth from 0.06m to 0.46m in depth and had an undulating surface. This deposit appears to have been dumped on this part of the site, rather than forming naturally over time. Four sherds of residual Roman pot, 4 sherds of CBM, and 4 sherds of medieval pot date the deposit to the late 12<sup>th</sup> century at the earliest.

Overlying deposit (2006) was a similar dark brownish grey clay silt soil (2038), which was seen in the northwestern section only, and varied in depth from 0m to 0.44m. Like deposit (2006), this was probably brought on to site rather than forming over time. Over this was a very dark brown grey clay sand silt deposit (2005), which varied in depth from 0.3m to 0.52m. Unlike the underlying deposits, (2005) was relatively uniform and is likely to have formed the ground surface following the dumping of organic soil.

Two pits were dug into deposit (2005), but were seen only in the excavation edge. Pit [2039] had steep sides and a concave base, and was 0.42m wide and 0.44m deep. It held a very dark brown grey clay sand silt fill (2040) that was looser than the otherwise identical surrounding deposit (2005). Pit [2041] was 0.42m wide and 0.28m deep, and had steep straight sides and a concave base. The fill of pit [2041] was the same loose very dark brown grey clay sand silt fill as (2040). The character and very organic fills of these pits [2039] and [2041], suggests that they might have been the positions of plants or trees. It is likely that these represent the use of the site as an orchard. They are also similar to and in the same position stratigraphically as pit [1025] in Trench 1, indicating that this activity was present across the site.

Sealing pits [2039] and [2041] was a final deposit of very dark grey clay sand silt organic soil (2004). This deposit varied in depth from 0.30m to 0.72m and was present across the trench. This organic soil was very similar to the underlying soils and probably served the same function.

Deposit (2004) was cut on three sides by the foundations [2003] for the brick building that was demolished prior to the archaeological work. These varied in depth from 0.38m to 1.45m or 13.75m AOD to 12.70m AOD. The red brick foundations (2002) themselves may have been of two different phases, as the relative difference in depth was extreme. The deeper foundation bounding the trench on its southwestern side appeared to be older than the shallow foundations bounding the trench on the southeastern and northeastern sides. The trench was sealed by a 0.24m thick deposit of grey sandy silt and brick rubble (2001) that is the result of the demolition of the building prior to the archaeological work.

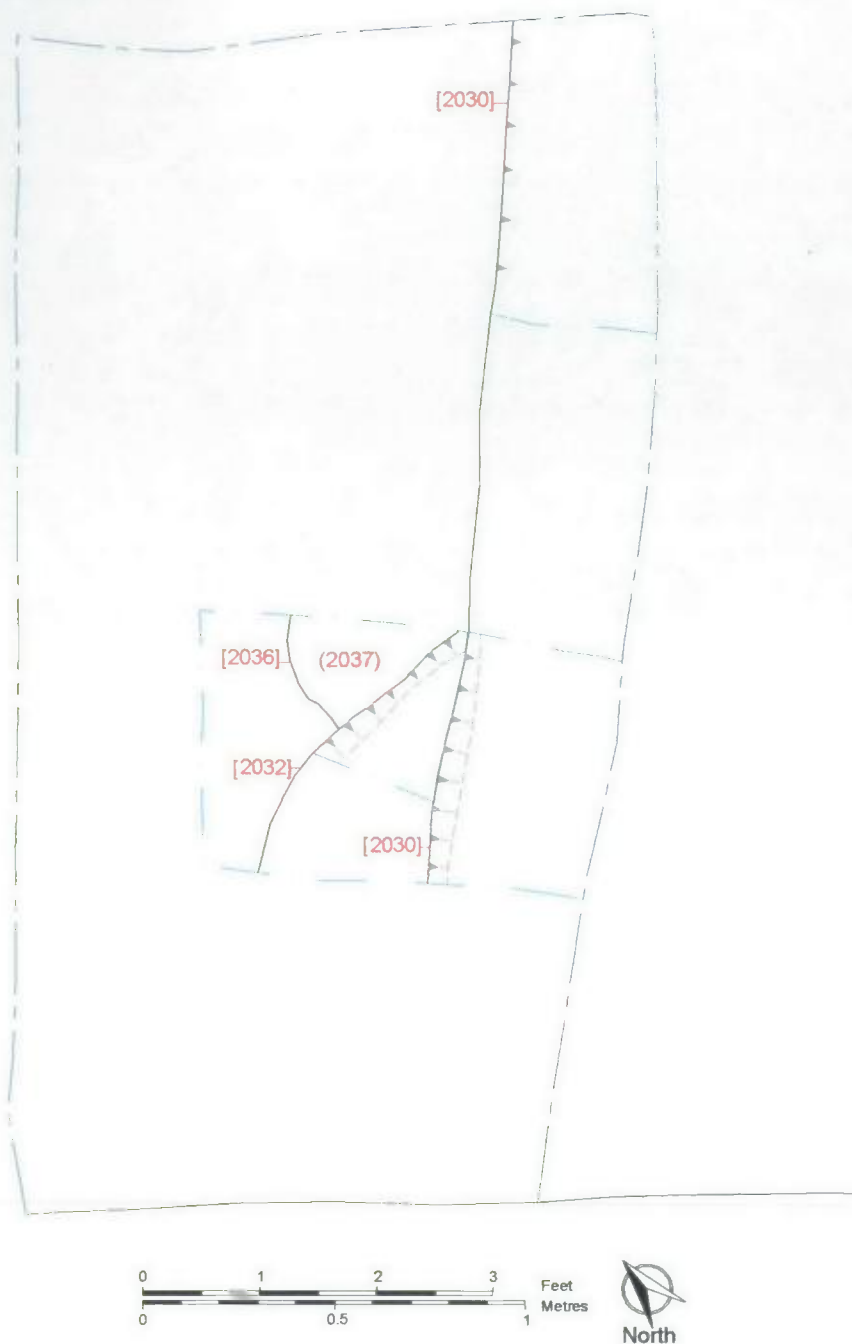


Figure 7. Trench 2, phase 1 & 2 features. (Scale 1:20).



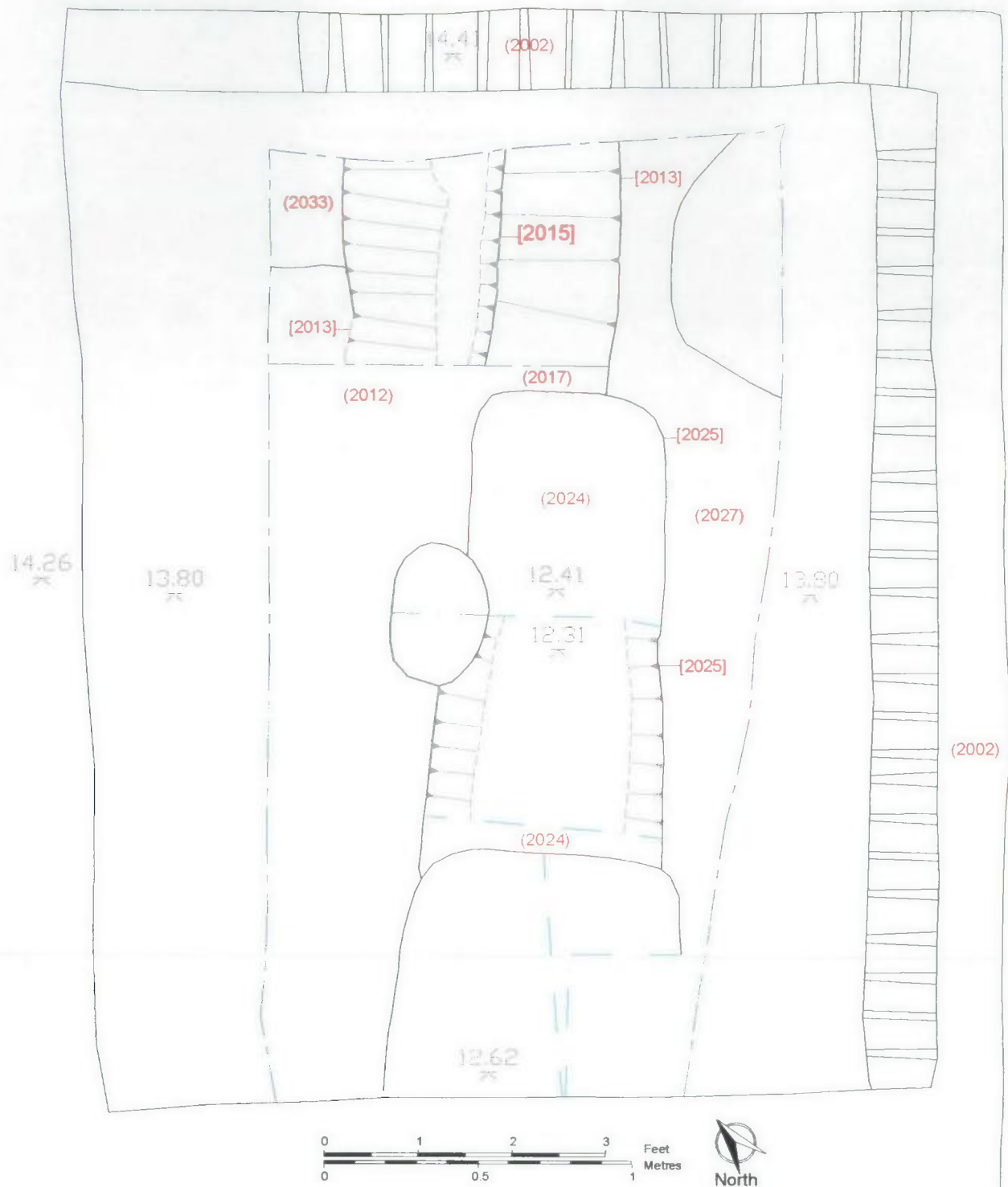


Figure 8. Trench 2 phase 3 & 4 features, showing foundation trench [2013], pit [2025] & robber trench [2015]. (Scale 1:20).



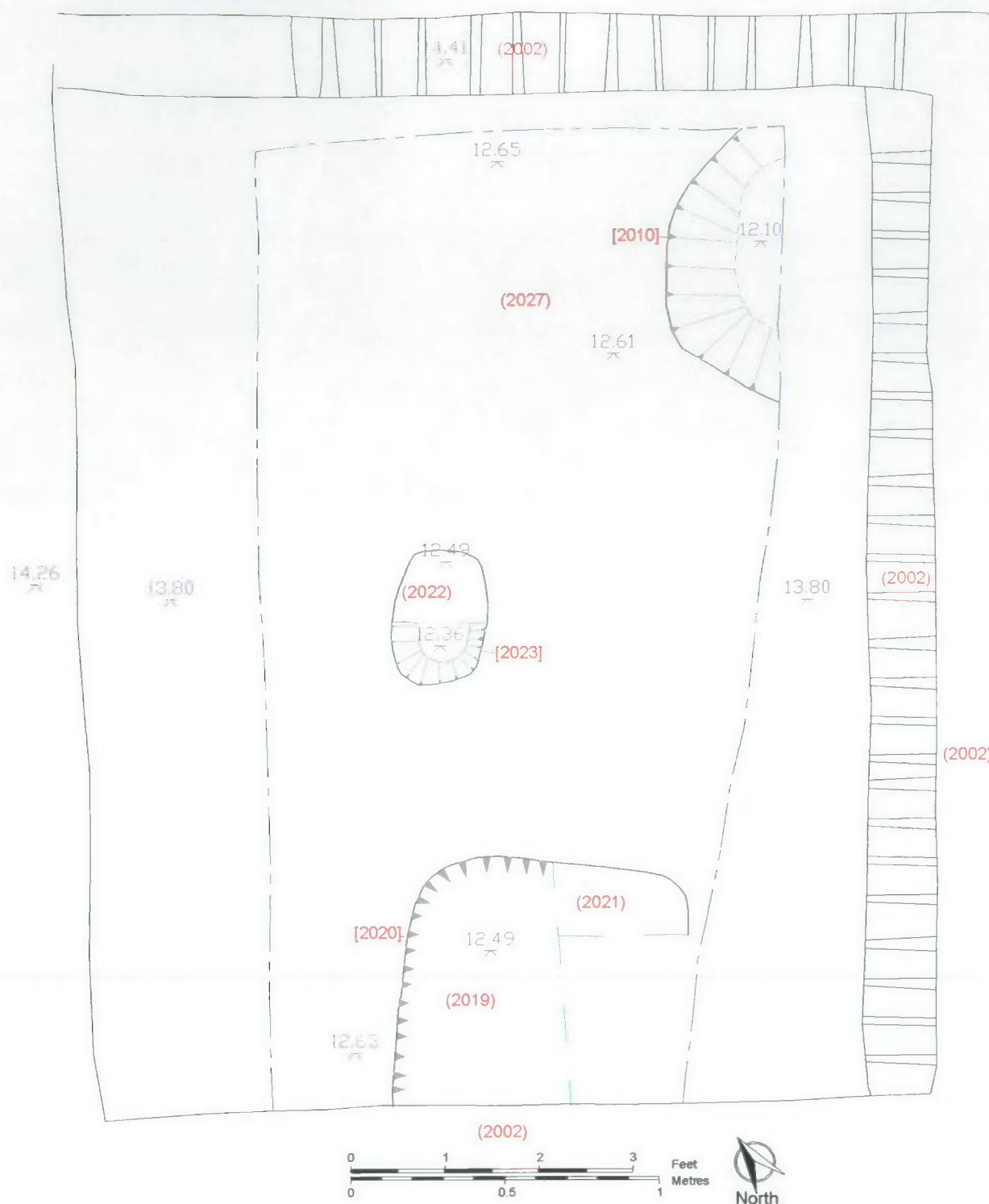


Figure 9. Trench 2 phase 5, 7, 8 & 10 features. (Scale 1:20).

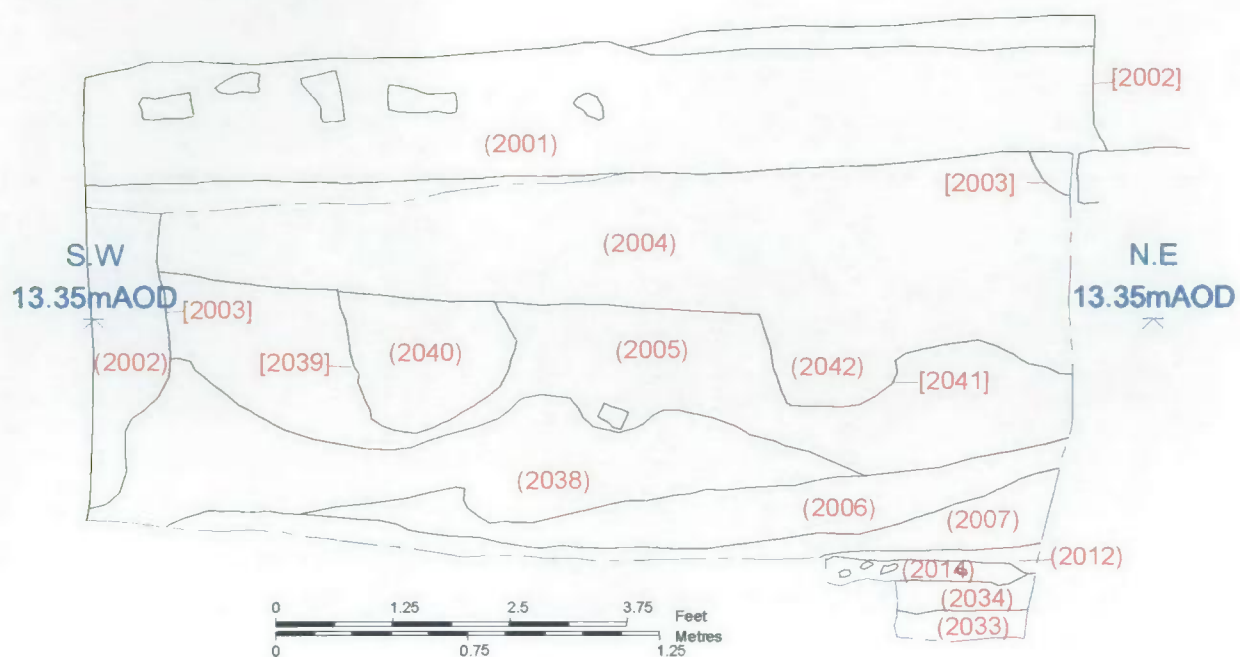


Figure 10. Northeast facing section of Trench 2. (Scale 1:25).

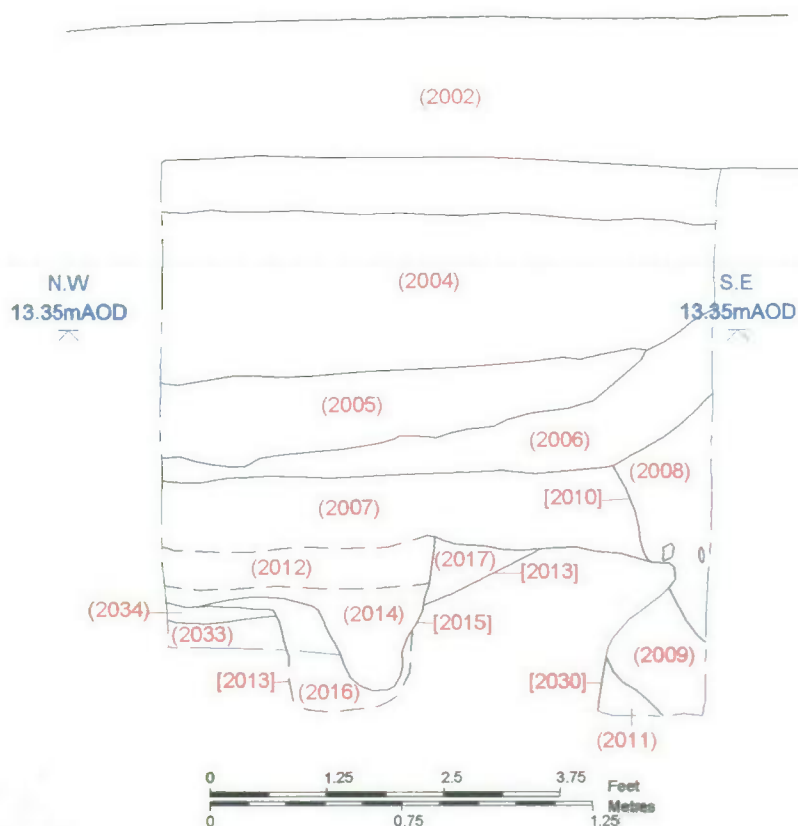


Figure 11. Southwest facing section of Trench 2. (Scale 1:25).

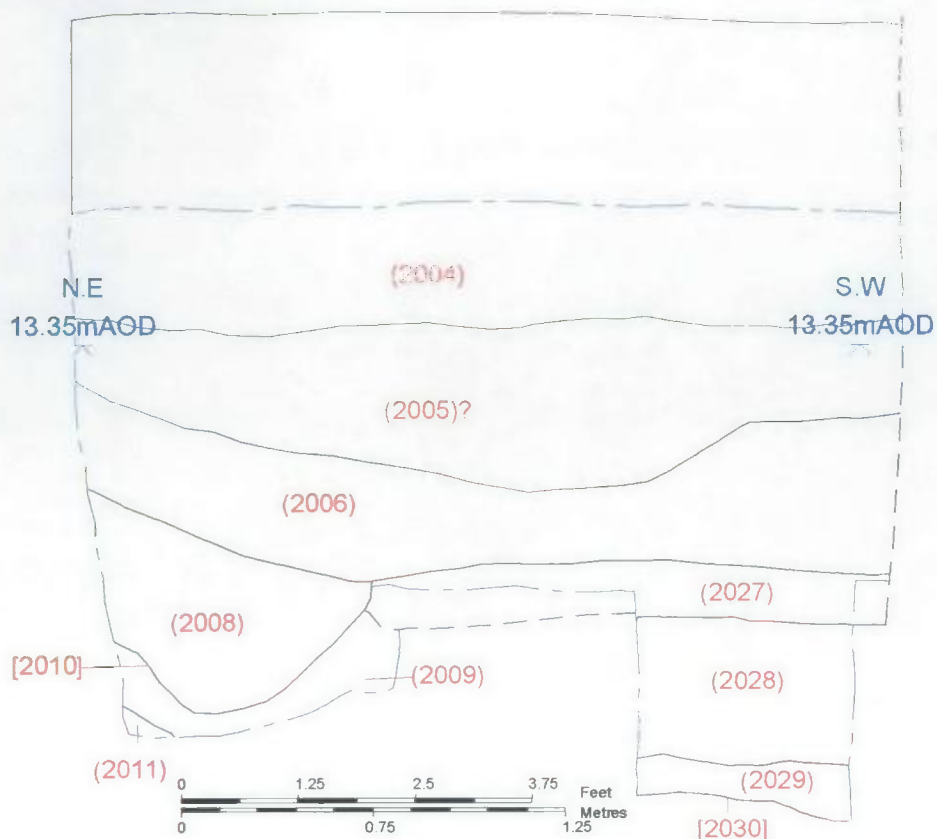


Figure 12. Northwest facing section of Trench 2. (Scale 1:25).

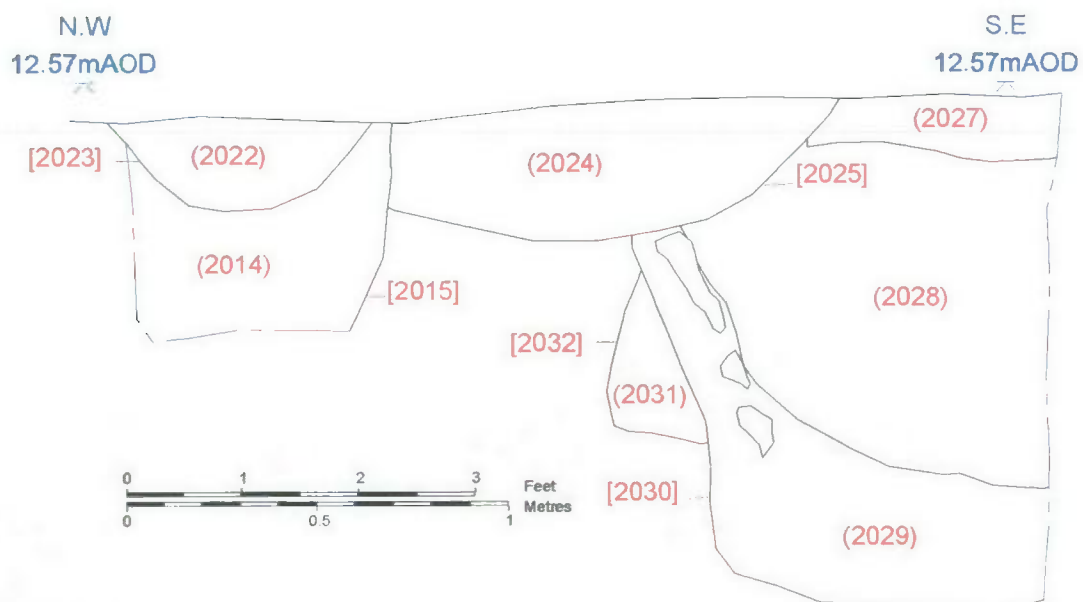


Figure 13. Southwest facing section of central sondage in Trench 2. (Scale 1:10)



### 5.3 Excavation of Z-shaped area around Trench 1.

The second phase of machining around Trench 1 revealed a complex of archaeological features similar to that seen in both trenches. These features were not investigated once it was determined that there was little chance of encountering burials in the area. Unfortunately the area was not planned immediately, and a lot of features were too dry to be visible when planned. Notable among the features was a northwest-southeast aligned linear feature, probably a ditch. To the southwest of the probable ditch was a clay deposit similar to the floor (2027) in Trench 2. Cutting it were numerous post-holes and slots attesting to the presence of timber structures. These may have been parts of the same building that was seen as a line of posts in Trench 1. In the eastern corner of the machined area a pit of similar size, character and fill as pit [2020] in Trench 2 was seen; this too may have been a medieval cess-pit. To the north of the position of Trench 1 a brick well was seen. This was probably in use and contemporary with the earliest brick buildings on the site in the 19<sup>th</sup> century. Two phases of brick building were seen, with the present day street front building utilizing part of the foundation for an earlier structure.

Finds collected during the machining of this area were assigned the context number (3000). They comprised an assemblage of Roman, mid/late 11<sup>th</sup> to 13<sup>th</sup>/14<sup>th</sup>, and later 16<sup>th</sup> to 19<sup>th</sup> century wares. This assemblage mirrors those collected from trenches 1 and 2. Of particular interest in this assemblage were 2 clay pipe wasters and waste clay from the manufacture of clay pipes. This waste was a small part of a larger assemblage of clay waste seen within a brick building beneath the present day building. It seems likely that clay pipes were being manufactured in the 19<sup>th</sup> century on this site.

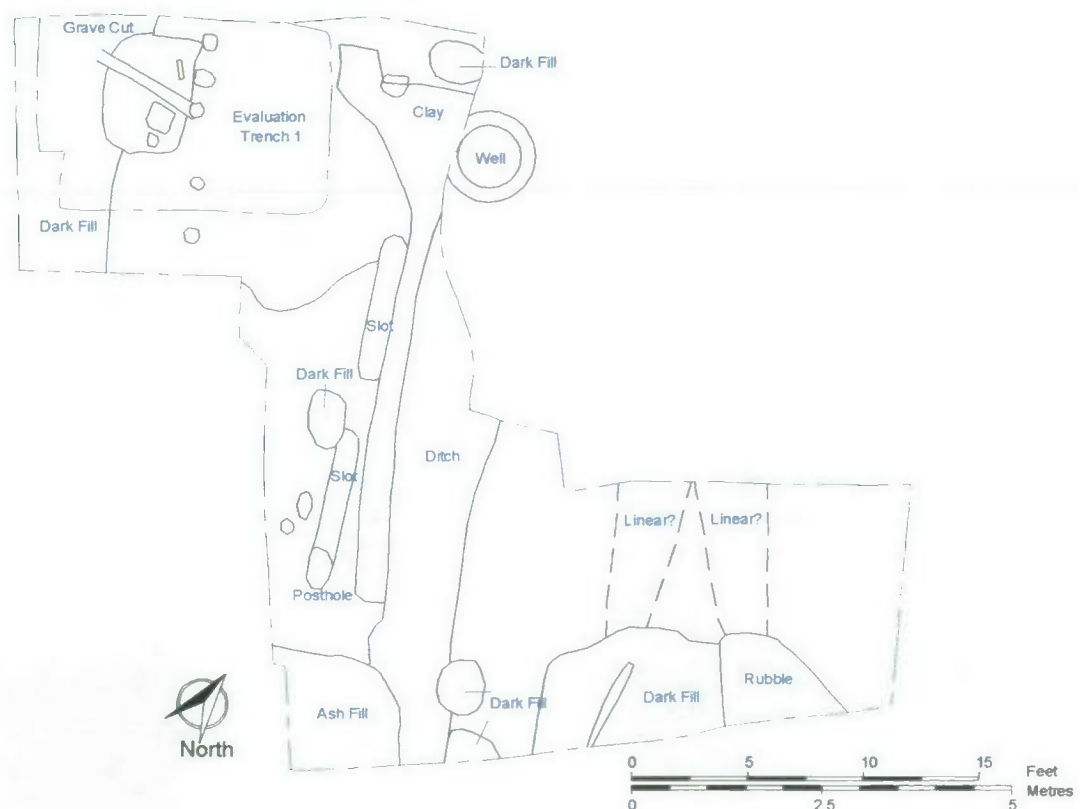


Figure 14. Plan of "Z" shaped area incorporating pile cap etc. (Scale 1:100).

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## 6.0 Discussion.

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### 6.1 *Phase I: Late 1<sup>st</sup> century to Early 2<sup>nd</sup> century.*

The earliest deposits in both trenches indicate that activity began on the site early in the Roman period in the late 1<sup>st</sup> century. In Trench 2, deposit (2033) a possible plough-soil, dates to this time, while pits [2036] and [2032] may be early 2<sup>nd</sup> century in date. In Trench 1 the earliest deposits (1027) and (1028) were undated, but pre-date the probable late 2<sup>nd</sup> century burial. A decayed timber in deposit (1028) also suggests that there may have been building activity on the site during this phase.

### 6.2 *Phase II: Mid 2<sup>nd</sup> century to Mid 3<sup>rd</sup> century.*

In the late 2<sup>nd</sup> century burial [1009] is placed in Trench 1 in a position possibly beside an extramural road. In the area of Trench 2 a building including a possible limestone wall and a clay floor is built. This building is represented by foundation trench [2030] and clay floor (2034).

### 6.3 *Phase IIIA: Mid 3<sup>rd</sup> century.*

The possible stone building in the Trench 2 area is demolished and the foundations robbed out. This activity is represented by fills (2009), (2011) and (2028), all containing pot dating to the early or mid 3<sup>rd</sup> century. This phase may be represented in Trench 1 by deposit (1026), which appears to be a homogenous plough-soil.

### 6.4 *Phase IIIB: Mid 3<sup>rd</sup> century.*

Timber structures are built in the locations of both Trenches 1 and 2, probably in the mid 3<sup>rd</sup> century. In Trench 1 this is represented by a line of post-holes [1021], [1015], [1017], and [1019] as well as one other seen in the second phase of excavation, and a slot that truncated the Phase II burial. One of these posts was replaced during the life of the building by post-hole [1023]. In Trench 2 the building is represented by foundation trench [2013] and clay floor (2027), as well as rectangular pit [2025].

### 6.5 *Phase IV: Mid to Late 3<sup>rd</sup> century.*

Both of the buildings are demolished. The late 3<sup>rd</sup> century finds recovered from one of the post-holes representing the Trench 1 structure probably date to the demolition of the building. Likewise in Trench 2, the timber wall represented by [2015] is removed and there is a hint that an adjoining tile or stone floor is removed. This appears to have occurred in the mid 3<sup>rd</sup> century.

### 6.6 *Phase V.*

A single post-hole [2023] represents activity post-dating the Phase IV building demolition in Trench 2. In Trench 1 there is a phase of pit digging, made up of pits [1011] and [1013], that



may belong to this phase. Finds from these features dating to the late 1<sup>st</sup> and early 2<sup>nd</sup> century must be residual based on the stratigraphic sequence, so they are undated.

#### **6.7 Phase VI: 4<sup>th</sup> century to 11<sup>th</sup> century.**

Agricultural soils build up over the former location of buildings in Trench 2. This is represented by deposit (2007) that was probably still being tilled when sherds of Torksey ware were deposited in the late 10<sup>th</sup> or early 11<sup>th</sup> century. This soil is the lowest of a sequence of dumped organic soils probably imported to the site to increase its agricultural potential. A similar deposit was not recorded in Trench 1, but it is likely that the lowest portions of deposit (1006) are contemporary.

#### **6.8 Phase VII: Mid 11<sup>th</sup> century to Late 12<sup>th</sup> century.**

A possible ditch [1030] is dug as a boundary in Trench 1 area. Most of the finds within its fill are of Roman date, but a single sherd of pot is dated to the mid or late 11<sup>th</sup> century. Organic material continues to be dumped across the site, in conjunction with some pitting. In Trench 2 this is seen as pit [2010] and deposits (2006), (2038), and (2005), containing late 12<sup>th</sup> century finds. This is probably an attempt to raise the ground level, possibly due to rising water tables and flooding of the River Foss due to the damming of that river by William the Conqueror in the late 11<sup>th</sup> century.

#### **6.9 Phase VIII: Late 12<sup>th</sup> century to Mid 14<sup>th</sup> century.**

A single square pit is dug in the area of Trench 2 and a similar one is dug closer to the street front. These may be cess pits related to street front occupation, and are represented by pit [2020] and an un-numbered pit seen in the second phase of machining. Finds from pit [2020] indicate that it went out of use in the mid 14<sup>th</sup> century. No activity from this phase was identified in Trench 1, although it is likely that tilling of deposit (1006) continued.

#### **6.10 Phase IX: Late medieval and post-medieval periods.**

A number of pits are present across the site possibly holding trees making up an orchard. Pit [1025] in Trench 1 and pits [2039] and [2041] represent this possible orchard. These are overlain by a very organic deposit, (1006) in Trench 1, and (2004) in Trench 2. Finds dating to the late 16<sup>th</sup> century come from deposit (2004).

#### **6.11 Phase X: 19<sup>th</sup> century to 21<sup>st</sup> century.**

Two phases of brick building occupy the street front of the site from the 19<sup>th</sup> century, and the rear of the site is built over in the 20<sup>th</sup> century. These are represented by foundations (1001) and (2002), and the brick well and other foundations seen in the second phase of machining. Finds of clay pipe manufacturing waste indicate that activity was occurring on the site in the 19<sup>th</sup> century, contemporary with the earliest brick building. The buildings to the rear of the property are demolished prior to the archaeological work.



A number of points should be discussed with regard to this tentative phasing of the site. While Trench 2 revealed a portion of the full archaeological sequence, the sequence in Trench 1 was limited due to the presence of the burial. Activity similar to the pitting and early phase building in Trench 2, are likely to have been present in Trench 1 also. This is indicated by the decayed timber seen at the base of Trench 1, which is likely to have been structural.

The Trench 1 sequence proved problematic in the relationships and dating of deposit (1026), and later structure and pits. Stratigraphically and physically deposit (1026) is most like post Roman agricultural soil (2007) in Trench 2. It is however cut by a number of features containing assemblages of Roman material, including the post-line structure and two large pits. These features have been assigned Roman period phasing, but it is possible that they contain residual material and may be as late as 12<sup>th</sup> century in date. The post-line structure in particular is suspicious in that it lines up with the rear of the 19<sup>th</sup> century buildings. This may be an effect of building positioning with respect to the medieval wall and moat. The position of linear feature [1030] to the rear of this post-line (with respect to St Maurice's street front), and its dating to mid or late 11<sup>th</sup> century may be supporting evidence for the building dating to the early medieval period. This date however is reliant on a single sherd of possibly intrusive 11<sup>th</sup> century pot in a much larger assemblage of Roman material.

In Trench 2 the relationship of the two phases of building are interesting and warrant some analysis. The Phase IIIB structure may not completely overlie the Phase II structure, despite seeming to be constructed soon after the demolition of the earlier structure. The early building appears to extend to the northwest of foundation [2030] while the late building appears to extend to the southeast of foundation [2013]. Alternatively, both foundations may represent internal walls within their respective structures. The early building may extend in the other direction, to the southeast of foundation [2030], but this was outside the trench area, so not seen. Likewise, clay floor (2027) does not continue to the northwest of foundation [2013], but the much lower floor level on that side of the foundation may indicate that a different floor surface had been robbed out during demolition of the building. Both walls therefore may have been internal ones in their respective buildings.

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## 7.0 Conclusions.

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The results from the archaeological work at 18-20 St Maurice's Road may require a certain amount of reassessment of the area in the Roman period. Authors of previous archaeological work in the area northeast of the legionary fortress have been reluctant to conclude the presence of settlement in the area, despite finding evidence of buildings and roads. The remains recorded during the evaluation work at 18-20 St Maurice's Road indicate an area quite intensively built upon in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries. The buildings are likely to have been contemporary with the burial, which is likely to have been placed beside the extramural road along the northeast side of the fortress.

The position of the site with respect to an extramural road along the northeast side of the legionary fortress is important. This road is indicated by the line of burials found along both St Maurice's Road and Lord Mayors Walk. A similar road is known to exist along the southwestern side of the fortress and excavations in Aldwark revealed a road along the southeastern side on the line of St Andrewgate. It seems likely therefore, that extramural roads were present on all sides of the legionary fortress. The development site would have occupied an important position at the confluence of two of these roads. Indeed, it seems likely that both roads continued, one to the known Roman building near Layerthorpe Bridge, and the other along the current line of Cloister Walk, possibly as far as the river crossing at Monk Bridge.

The resulting network of roads, buildings and occasional burials is very similar to the pattern of occupation to the southeast of the fortress in the *Canabae*. It seems likely therefore, that this civilian settlement continued to the northeast of the fortress between it and the River Foss. The find of a jet blank from the production of bangles may indicate that workshops were present in the area, a suggestion that seems likely if it is a continuation of the type of activity seen in the *Canabae*.

The Torksey ware sherds recovered from the deposit immediately sealing the Roman floor layer indicate that following demolition of the building in the late 3<sup>rd</sup> century the area reverted to agricultural use, with the ground still being tilled into the 10<sup>th</sup> or 11<sup>th</sup> century when the pot was worked into the deposit.

Contrary to earlier assumptions about seasonal flooding of the area because of its proximity to the River Foss (Clarke, 1983) the development site shows no evidence for this. The presence of buildings strongly indicates that the area was not affected in the Roman period. Build up of the ground level with dumps of organic soil does not begin until the 11<sup>th</sup> or 12<sup>th</sup> century. This is probably a direct result of rising river levels due to the damming of the Foss by William the Conqueror, as part of his defences for the castle (Hall, 1996).

There is some evidence for medieval activity on the site, and this might include a timber building of uncertain date along the St Maurice street front. There is a notable lack of finds and activity in the later medieval period however. The site is probably occupied by orchards throughout the post-medieval period until the early 19<sup>th</sup> century when the first of three phases



of brick building occupy the site. This building may be associated with the manufacture of clay pipes. The second of the three brick building phases remains upstanding, while the 20<sup>th</sup> century phase was demolished just prior to the evaluation.

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## 8.0 Bibliography.

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- Brinklow, D., 1984. Roman Settlement around the Legionary Fortress at York. *In*: P. Addyman & V. Black eds. *Archaeological Papers from York*. York Archaeological Trust.
- Clarke, A., 1983. Sites Review -Monkgate. *Interim* 9-2, p.13.
- Hall, R., 1996. *York*. London: Batsford
- Jones, R.,1984. The Cemeteries of Roman York. *In*: P. Addyman & V. Black eds. *Archaeological Papers from York*. York Archaeological Trust.
- Lilley, J., 1992. Mystery at St Maurice's. *Interim* 17-2, p.17.
- Magilton, J.R., 1980. The Church of St. Helen-on-the-Walls, Aldwark. *York Archaeological Trust Fascicule* (AY 10/1).
- RCHMY, 1962. *An Inventory of the Historical Monuments of the City of York, Volume 1 Eboracum Roman York*.
- Turnbull, P. 1983. Sites Review - Jewbury. *Interim* 9-1, p.5.
- York Archaeological Trust, 2005. Gazetteer Website. Accessed 20-06-05.



## 9.0 Appendix 1 ~ List of Contexts.

Context	Description (and interpretation)	Extent	Thickness
<b>Trench 1</b>			
1000	Unstratified finds from Trench 1	N/A	N/A
1001	Red brick foundations	Trench	0.60m
1002	Mixed brick rubble and gravel, fill of [1033]	1.65m x ?	0.35m
1003	Dark brown silt sand and brick rubble, topsoil deposit	>3.8m x ?	0.17m
1004	Mid brown grey silt with stone and brick rubble, make-up deposit	>2.0m x ?	0.20m
1005	Yellow brown sand and gravel, make-up deposit	>3.8m x ?	0.16m
1006	Very dark grey brown clay sand silt, garden/orchard soil	Trench	0.67m
1007	Dark brown grey sand clay silt, fill in grave [1009]	>1.7m x >0.55m	>0.09m
1008	Inhumation burial in grave [1009]	N/A	N/A
1009	Steep sided, flat base, cut of grave	>1.7m x >0.55m	>0.09m
1010	Dark grey brown clay sand silt, fill of pit [1011]	>1.3m x >0.7m	0.22m
1011	Moderate concave sides, concave base, cut of pit	>1.3m x >0.7m	0.22m
1012	Dark grey brown clay sand silt, fill of pit [1013]	>1.9m x >1.2m	0.54m
1013	Steep straight sides, flat base, cut of pit	>1.9m x >1.2m	0.54m
1014	Dark grey brown clay sand silt, fill of post-hole [1015]	>0.4m x 0.3m	0.23m
1015	Steep straight sided, concave base, cut of post-hole	>0.4m x 0.3m	0.23m
1016	Dark grey brown clay sand silt, fill of post-hole [1017]	>0.56m x 0.3m	0.23m
1017	Steep straight sides, concave base, cut of post-hole	>0.56m x 0.3m	0.23m
1018	Dark grey brown clay sand silt, fill of post-hole [1019]	0.40m x 0.28m	0.33m
1019	Steep straight sides, concave base, cut of post-hole	0.40m x 0.28m	0.33m
1020	Dark grey brown clay sand silt, fill of post-hole [1021]	>0.35m x 0.24m	0.18m
1021	Steep concave sides, irregular base, cut of post-hole	>0.35m x 0.24m	0.18m
1022	Dark grey brown clay sand silt, fill of post-hole [1023]	0.34m x 0.18m	0.10m
1023	Moderate concave sides, concave base, cut of post-hole	0.34m x 0.18m	0.10m
1024	Very dark brown grey clay sand silt, fill of possible tree throw [1025]	0.55m x ?	0.22m
1025	Moderate concave sides, concave base, cut of possible tree throw	0.55m x ?	0.22m
1026	Mid grey brown clay silt, deposit of possible garden/orchard soil	>1.84m x >1.0m	0.26m
1027	Mid brown clay silt, possible make-up deposit	>0.54m x >2.6m	0.18m
1028	Dark grey brown sand clay silt, deposit containing decayed timber	>0.64m x >0.28m	>0.13
1029	Dark grey brown clay sand silt, fill of pit [1030]	>2.44m x 0.93m	0.09m
1030	Moderate concave sides, concave base, cut of possible linear	>2.44m x 0.93m	0.09m
1031	Vertical sides, flat base, construction cut for masonry	>1.68m x >3.8m	0.68m
1032	Creamy brown gravel, hardcore road surface	>1.68m x ?	0.16m
1033	Vertical sides, flat base, construction cut	1.63m x ?	0.34m
<b>Trench 2</b>			
2000	Unstratified finds for Trench 2	N/A	N/A
2001	Grey sand silt and brick rubble, demolition rubble from 20th century building	Trench	0.24m
2002	Red brick, foundations for 19th and 20th century buildings	Trench	0.38 - 1.45m
2003	Vertical sided, flat base, cut for foundations (2002)	Trench	0.38m - 1.45m
2004	Very dark grey clay sand silt, garden/orchard soil	Trench	0.3m - 0.72m
2005	Very dark brown grey clay sand silt, garden/orchard soil	Trench	0.3m - 0.52m
2006	Dark brown grey clay silt with red brown clay mottles, organic dump deposit	Trench	0.46m - 0.6m
2007	Dark brown grey clay silt, dump deposit	>2.88m x >1.56m	0.04m - 0.38m
2008	Dark brown grey clay sand silt, fill of pit [2010]	>0.41m x >0.83m	0.8m
2009	Mid brown grey clay silt with yellow brown grey clay mottles, secondary fill	>0.84m x >0.4m	0.4m

	of linear [2030]		
2010	Steep concave sides and concave base, cut of pit	>0.83m x >0.41m	0.60m
2011	Dark brown grey clay silt, primary fill of linear [2030]	>0.84m x >0.4m	>0.18m
2012	Finds number for mixed finds from [2013]	N/A	N/A
2013	Steep and moderate, straight sides, unseen base, cut of foundation trench	>0.82m x >0.86m	>0.52m
2014	Dark grey clay silt, backfill of beamslot in foundation [2013]	>0.9m x >3.16m	0.50m
2015	Steep straight sides, concave base, interface between fills (2014), (2016) and (2016) in foundation [2013]	>3.16m x 0.38m	0.26m -0.50m
2016	Grey brown clay silt, packing fill in foundation [2013]	0.46m x >0.72m	>0.16m
2017	Grey brown clay silt, packing fill in foundation [2013]	0.35m x >0.72m	>0.22m
2018	Dark orange brown ashy silt with freq. charcoal, fill of pit [2020]	0.88m x >0.8m	>0.15m
2019	Dark greyish brown clay sand silt with freq. charcoal, fill of pit [2020]	0.88m x >0.8m	?
2020	Vertical sides, unseen base, cut of pit	0.88m x >0.8m	?
2021	Mid grey clay silt, fill of pit [2020]	0.88m x >0.8m	0.22m
2022	Dark brown grey clay silt, fill of post-hole [2023]	0.44m x 0.3m	0.13m
2023	Steep concave sides and concave base, cut of post-hole	0.44m x 0.3m	0.13m
2024	Mottled grey brown and grey clay sand silt, fill of pit [2025]	1.54m x 0.74m	0.18m
2025	Steep concave sides and concave base, rectangular cut of pit	1.54m x 0.74m	0.18m
2026	Finds number for mixed (2028) and (2024)	N/A	N/A
2027	Mottled light red brown, orange brown and grey clay, possible clay floor	>2.7m x >0.68m	0.18m
2028	Mid brown grey clay sand silt, secondary fill of linear [2030]	>0.68m x >0.56m	0.44m
2029	Mid grey brown clay sand silt, primary fill of linear [2030]	>0.68m x >0.56m	0.46m
2030	Steep straight sides and flat base, cut of linear	>2.4m x 0.46m	0.64m
2031	Mid grey brown clay sand silt, fill of pit [2032]	0.68m x >0.46m	0.26m
2032	Vertical sides, flat base, cut of pit	0.68m x >0.46m	0.26m
2033	Mid grey brown clay sand silt, deposit	>0.38m x >0.36m	>0.10m
2034	Mid grey brown and orange brown clay, possible clay floor	>0.38m x >0.36m	0.06m
2035	Mid grey brown clay sand silt, fill of pit? [2036]	>0.38m x >0.14m	?
2036	Unexcavated feature, possibly a pit	>0.38m x >0.14m	?
2037	Light yellow brown sandy clay, possible natural deposit		
2038	Dark brown grey clay silt, dumped organic soil	>2.5m x ?	0-0.44m
2039	Steep sides and concave base, cut of possible tree throw	0.42m x ?	0.44m
2040	Loose, very dark brown grey clay sand silt, fill of [2039]	0.42m x ?	0.44m
2041	Steep straight sides and concave base, cut of possible tree throw	0.42m x ?	0.28m
2042	Loose, very dark brown grey clay sand silt, fill of [2041]	0.42m x ?	0.28m
3000	Unstratified finds from machined area	N/A	N/A



## 10.0 Appendix 2 ~ Archive Index.

### 10.1 Drawing Register.

Dwg No	Description	Scale	Date	Initials
1	Plan- Skeleton (1008)	1:10	24-03-05	IM
2	Plan- Pits [2025][2010] and trench outline	1:20	24-03-05	DS
3	Plan- Foundation trench interface [2015]	1:20	24-03-05	DS
4	Plan- Post-holes [1021][1019][1017][1015] and slot	1:20	24-03-05	IM
5	Section- Post-holes [1021][1023]	1:10	29-03-05	IM
6	Section- Post-hole [1019]	1:10	29-03-05	IM
7	Section- Post-hole [1017]	1:10	29-03-05	IM
8	Section- Post-hole [1015]	1:10	29-03-05	IM
9	Section- NE facing edge Trench 1	1:10	29-03-05	IM
10	Section- SE facing edge Trench 1	1:10	29-03-05	IM
11	Plan-pits [1011][1013] linear [1030] post-hole [1023]	1:20	29-03-05	IM
12	Section- NE facing edge Trench 2	1:20	29-03-05	DS
13	Section- SW facing edge Trench 2	1:20	29-03-05	DS
14	Section- NW facing edge Trench 2	1:20	29-03-05	DS
15	Section- foundations [2030][2015] pits[2025][2032] ph[2023] floor (2027)	1:20	29-03-05	DS
16	Plan- Multi-context area strip	1:50	13-05-05	TK
17	Plan- Pit [2020] ph [2023]	1:20	24-03-05	DS
18	Plan- Bottom plan including sondages Trench 2	1:20	29-03-05	DS

### 10.2 Photographic Register.

Frame	Description	Scale	Date	Initials
<i>Film: Black &amp; White, Colour, and Digital</i>				
1	Identification shot	N/A	22-03-05	DS
2	Trench 1 Pre-excavation	1m	23-03-05	DS
3	Trench 1 Pre-excavation	1m	23-03-05	DS
4-5	Trench 2 Pits [2010][2020]	1m	23-03-05	DS
6	Working Shot of burial excavation	1m	23-03-05	DS
7-8	Skeleton (1008)	1m	23-03-05	IM
<i>Film: Digital</i>				
1	Pit [2010] cutting clay floor (2027)	0.5m, 1m	24-03-05	DS
2	Skeleton (1008)	-	24-03-05	IM
3	Trench 1 NE facing section	0.5m	24-03-05	IM
4	Trench 1 SE facing section	1m	24-03-05	IM
5	Trench 1 SW facing section	1m	24-03-05	IM
6	Section showing [pits [2036][2032][2025] linear[2030] ph[2023] floor (2027)	0.5m, 1m	24-03-05	DS
7	Sondage showing linear [2030] pits [2032][2036]	0.5m, 1m	24-03-05	DS
8-9	Trench 2 SW facing section	1m	24-03-05	DS
10	Trench 2 SE facing section	1m	24-03-05	DS
11	Trench 2 NE facing section	1m	24-03-05	DS
12	Trench 2 NW facing section	1m	24-03-05	DS
13-15	Trench 2 final shots	1m	24-03-05	DS
<i>Film: Digital</i>				
1-3	Brick well in z-shaped machined area	-	24-04-05	DS
1-2	Covered burial	-	23-05-05	IM



3-4	General shots of Z-shaped machined area	2x2m	23-05-05	IM
5-6	Re-excavated skeleton (1008)	-	23-05-05	IM
7	Skeleton (1008) skull close-up	-	23-05-05	IM
8-9	Re-excavated skeleton (1008)	0.5m	23-05-05	IM
10	General shot of z-shaped machined area	2x2m	23-05-05	IM

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## 11.0 Appendix 3 ~ Finds Assessment Report.

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*Alan Vince, Kate Steane & Barbara Precious.*

### 11.1 Introduction.

An archaeological evaluation at 18-20 St Maurice's Road, York, carried out by *On-Site Archaeology Ltd* produced a collection of pottery and a small amount of ceramic building material and clay tobacco pipes (Appendix A). The pottery ranges in date from the late 1<sup>st</sup>/early 2<sup>nd</sup> century to the 19<sup>th</sup> century with a gap between the 5<sup>th</sup> and the mid 10<sup>th</sup> centuries, although the earliest stratified material is probably of late 2<sup>nd</sup>/early 3<sup>rd</sup> century date.

Of note is a fragment of pipeclay used in the production of clay pipes. It was found in the same deposit as two possible clay pipe wasters, both of early 19<sup>th</sup>-century date.

### 11.2 Description.

#### 11.2.1 Ceramic Building Material.

Three fragments of ceramic building material were recovered. All are probably of Roman date and include one flange from a *tegula*. The remaining pieces are featureless and too small to determine their original form.

#### 11.2.2 Clay Tobacco Pipe.

Four fragments of pipeclay were recovered from context 3000. One of these is a decorated bowl from a pipe of early 19<sup>th</sup>-century date. It has blackening around the inside of the bowl and has definitely been used. By contrast, the two other pipes present, both decorated and of early 19<sup>th</sup>-century type, are blemished with no traces of use. One has not had the seams trimmed before firing and is therefore a second whilst the other has patches of brown ash glaze on the bowl rim and body and can be classed as a waster.

The fourth piece is a curved sausage of pipeclay with evenly spaced impressions from clay pipe stems in it. It was probably a piece of kiln furniture used in the stacking of the pipe kiln. However, it deserves specialist study.

Taken together, these objects suggest that waste from clay pipe production of early 19<sup>th</sup>-century date is present on the site.

#### 11.2.3 Fired Clay.

A small fragment of fired clay was recovered from context 2028. It is featureless and its original use cannot be determined.

### 11.2.4 Pottery.

#### *Roman.*

One hundred and ninety-one sherds of Romano-British pottery were recovered. Most of these could be paralleled in general with the corpus of Roman Pottery in York (1997). The majority of the sherds are of types found between the late 1<sup>st</sup>/early 2<sup>nd</sup> century and the 4<sup>th</sup> centuries (Table 1).

However, they included two unusual types. The first is an oxidized jar with a medium-textured mixed sand, consisting of rounded quartz and individual ooliths and the second is a handmade jar rim from a large storage jar which contains moderate rounded fragments of limestone, including oolitic limestone.

Similarly, the range of forms present is typical of Roman pottery assemblages from central York (Table 2). The face pot is represented by a featureless bodysherd which has been moulded by hand after throwing and then burnished. The only unusual form is an unguentarium base which appears to be made in a standard Eboracum ware 1 fabric.

*Table 1.*

YAT code	full name	Broad source	Source area	NoSH	NoV	Wt
AP25	Amphorae - Peacock & Williams (25) - Dressel 20	Imported	Western Mediterranean	1	1	141
AP27	Amphorae - Peacock & Williams (27) - Gauloise 4	Imported	Western Mediterranean	2	2	24
AP45	Amphorae - Peacock & Williams (45) - Biv	Imported	Eastern Mediterranean	1	1	5
B1	Black Burnished ware 1	Regional industries	Dorset	9	8	61
B12	Crambeck B12	Regional industries	Crambeck	1	1	15
B3	Grey B3	Local	Yorkshire	48	47	481
B7	Black Burnished ware 2	Regional industries	South Yorkshire	3	3	44
C1	NVCC	Regional industries	Lower Nene	15	12	112
C24	Moselkeramik	Imported	Rhineland	3	2	7
C3	NVCC	Regional industries	Lower Nene	6	6	20
E1	Ebor 1	York	York	38	35	695
E8	Ebor 1	York	York	1	1	10
F1	Grey	Unknown British?	Unknown British?	1	1	2
F3	Parisian ware	Local	Yorkshire	1	1	26
G1	Local grey ware	York	York	37	32	304
G12	Grey	Regional industries	Lincolnshire/Greyware	1	1	9
H1	Dales	Regional industries	Lincolnshire	9	6	235
M0	Unknown mortaria	Unknown British?	Unknown British?	1	1	9
M14	Mancetter-Hartshill mortaria	Regional industries	Mancetter	1	1	34
M5	Eboracum and local mortaria	York	York	1	1	232
OX	Unidentified oxidized Roman wares	Unknown British?	Unknown British?	1	1	4
S0	Samian	Imported	imported	3	3	3
S1	SGS	Imported	South Gaul	7	6	23
S2	LMDV	Imported	South Gaul	10	8	136



YAT code	1 full name	Broad source	Source area	NoSH	NoV	Wt
S3	CGS	Imported	Central Gaul	1	1	188
S4	EGS	Imported	East Gaul	1	1	10
W1	Ebor white	York	York	6	5	25

Table 2.

Form	NoV	NoSH	Wt
?	7	8	14
18/31	1	1	21
18/31R	2	2	24
31	1	1	10
31R?	1	3	33
37	1	1	38
AMPH	5	5	175
BEAKER	22	26	167
BOWL	2	2	12
DISH	4	4	41
DISH/BOWL	1	1	3
DR27	3	3	19
DR37	1	1	10
DR43	1	1	188
FACE POT	1	1	10
JAR	126	135	1632
JAR/FLAG	5	6	25
LID	2	6	71
MORT	3	3	275
PLATTER	1	1	56
UNGUENTARIUM	1	1	94
<b>Grand Total</b>	<b>191</b>	<b>212</b>	<b>2918</b>

### Medieval.

The earliest post-Roman pottery recovered consisted of two sherds from a single Torksey ware (TORK) jar from context 2007 (Barley 1964; Barley 1981; Brooks and Mainman 1984). The rim and firing of this vessel suggest a late 10<sup>th</sup> to mid 11<sup>th</sup> century date.

There are then a single sherd of Stamford ware jug, of late 11<sup>th</sup> to mid 12<sup>th</sup>-century character (ST); 12 sherds of York Gritty ware (YG), of mid 11<sup>th</sup> to mid 13<sup>th</sup> century date; four York Splashed ware (YSP) jug sherds, dating between the early and late 12<sup>th</sup> centuries; a sherd of Beverley-type glazed ware, of mid/late 12<sup>th</sup>-century type (BEVO1A); four York glazed ware (YORK) sherds, of later 12<sup>th</sup> to mid 13<sup>th</sup> century date; and two sherds of Northern Gritty ware (NGR), of mid 12<sup>th</sup> to 14<sup>th</sup> century date. These suggest activity on the site by the middle of the 12<sup>th</sup> century. No types specific to the early 13<sup>th</sup> century or later were present although most of the types listed above continued in use into the 13<sup>th</sup> century.

Later medieval pottery consists of three sherds: Scarborough ware (SCAR, a jug sherd), Brandsby-type ware (BRAN, a jug sherd); and Humberware (HUM, a late 14<sup>th</sup>-century unglazed drinking jug).

### *Post-Medieval.*

Twelve sherds of post-medieval pottery were recovered. They include a sherd of Ryedale ware, of late 15<sup>th</sup>, 16<sup>th</sup> or early 17<sup>th</sup> century date. The remainder are probably of later 17<sup>th</sup> or 18<sup>th</sup> century date and consist of glazed red earthenware (GRE); Late Humberware (LHUM); Staffordshire slipware (STSL) and a tin-glazed ware ointment pot, of mid 18<sup>th</sup>-century character (TGW).

### *Early Modern.*

A single fragment of early modern pottery was recovered. This was a transfer-printed ware bowl, probably of 19<sup>th</sup>-century date (TPW).

## **11.3 Assessment.**

### *11.3.1 Trench 1.*

Four contexts in Trench 1 produced finds, in addition to unstratified material of Roman and medieval date.

A small group of pottery was recovered from the fill of the grave, 1008 (context 1007). These sherds give a *terminus post quem* for the burial of the later 2<sup>nd</sup> century. This burial was sealed by a possible dump, which was itself cut by a line of post-holes. One of these post-holes produced a small group of pottery of Roman date, the latest sherd of which dates the back-filling to the later 3<sup>rd</sup> century or later. However, the interpretation of this deposit by the excavator is that it is post-Roman, in which case these sherds are residual. A pit cutting through the dump and partially truncating the grave also only contained pottery of Roman date. The latest sherd from its fill (context 1012) is of early 2<sup>nd</sup>-century or later date. A pit or boundary, 1030, produced a group of pottery, fourteen sherds of which are of Roman date (latest sherds of later 3<sup>rd</sup> century or later date) and a single sherd of York Gritty ware (YG). This sherd probably dates the fill to the mid/late 11<sup>th</sup> century or later.

Thus, most of the finds from Trench 1 are residual and of Roman date and only a single medieval potsherd was actually recovered from a stratified medieval deposit.

### *11.3.2 Trench 2.*

The earliest excavated deposit from Trench 2 to produce finds was the fill of pit 2032 (context 2031). The pottery is of early 2<sup>nd</sup> century or later date and includes a substantial part of a crude *unguentarium*. This pit was cut by a linear feature 1030 from which were recovered four groups of pottery, three of which included sherds of Dales-type shelly ware, probably dating to the mid/late 3<sup>rd</sup> century since the total assemblage of 56 sherds contained no sherds of calcite-tempered ware, which would be expected in a 4<sup>th</sup> century assemblage. The fill of feature 2030 was sealed by a deposit of clay, 2027, which produced a few sherds of early 2<sup>nd</sup>-century or later date.



An isolated patch of stratigraphy in the northern corner of the trench produced sherds of late 1<sup>st</sup> century or later date from the lowest excavated deposit, 2033. This was sealed by a clay deposit similar to 2027 and a linear feature, 2013, separated the two deposits. The fill of 2013 (contexts 2013, 2014 and 2017) contained a combined assemblage of 53 sherds, of which the latest type dates to the mid 3<sup>rd</sup> century or later. Some of these mid 3<sup>rd</sup>-century or later sherds came from a deposit interpreted as packing and therefore contemporary with or earlier than the construction of the feature. The fill of a rectangular pit 2025 (context 2024), interpreted as being of contemporary date to foundation 2013 produced an assemblage of 33 sherds of later 2<sup>nd</sup>-century or later date, and is therefore consistent with this interpretation. The pit fill was itself cut by a post-hole, 2023, whose fill produced a single sherd of later 1<sup>st</sup> century or later date.

Pit 2025 was also cut by a deep pit, 2020, a fill in which can be dated to the later 14<sup>th</sup> century or later by the presence of Humberware, including an unglazed drinking jug.

In the northern part of the trench, deposits were removed by machine and the earliest of these, 2007, produced two sherds of Torksey ware, indicating a late 10<sup>th</sup> century or later deposition date. This deposit was cut by a pit, 2010, whose fill (context 2008) produced six sherds of Roman date, presumably residual. The pit fill was sealed by a deposit, 2006, interpreted as deliberately dumped horticultural soil. This deposit contained four sherds of medieval date and some indeterminate ceramic building material. These sherds date the dump to the later 12<sup>th</sup> century or later. Following the dumping of another similar deposit, a layer of silt accumulated on the site, context 2005, and this too produced sherds of medieval pottery of which the latest types were of late 12<sup>th</sup> century or later date. Two pits cut this silt but produced no finds. Their fills were sealed by a soil horizon, 2004, which produced a mixed assemblage of pottery, the latest sherds in which were of late 16<sup>th</sup> century or later date.

The finds from Trench 2 therefore suggest that the site was occupied in the 2<sup>nd</sup> to early 3<sup>rd</sup> centuries and that in the mid to late 3<sup>rd</sup> century a timber structure was built on the site. There is, however, little evidence from the pottery for this structure continuing in use into the 4<sup>th</sup> century. There is then evidence for dumping on the site some time between the later 10<sup>th</sup> and the later 12<sup>th</sup> centuries following by occupation and then further dumping in the later 12<sup>th</sup> century or later and subsequent occupation in the later 14<sup>th</sup> century or later. The finds from soil 2004 suggest, however, that there was little late medieval activity and consist of residual Roman and late 12<sup>th</sup> to mid 13<sup>th</sup>-century pottery with a few sherds of later 16<sup>th</sup> century or later date.

### 11.3.3 *Trench 3.*

No stratified finds were recovered from Trench 3 and unstratified finds consist of pottery of Roman, mid/late 11<sup>th</sup> century to later 13<sup>th</sup>/14<sup>th</sup> century date, and later 16<sup>th</sup> century and later pottery. Here too, there is a paucity of finds that date to the later medieval period.



### 11.4 Further Analysis.

None of the finds are of intrinsic interest and their main importance is for dating the stratigraphy on the site and for the light they might throw on activity taking place on the site. For the Roman period, therefore, it is possible that a study of the pottery associated with timber building would be of some interest, although most of this is associated with its construction rather than its use, and might therefore have come from elsewhere in York. However, a more precise date for the construction of the building could be obtained through a specialist study of this pottery. No large assemblages of post-Roman date were recovered and there is good reason to believe that much of the pottery found is residual or comes from mixed assemblages.

### 11.5 Retention.

All stratified finds from the site should be retained for potential future study. The unstratified finds (47 finds, weighing in total 911 gm) could, however, be discarded.

### 11.6 Bibliography.

Barley, M. W. (1964) "The medieval borough of Torksey: excavations 1960-62." *Antiq J*, 44, 164-87.

Barley, M. W. (1981) "The medieval borough of Torksey: excavations 1963-8." *Antiq J*, 61, 263-91.

Brooks, C. and Mainman, A. (1984) "Torksey ware viewed from the North." in P. V. Addyman and V. E. Black, eds., *Archaeological papers from York, presented to M W Barley*, 63-70.

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

### 11.7 Appendix A.

Context	class	cname	subfabric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
1000	POTTERY	B1		BOWL	1	1		FLANGED RIM			R	0	7			
1000	POTTERY	E1		JAR	1	1					BS	0	17			
1000	POTTERY	H1		JAR	1	1		DWSH RIM			R	0	12			
1000	POTTERY	SCAR		JUG	2	2					BS	0	7			
1000	POTTERY	W1		JAR/F LAG	1	1					BS	0	2			
1000	POTTERY	YORK		JUG	1	1					BS	0	4			
1000	POTTERY	YORK		JAR	1	1					BS	0	14	SOOTED EXT		
1007	POTTERY	B3		JAR	1	1		ACUTE LATTICE			BS	0	26			
1007	POTTERY	C1		BEAK CD	1	1					B	0	6			

Context	class	cname	subfabric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
				ER												
1007	POTTERY	E1		JAR	1	1					BS	0	5			
1007	POTTERY	G1		JAR	1	1					BS	0	4			
1007	POTTERY	S2		18/31R	1	1					BS	0	20			
1007	POTTERY	S2		DISH/ BOWL	1	1					R	0	3			
1012	POTTERY	AP0		AMPH	1	1					BS	0	5			
1012	CBM	RTIL			1	1					BS	0	6			
1012	POTTERY	B3		BEAK ER	1	1		BARBOTIN E DOTS			BS	0	2			
1012	POTTERY	E1		JAR	1	1					BS	0	9			
1012	POTTERY	E1		JAR	1	1					BS	0	6		WHIT E DEP INT	
1012	POTTERY	E8		JAR	1	1					BS	0	10			
1012	POTTERY	W1		JAR/F LAG	2	1					BS	0	15			
1012	POTTERY	W1		JAR/F LAG	1	1		WHITE SLIP INT/EXT			BS	0	1			
1018	POTTERY	B12		JAR	1	1					BS	0	15			
1018	POTTERY	B3		JAR	1	1					BS	0	6			
1029	POTTERY	B3		DISH	1	1					B	0	14			
1029	POTTERY	B3		JAR	1	1		ACUTE LATTICE			BS	0	11			
1029	POTTERY	B3		JAR	1	1		OBTUSE LATTICE			BS	0	2			
1029	POTTERY	B3		JAR	2	2					B;BS	0	13			
1029	POTTERY	C1		BEAK ER	1	1		ROULETTI NG			BS	0	6			
1029	POTTERY	C1		BEAK ER	1	1					BS	0	2			
1029	POTTERY	C24		BEAK ER	1	1					BS	0	3			
1029	POTTERY	E1		FACE POT	1	1					BS	0	10			
1029	POTTERY	G1		JAR	2	2					BS	0	21			
1029	POTTERY	G1		JAR	1	1					BS	0	4		SOO TED EXT	
1029	POTTERY	KO		JAR	1	1					BS	0	16		WHIT E DEP INT	
1029	POTTERY	M0		MORT	1	1					BS	0	9			
1029	POTTERY	YG		JAR	1	1					BS	0	15		SOO TED EXT; BLAC K DEP INT	
2000	POTTERY	C1		BEAK ER	2	1		BLACK SLIPPED BODY			BS	0	5			

Context	class	cname	subfa bric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
								WITH WHITE BARBOTIN E OBTUSE LATTICE								
2000	POTTERY	G1		JAR	1	1					BS	0	1			
2000	POTTERY	G1		JAR	2	1					BS	0	17			
2004	POTTERY	E1		JAR	1	1					BS	0	4			
2004	POTTERY	F1		JAR	1	1		ROULTTIN G			BS	0	2			
2004	POTTERY	G12		JAR	1	1		DWSH RIM			R	0	9			
2004	POTTERY	GRE		BOWL	2	2					R;BS	0	92			
2004	POTTERY	LHUM		JAR	1	1					BS	0	4			
2004	POTTERY	NGR		JAR	1	1					B	0	7			
2004	POTTERY	YG		JAR	1	1					BS	0	8		SOO TED EXT	
2004	POTTERY	YORK		JAR	1	1					BS	0	3		SOO TED EXT	
2004	POTTERY	YORK		JUG	6	6					BS	0	25			
2004	POTTERY	YSP		JUG	2	2					BS	0	8			
2005	POTTERY	B3		JAR	1	1					BS	0	17			
2005	POTTERY	NGR		JUG	1	1		SPLASHED GLAZE			BS	0	3			
2005	POTTERY	YG		JAR	1	1					BS	0	5		SOO TED EXT	
2005	POTTERY	YORK		JUG	1	1					BS	0	8			
2006	POTTERY	B3		JAR	3	3					BS	0	6			
2006	POTTERY	G1		JAR	1	1					BS	0	2			
2006	POTTERY	YG		JAR	1	1					BS	0	1		SOO TED EXT	
2006	CBM	RTIL/M TIL			4	4					BS	0	18			
2006	POTTERY	YORK		JAR	1	1					BS	0	3			
2006	POTTERY	YSP		JUG	2	2					BS	0	7			
2007	POTTERY	B3		BOWL	1	1		FLANGED RIM			R	0	5			
2007	POTTERY	TORK		JAR	2	1					R;BS	0	30			ABRA
2008	POTTERY	E1		JAR	3	3					BS	0	13			
2008	POTTERY	G1		JAR	3	3					BS	0	8			
2009	POTTERY	B3		JAR	3	3					R;BS	0	44			
2009	CBM	RTIL			3	3					BS	0	29			
2009	POTTERY	B7		JAR	2	2					B;BS	0	37			
2009	POTTERY	C1		BEAK ER	1	1		INDENTED			BS	0	4			
2009	POTTERY	C3		BEAK ER	1	1		FUNNEL NECK			R	0	5			
2009	POTTERY	C3		BEAK ER	1	1		APPLIED SCALES			BS	0	2			



Context	class	cname	subfabric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
								OF INDENTED BEAKER								
2009	POTTERY	E1		JAR	3	3					BS	0	9			
2009	POTTERY	E1		JAR	1	1					BS	0	2	SOOTED EXT. BLACK DEP INT		
2009	POTTERY	H1		JAR	1	1					BS	0	13	SOOTED EXT. WHITE UNDER BLACK DEP INT		
2009	POTTERY	H1		JAR	1	1					BS	0	2	WHITE DEP INT		
2009	POTTERY	S1		?	2	2		FRAGMENTS			BS	0	6			
2011	POTTERY	E1		JAR	3	1					R,B	0	88			
2011	POTTERY	S3		DR43	1	1					B	0	188			
2012	POTTERY	B3		JAR	1	1					BS	0	4			
2012	POTTERY	B3		JAR	1	1		HORIZ AND DIAGONAL LINES			BS	0	17			
2012	POTTERY	B3		DISH	1	1					R	0	7			
2012	POTTERY	B3		JAR	3	3					R,BS	0	9			
2012	POTTERY	B3		JAR	2	2		LINES			BS	0	3			
2012	POTTERY	C1		BEAKER	3	1		BARBOTINE FREEHAND DEC			B,BS	0	61			
2012	POTTERY	C1		BEAKER	2	2					BS	0	4			
2012	POTTERY	C24		BEAKER	2	1		INDENTED WITH ROULETTING			BS	0	4			
2012	POTTERY	C3		BEAKER	1	1		ROULETTING			BS	0	1			
2012	POTTERY	E1		JAR	1	1		REEDED RIM			BS	0	42			
2012	POTTERY	E1		JAR	1	1					BS	0	4			
2012	POTTERY	E1		JAR	1	1					BS	0	1	SOOTED EXT		
2012	CBM	RTIL			4	4					BS	0	10			
2012	POTTERY	G1		JAR	1	1					BS	0	31	SOOTED EXT		

Context	class	cname	subfabric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF	Condition
2012	POTTERY	G1		JAR	5	5					BS	0	21			
2012	POTTERY	H1		JAR	1	1					BS	0	59	WHIT E DEP INT		
2012	POTTERY	M14		MORT	1	1					BS	0	34			
2012	POTTERY	S0		?	3	3		FRAGMEN TS			BS	0	3			
2012	POTTERY	S2		18/31R	1	1					BS	0	4			
2012	POTTERY	W1		JAR/F LAG	1	1					BS	0	4			
2014	POTTERY	B3		JAR	1	1		OBTUSE LATTICE			BS	0	10	SOO TED EXT; WHIT E DEP INT		
2014	POTTERY	B3		JAR	2	2					BS	0	15			
2014	POTTERY	B3		JAR	1	1		LATTICE			BS	0	1			
2014	POTTERY	B3		JAR	1	1		PECKED SURFACE			BS	0	6			
2014	POTTERY	E1		JAR	1	1					BS	0	8			
2014	POTTERY	G1		JAR	2	2					BS	0	7			
2014	POTTERY	H1		JAR	2	1					BS	0	14	WHIT E DEP INT		
2014	POTTERY	S1		?	2	1		FRAGMEN TS			BS	0	3			
2017	POTTERY	AP27	BIOTITE META	AMPH	1	1					BS	0	4			
2017	POTTERY	B3		JAR	1	1		DIAGONAL LINES			BS	0	28			
2017	POTTERY	B7		JAR	1	1					BS	0	7			
2017	POTTERY	C3		BEAK ER	1	1		INDENTED BEAKER WITH APPLIED SCALES			BS	0	4			
2017	POTTERY	OX	GSQ, OOL	JAR	1	1					BS	0	4			
2018	POTTERY	B3		JAR	1	1					R	0	22			
2018	POTTERY	HUM		JUG	3	1					BS	0	62			
2018	POTTERY	HUM		DJ	1	1					BS	0	32			
2021	POTTERY	B3		JAR	3	2					R;BS	0	38			
2021	POTTERY	BEVO1 A		JUG	1	1					BS	0	3			
2022	POTTERY	G1		JAR	1	1					BS	0	14			
2024	POTTERY	AP25		AMPH	1	1					BS	0	141			
2024	POTTERY	AP27		AMPH	1	1					BS	0	20			
2024	POTTERY	B1		DISH	1	1		DIAG LINE			R	0	7			
2024	POTTERY	B1		JAR	2	1		OBTUSE LATTICE			BS	0	11			

Context	class	cname	subfa bric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
2024	POTTERY	B1		JAR	3	3					BS	0	23			
2024	POTTERY	B3		JAR	1	1					R	0	12	SOO TED UND ER RIM		
2024	POTTERY	B3		JAR	3	3					B,BS	0	35			
2024	POTTERY	B3		JAR	1	1		VERT AND DIAGONAL LINES			BS	0	19			
2024	POTTERY	B3		JAR	1	1		LATTICE			BS	0	2			
2024	POTTERY	B3		JAR	1	1		DIAG LINE			BS	0	42	SOO TED EXT		
2024	POTTERY	C1		BEAK ER	1	1					BS	0	5			
2024	POTTERY	E1		JAR	6	6					BS	0	13			
2024	POTTERY	E1		JAR	2	1					BS	0	173			
2024	POTTERY	E1		JAR	1	1					BS	0	11			
2024	POTTERY	F3		BEAK ER	1	1					B	0	26			
2024	POTTERY	G1		JAR	1	1					R	0	42			
2024	POTTERY	G1		JAR	1	1					BS	0	6			
2024	POTTERY	S1		DR27	1	1					R	0	3			
2024	POTTERY	S2		31R?	3	1					BS	0	33			
2024	POTTERY	S4		31	1	1					R	0	10			
2026	POTTERY	C1		BEAK ER	1	1					B	0	12			
2026	POTTERY	C3		BEAK ER	1	1		BARBOTIN E TRAIL DEC			BS	0	3			
2026	POTTERY	E1		JAR	2	2					BS	0	31			
2026	POTTERY	G1		JAR	2	2					BS	0	9	SOO TED EXT; WHIT E DEP INT		
2026	POTTERY	N0	OOLI TIC LST	JAR	1	1					R	0	42			ABRA
2027	POTTERY	B3		JAR	1	1					R	0	16	SOO TED UND ER RIM		
2027	POTTERY	G1		JAR	1	1					BS	0	13	SOO TED EXT; WHIT E DEP INT		
2028	POTTERY	B1		JAR	1	1		OBTUSE LATTICE			BS	0	7	SOO TED EXT		
2028	POTTERY	B1		JAR	1	1		OBTUSE LATTICE			BS	0	6	WHIT E		



Context	class	cname	subfa bric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
								LATTICE						DEP INT		
2028	POTTERY	B3		JAR	1	1					BS	0	14			ABRA
2028	POTTERY	B3		DISH	1	1		FLANGED RIM			R	0	13			
2028	POTTERY	B3		JAR	1	1					BS	0	8	WHIT E DEP INT		
2028	POTTERY	C1		BEAK ER	1	1		BARBOTIN E FREEHAN D DEC			BS	0	4			
2028	POTTERY	C1		BEAK ER	1	1					BS	0	3			
2028	POTTERY	C3		BEAK ER	1	1		ROULETTI NG			BS	0	5			
2028	POTTERY	E1		JAR	3	3					BS	0	72			
2028	POTTERY	E1		JAR	1	1					BS	0	16	SOO TED EXT		
2028	POTTERY	G1		JAR	2	2					R;BS	0	17	SOO TED EXT		
2028	POTTERY	G1		LID	5	1					R;BS	0	55			
2028	POTTERY	G1		JAR	1	1					BS	0	7			
2028	POTTERY	H1		JAR	3	1					R;B	0	135	SOO TED EXT; BLAK DEP INT		
2028	CBM	RTIL			2	2					BS	0	39			
2028	POTTERY	S1		DR37	1	1		MOULDED DEC			BS	0	10			
2028	POTTERY	S2		18/31	1	1					B	0	21			
2028	POTTERY	S2		DR27	1	1					BS	0	15			
2028	POTTERY	S2		?	1	1		FRAGMEN T			BS	0	2			
2028	POTTERY	W1		JAR/F LAG	1	1					BS	0	3			
2028	FCLAY	FCLAY			1	1					BS	0	7			
2029	POTTERY	AP45		AMPH	1	1					BS	0	5			
2029	POTTERY	E1		PLATT ER	1	1					R	0	56			
2031	POTTERY	B3		JAR	1	1					BS	0	6	SOO TED EXT		
2031	POTTERY	E1		JAR	1	1					B	0	11			
2031	POTTERY	E1		UNGU ENTA RIUM	1	1					B	0	94			
2031	POTTERY	G1		LID	1	1					R	0	16			
2031	POTTERY	M5		MORT	1	1					R	0	232			
2031	POTTERY	S2		37	1	1					B	0	38			
2033	POTTERY	G1		JAR	1	1					BS	0	1	SOO TED		

Context	class	cname	subfa bric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
														EXT		
2033	POTTERY	S1		DR27	1	1					BS	0	1			
3000	POTTERY	B3		JAR	2	2					BS	0	8			
3000	POTTERY	BRAN		JUG	1	1					BS	0	7			
3000	POTTERY	G1		JAR	1	1		19TH CENTURY BORE			BS	0	5	SOO TED EXT		
3000	POTTERY	G1		JAR	1	1					BS	0	3	SOO TED EXT; BLAC K DEP INT		
3000	POTTERY	GRE		JUG	1	1					BS	0	87			
3000	POTTERY	GRE		JAR	2	2					R;BS	0	84			
3000	POTTERY	GRE		BOWL	2	2					R;BS	0	74			
3000	POTTERY	LHUM		JUG	1	1					BS	0	39			
3000	POTTERY	NGR		JAR	1	1					B	0	16	SOO TED EXT		
3000	POTTERY	NGR		JUG	1	1		SPLASHED GLAZE			BS	0	4			
3000	CTP	PIPECL AY			1	1		CURVED ROLL OF CLAY WITH CLAY PIPE INDENTS ACROSS BRIDGE			BS	0	53			WASTE
3000	CTP	PIPECL AY		PIPE	1	1		19TH CENTURY BORE; FLUTED MOULDED DEC; UNFETTLE D AND UNUSED			BOW 0 L		10			
3000	CTP	PIPECL AY		PIPE	1	1		19TH CENTURY BORE; TALL SHIP MOULDED DEC; USED			BOW 0 L		6	BLAC K DEP INT		
3000	CTP	PIPECL AY		PIPE	1	1		19TH CENTURY BORE; SIMPLE MOULDED DEC; FRIED GLAZE PATCHES; UNUSED			BOW 0 L/ST EM		15			WASTE?
3000	POTTERY	RYEDA LE		BOWL	1	1					BS	0	85			
3000	POTTERY	ST		JUG	1	1					B	0	25			
3000	POTTERY	STSL		POSS	1	1					R	0	2			
3000	POTTERY	TGW		OINT	1	1					BS	0	5			

Context	class	cname	subfa bric	Form	Nosh	NoV	Action	Description	date	Box	Part	eves	Weight	Use	REF NO	Condition
3000	POTTERY	TPW		BOWL	1	1					B	0	63			
3000	POTTERY	YG		JAR	3	3					R	0	107			
3000	POTTERY	YG		JAR	4	4					BS	0	33	SOO TED EXT		
3000	POTTERY	YG		JAR	1	1					B	0	15	SOO TED EXT; BLAC K DEP INT		
3000	POTTERY	YORK		JUG	1	1		DEVS COPY			BS	0	9			
3000	POTTERY	YORK		JUG	2	2					BS	0	22			
3000	POTTERY	YORK		JAR	1	1					BS	0	48			



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## 12.0 Appendix 4 ~ Osteological Analysis.

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*Malin Holst, York Osteoarchaeology Ltd*

### **12.1 Introduction.**

In June 2005 York Osteoarchaeology Ltd was commissioned by *On-Site Archaeology Ltd* to carry out the osteological analysis of a skeleton. The skeleton had been recovered in spring 2005 during an archaeological evaluation at 18-20 St Maurice's Road, York (SE 6067 5221).

The skeleton had been interred in an extended position on its back, with the arms beside the body. It was lying with the upper body to the southeast and the legs to the northwest. The pelvis and left leg were cut by posthole [1019] and two large pits [1013], [1011].

#### **12.1.1 Aims & Objectives.**

The aim of the skeletal analysis was to determine the age, sex and stature of the skeleton, as well as to record and diagnose any skeletal manifestations of disease and trauma.

#### **12.1.2 Methodology.**

The skeleton was analysed in detail, assessing the preservation and completeness, as well as determining the age, sex and stature of the individual (Appendix 1). All pathological lesions were recorded and described.

### **12.2 Osteological Analysis.**

Osteological analysis is concerned with the determination of the identity of a skeleton, by estimating its age, sex and stature. Robusticity and non-metric traits can provide further information on the appearance and familial affinities of the individual studied. This information is essential in order to determine the prevalence of disease types and age-related changes. It is crucial for identifying gender dimorphism in occupation, lifestyle and diet, as well as the role of different age groups in society.

#### **12.2.1 Preservation.**

Skeletal preservation depends upon a number of factors, including the age and sex of the individual as well as the size, shape and robusticity of the bone. Burial environment, post-depositional disturbance and treatment following excavation can also have a considerable impact on bone condition. Preservation of human skeletal remains is assessed subjectively, depending upon the severity of bone surface erosion and post-mortem breaks, but disregarding completeness.

Preservation was assessed using a grading system of five categories: very poor, poor, moderate, good and excellent. Excellent preservation implied no bone surface erosion and very few or no breaks, whereas very poor preservation indicated complete or almost complete loss of the bone surface due to erosion and severe fragmentation.

The skeleton was in a poor condition (Table 1). It had suffered from considerable post-mortem breaks, which can probably be attributed to increased bone fragility due to its truncation by later features. This led to the loss of some of the spongy bones, such as the joints. Moderate superficial erosion was also observed. However, the skull was relatively well-preserved and almost complete. Intercutting of the grave by a posthole and two pits resulted in the loss of the majority of the lower limbs.

Table 1. Summary of osteological and palaeopathological results

Preservation	Completeness	Age	Sex	Stature	Pathology
Poor	50%	36+	Male	-	Bone excavations, enthesopathies, spinal and shoulder djd, inflammation of the right femur, <i>cribra orbitalia</i>

Because of the poor preservation and intercutting, the skeleton was only 50% complete (see Table 1).

### 12.2.2 Minimum Number of Individuals.

A count of the 'minimum number of individuals' (MNI) recovered from a cemetery is carried out as standard procedure in osteological reports on inhumations in order to establish how many individuals are represented by the articulated and disarticulated human bones (without taking the archaeologically defined graves into account). The MNI is calculated by counting all long bone ends, as well as other larger skeletal elements recovered. The largest number of these is then taken as the MNI. The MNI is likely to be lower than the actual number of skeletons that would have been interred on the site, but represents the minimum number of individuals that can be scientifically proven to be present.

No bone elements were duplicated, suggesting an MNI of one individual.

### 12.2.3 Assessment of Age.

Age was determined using standard ageing techniques, as specified in Scheuer and Black (2000a; 2000b) and Cox (2000). Age estimation relies on the presence of the pelvis and uses different stages of bone development and degeneration in order to calculate the age of an individual. Age is split into a number of categories, from foetus (up to 40 weeks in *utero*), neonate (around the time of birth), infant (newborn to one year), juvenile (1-12 years), adolescent (13-17 years), young adult (ya; 18-25 years), young middle adult (yma; 26-35 years), old middle adult (oma; 36-45 years), mature adult (ma; 46+) to adult (an individual whose age could not be determined more accurately as over the age of seventeen).

In this instance, the poor preservation meant that only very fragmentary ageing criteria survived. The fact that the long bone ends were completely fused suggested that this individual was at least 17 years old. The dental wear suggested an age of 35 to 45 years. However, dental wear age determination is not always accurate, as it depends on the coarseness of the diet and the pathological manifestations indicated that this individual might



have been more mature. It was therefore determined that this individual was an old middle or mature adult, aged 36 years or older (see Table 1).

#### 12.2.4 *Sex Determination.*

Sex determination was carried out using standard osteological techniques, such as those described by Mays and Cox (2000). Assessment of sex in both males and females relies on the preservation of the skull and the pelvis and can only be carried out once sexual characteristics have developed, during late puberty and early adulthood.

Only the cranial sexing characteristics survived and it was not possible to measure any of the bones for robusticity. However, all the surviving sexing characteristics suggested that this was a male.

#### 12.2.5 *Metric Analysis.*

Stature depends on two main factors, heredity and environment. However, stature can also fluctuate between chronological periods. Stature can only be established in skeletons if at least one complete and fully fused long bone is present. In this instance, the lack of complete long bones meant that it was not possible to assess stature.

Measurement of some of the long bone circumferences was possible and suggested that this individual was left-handed.

The partial fragmentation of the skull together meant that it was not possible to establish the shape of the cranium.

#### 12.2.6 *Non-Metric Traits.*

Non-metric traits are additional sutures, facets, bony processes, canals and foramina, which occur in a minority of skeletons and are believed to suggest hereditary affiliation between skeletons (Saunders 1989). The origins of non-metric traits have been extensively discussed in the osteological literature and it is now thought that while most non-metric traits have genetic origins, some can be produced by factors such as mechanical stress (Kennedy 1989) or environment (Trinkhaus 1978).

A total of thirty cranial (skull) and thirty post-cranial (bones of the body and limbs) non-metric traits were selected from the osteological literature (Buikstra and Ubelaker 1994, Finnegan 1978, Berry and Berry 1967) and recorded. These were anomalies that would not have affected the individual.

Only one non-metric trait was noted in this individual; this was a *parietal foramen* (small depression at the top of the skull). This trait was probably genetic in origin and would not have affected this individual.



### 12.2.7 Conclusion.

Osteological analysis of the skeleton established that this individual was an old middle or mature adult male, who was relatively slight in appearance. It is probable that he was left-handed, as measurements and muscle development of his left arm were more pronounced than those of the right arm.

### 12.3 Pathological Analysis.

Pathological conditions (disease) can manifest themselves on the skeleton, especially when these are chronic conditions or the result of trauma to the bone. The bone elements to which muscles attach can also provide information on muscle trauma and excessive use of muscles.

#### 12.3.1 Infection.



*Plate A. Close-up of striated inflammatory lesions on distal.*

Evidence for inflammation was observed in this skeleton. The infection was characterised by superficial inflammatory lesions on the distal (lower) part of the shaft of the right femur (Plate A). The type of skeletal lesions (lamellar bone) suggested that the inflammation was receding at the time of death. However, the femur showed evidence for irregular and plaque-like new bone formation, which implied that the infection had been severe and long-standing. The medullary cavity (which contains the bone marrow during life) was not affected, which meant that the infection was restricted to the bone surface.

Inflammatory lesions on human bones can be indicative of infectious diseases, such as leprosy and syphilis, and of non-specific localised infection, such as varicose veins, leg ulcers or

trauma. However, the lesions only form in the bone if the inflammation is chronic and long-standing (Roberts and Manchester 1995, 125).

It is possible that the inflammation in this case was associated with muscular strain noted on the same bone. Alternatively, it may have been due to a variety of other conditions, but the poor preservation and incompleteness of the skeleton meant that the cause could not be diagnosed.

### 12.3.2 *Degenerative Joint Disease.*

The term joint disease encompasses a large number of conditions with different causes, which all affect the articular joints of the skeleton. Factors influencing joint disease include physical activity, occupation, workload and advancing age, which manifest as degenerative joint disease and osteoarthritis. Alternatively, joint changes may have inflammatory causes in the *spondyloarthropathies*, such as septic or rheumatoid arthritis. Different joint diseases affect the articular joints in different ways, and it is the type of lesion, together with the distribution of skeletal manifestations, which determines the diagnosis.

The most common type of joint disease observed tends to be degenerative joint disease (DJD). DJD is characterised by both bone formation (osteophytes) and bone resorption (porosity) at and around the articular surfaces of the joints, which can cause great discomfort and disability (Rogers 2001).

Moderate DJD in the form of porosity at the shoulder joints of the clavicles were noted in this man. However, DJD was most widespread in the bodies of the vertebrae throughout all parts of the spine (Plate B). These changes are common in elderly people and are exacerbated by the pressure exerted on the spine through bipedalism. It is therefore likely that the degenerative changes observed were age- rather than activity-related.

A different condition that affects the spine is Schmorl's nodes. Schmorl's nodes are indentations in the upper and lower surfaces of the vertebral bodies, most commonly in the lower thoracic vertebrae (Hilton *et al* 1976). Schmorl's nodes can result from damage to the intervertebral discs, which then impinge onto the vertebral body surface (Rogers 2001), and may cause necrosis (death) of the surrounding tissue. Rupture of the discs only occurs if sufficient axial compressive forces are causing pressure on the central part of the discs; frequent lifting or carrying of heavy loads can cause this. Schmorl's nodes were observed in the central spine of this man and might be attributed to the physical stresses he underwent in his daily activities. Schmorl's nodes were common in the Roman period, with a crude prevalence rate of 8.9% (Roberts and Cox 2003, 147).





**Plate B.** JD on thoracic vertebra.

### 12.3.3 Trauma.

A small rib fragment from the right side of the body showed evidence for a fracture. The fragment probably derived from a central rib. The fracture was well-healed, suggesting that it had occurred some time before death. It did, however, show evidence for slight overlapping of the broken bone ends, leading to slight distortion of the rib shaft.

Rib fractures are commonly seen in skeletal assemblages from archaeological context; approximately 3.3% of ribs from the Roman period are fractured (Roberts and Cox 2003, 156). Rib fractures can be the results of accidents or interpersonal violence and tend to be four times as common in males compared with females.

Occasionally, it is possible to infer trauma to the soft tissue on the bones, in the form of ligamentous or muscular trauma. This is expressed through the formation of bony processes (*enthesopathies*) at the site of ligament attachments. Additionally, it is possible to observe bone defects at the site of muscle insertions, which are the result of constant micro-trauma and are usually activity-related (Hawkey and Merbs 1995, 334).



The skeleton showed evidence for muscular strain to *gluteus maximus*, the main muscle of the bottom. This muscle extends and laterally rotates the hip joint and extends the trunk. Repetitive strain injuries to *gluteus maximus* are commonly observed in most archaeological populations. Muscle trauma in the form of cortical bone defects was observed on the left humerus, at the attachment sites for *teres major* (rotator cuff muscle). This muscle is responsible for movements of the arm and shoulder (Stone and Stone 1990).

#### 12.3.4 Metabolic Conditions.

Metabolic disease can be described as the body's response to physiological stress. This can be due to dietary deficiencies or excesses, chronic disease, trauma, blood loss, poor hygiene, medical care and living conditions. Physiological stress, food intake and disease are all closely inter-related, often affecting one another. Symptoms of iron deficiency anaemia include gastro-intestinal disturbance, shortness of breath, fatigue, pallor and palpitations (Roberts and Manchester 1995, 167).

This man showed evidence for metabolic disease in the form of *cribra orbitalia*, which are pitted lesions in the eye orbits. The lesions are thought to be indicative of periods of iron deficiency during childhood, but can be observed in both children and adults.

#### 12.3.5 Miscellaneous Pathology.

*Arachnoid granulations* are small, well-defined depressions on the inner (endocranial) surface of the skull. They tend to cluster at the frontal and parietal, especially at the border between these three skull parts (Mann and Murphy 1990, 26). They are common in all populations and have a tendency to increase in number and depth with advancing age. The cause for the formation of *arachnoid granulations* has not yet been understood. Older females tend to be predominantly affected, especially following menopause, although males do exhibit the lesions as well. The skeleton exhibited small clusters of *arachnoid granulations* on the endocranial (inner) surface of the frontal bone.

#### 12.3.6 Conclusion.

The skeletal evidence suggests that this man had suffered poor health during childhood, leading to probable iron deficiency anaemia. Some time before death, he sustained a rib fracture, which might have been caused by an accident or through personal conflict. Physical work also took its toll on the skeleton in the form of micro-trauma at some muscle attachments and damage to the vertebral discs. The advancing age of this man had led to the onset of joint deterioration in his spine and shoulders.

### 12.4 Dental Health.

Analysis of the teeth from archaeological populations provides vital clues about health, diet and oral hygiene, as well as information about environmental and congenital conditions. Of the total 28 tooth positions present, 25 permanent teeth were recovered. Two of the third molars

were not present and it was not clear, whether these were impacted in the jaw, or had simply not developed. One tooth had been lost ante-mortem, the cause of which was unclear.

Dental wear tends to be more common and severe in archaeological populations than in modern teeth. Severity of the dental wear was assessed using a chart developed by Smith (1984). Each tooth was scored using a grading system ranging from 1 (no wear) to 8 (severe attrition of the whole tooth crown). Dental wear was moderate to severe.

Calculus (dental plaque) is commonly observed in archaeological populations whose dental hygiene was not as rigorous as it is today. Calculus mineralises and forms concretions on the tooth crowns, along the line of the gums. Calculus was observed in all the teeth, and was slight on the anterior teeth and very thick on the molars (Plate C).

Periodontitis (receding gums) was severe and was probably related to the extensive calculus deposits, which often irritate the gums, causing the gums to recede considerably.

It is possible that a bump or fall caused the infractions (dental chipping) of the first and second upper right premolars and the lower right first incisor. Wear on the chipped parts of the three teeth implies that these injuries had occurred some time before death.

Cavities are multifactorial in origin, but develop as a result of aggressive bacterial attack in the presence of sucrose (Hillson 1996, 282) and fermentable carbohydrates (Roberts and Manchester 1995, 47). One caries lesion could be observed, which affected the upper right second premolar.

Three teeth showed evidence for dental enamel *hypoplasia* (DEH). DEH is the manifestation of lines, grooves or pits on the crown surface of the teeth, which represent the cessation of crown formation. The defects are caused by periods of severe stress during the first to seventh year of childhood, including malnutrition or disease.

The dental health of this individual was relatively good, with only one cavity and no abscesses. However, poor oral hygiene had led to the build-up of thick calculus concretions on the teeth and consequently to considerable receding of the gums, which may have caused the loss of one tooth. DEH was noted in three teeth, implying that this man had suffered from several episodes of stress during childhood.





*Plate C. Calculus concretions on left upper jaw teeth.*

### **12.5 Mortuary Practice.**

The single male skeleton had been interred in a sub-oval grave. The man lay on his back in an extended position in a southeast to northwest orientation. The arms lay straight beside the torso; his legs and pelvis had been cut by a posthole and two pits.

The skeleton was found in an area to the northeast of the legionary fortress. It is possible that this burial was part of a roadside cemetery, along the Roman road *Via Decumana*, leading from the fortress northeastwards out of York towards Malton. The most extensive cemeteries in York have been found to the west of the fortress (Jones 1984, 35). However, a number of Roman burials have been discovered to the northeast of the fortress, including both isolated graves and larger groups of burials. These comprise of plain inhumations and burials in stone coffins, as well as a cremation burial (D. Stirk *pers. comm.*). The fact that inhumations predominate suggests that this may have been a later cemetery. Notably, two cremation cemeteries are known from Heworth and Heworth Green, along the same road, further away from the fortress (*ibid*, 36).

### **12.6 Discussion & Summary.**

A single skeleton was excavated during an archaeological evaluation at St Maurice's Road, in York. The skeleton had been interred in a supine extended position. The stratigraphic relationship of the skeleton with other features suggests that it dates to the Roman period. The burial may have been associated with other known Roman graves in the proximity of a Roman road, leading from the legionary fortress northeastwards towards Malton.



Osteological analysis found that the skeleton was a middle-aged or mature adult male, at least 36 years old. He had suffered from episodes of stress in the form of disease or malnutrition during childhood, which led to temporary cessation of his tooth development, as well as probably causing iron deficiency anaemia.

Strong muscular development on the left upper arm indicated that he was probably left-handed. Additionally, he showed evidence for activity-related strain to the spine and the muscles of the shoulders and thigh. Accidents or interpersonal violence caused a rib fracture and dental chipping. The rib fracture was well-healed and had occurred some time before death. Advancing age contributed to moderate joint deterioration in the spine and shoulders. The individual had also suffered from a chronic and severe inflammation of the right lower thigh, which may have been associated with the muscular trauma.

## 12.7 References.

- Berry, A.C. and Berry, R.J. 1967. 'Epigenetic variation in the human cranium', *Journal of Anatomy* 101 (2): 361-379
- Buikstra, J.E. and Ubelaker D.H. (eds) 1994. *Standards for Data Collection from Human Skeletal Remains* (Fayetteville)
- Cox, M. 2000. 'Ageing adults from the skeleton', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science* (London): 61-82
- Finnegan, M. 1978. 'Non-metric variation of the infracranial skeleton', *Journal of Anatomy* 125: 23-37
- Hawkey, D.E. and Merbs, C.F. 1995. 'Activity-induced musculoskeletal stress markers (MSM) and subsistence strategy changes among ancient Hudson Bay Eskimos', *International Journal of Osteoarchaeology* 5: 324-338
- Hillson, S. 1996. *Dental Anthropology* (Cambridge)
- Hilton, R.C., Ball, J. and Benn R.T. 1976. 'Vertebral end-plate lesions (Schmorl's nodes) in the dorsolumbar spine', *Ann Rheum. Dis.* 35: 127-132
- Jones, R.F.J. 1984. 'The Cemeteries of Roman York', in Addyman, P.V. and Black, V.E., *Archaeological Papers from York, York*, 34-42
- Kennedy, K.A.R. 1989. 'Skeletal markers of occupational stress', in M.Y. Işcan and K.A.R. Kennedy (eds), *Reconstruction of Life from the Skeleton* (New York): 129-160
- Larsen, C.S. 1997. *Bioarchaeology: Interpreting Behavior from the Human Skeleton* (Cambridge)
- Mann, R.W. and Murphy, S.P. 1990. *Regional Atlas of Bone Disease: a Guide to Pathologic and Normal Variation in the Human Skeleton* (Illinois)
- Mays, S. and Cox, M. 2000. 'Sex determination in skeletal remains', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science* (London): 117-130
- Roberts, C.A. and Cox, M. 2003. *Health and Disease in Britain* (Stroud)
- Roberts, C.A. and Manchester, K. 1995. *The Archaeology of Disease* (Stroud)
- Rogers, J. 2001. 'The palaeopathology of joint disease', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science* (London): 163-182
- Saunders, S.R. 1989. 'Non-metric variation', in M.Y. Işcan and K.A.R. Kennedy (eds) *Reconstruction of Life from the Skeleton* (New York): 95-108
- Scheuer, L. and Black, S. 2000a. 'Development and ageing of the juvenile skeleton', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science* (London): 9-22

Scheuer, L. and Black, S. 2000b. *Developmental Juvenile Osteology* (San Diego)

Smith, B.H. 1984. 'Patterns of molar wear in hunter-gatherers and agriculturalists', *American Journal of Physical Anthropology* 63: 39-56

Stone, R.J. and Stone, J.A. 1990. *Atlas of the Skeletal Muscles* (Iowa)

Trinkhaus, E. 1978. 'Bilateral asymmetry of human skeletal non-metric traits', *American Journal of Physical Anthropology* 49: 315-318



## 12.8 Appendix A ~ Osteological &amp; Palaeopathological Catalogue.

<b>Skeleton Number</b>	<b>1008</b>															
<b>Preservation</b>	Poor															
<b>Completeness</b>	50% skull, arms, parts of left hand, clavicles, scapulae, vertebrae, ribs, sternum, manubrium, right femur, parts of right? Fibula, pelvis fragments															
<b>Age</b>	36+															
<b>Sex</b>	Male															
<b>Stature</b>	-															
<b>Non-Metric Traits</b>	Parietal foramen (right)															
<b>Pathology</b>	DJD in spine, shoulders, Schmorl's nodes, arachnoid granulations, <i>cribra orbitalia</i> , bone excavations, <i>enthesopathies</i>															
<b>Dental Health</b>	calculus on 25/25 teeth, moderate to severe wear, caries 1/25, DEH on 3/25 teeth, infractions of upper right first and second premolars and lower right first incisor, considerable periodontitis															
	Right Dentition								Left Dentition							
Present	-	P	P	P	P	P	P	-	AM	P	P	P	P	P	P	P
Calculus	-	Ma	Fa	Sb	Sb	Mb	Ma	-	-	Sb	Sb	Mb	Mb	Hb	Ha	Ha
DEH	-	-	-	-	-	L	-	-	-	L	-	-	-	-	-	-
Caries	-	-	-	-	-	-	-	-	-	-	-	Md	-	-	-	-
Wear	-	4	5	5	4	4	4	-	-	6	6	5	5	6	5	1
Maxilla	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandible	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present	NP	P	P	-	-	P	P	P	P	P	P	P	P	P	P	Np
Calculus	-	Fa	Fa	-	-	MI	Ma	MI	Fa	MI	MI	MI	MI	Ha	Ha	-
DEH	-	-	-	-	-	-	-	L	-	-	-	-	-	-	-	-
Caries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wear	-	5	7	-	-	4	3	4	4	3	5	5	6	7	6	-

**KEY:**

**Present** - Tooth presence; **am** - ante-mortem tooth loss; **pm** - post-mortem tooth loss; **p** - tooth present; - - jaw not present

**Caries** - Calculus; **F** - flecks of calculus; **S** - slight calculus; **M** - moderate calculus; **H** - heavy calculus; **a** - all surfaces; **b** - buccal surface; **d** - distal surface; **m** - mesial surface; **l** - lingual surface; **o** - occlusal surface

**DEH** - dental enamel *hypoplasia*; **l** - lines; **g** - grooves; **p** - pits

**Caries** - caries; **s** - small lesions; **m** - moderate lesions; **l** - large lesions

**Wear** - dental wear; numbers from 1-8 - slight to severe wear

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13.0 Appendix 5 ~ The Plates.

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Plate 1. Pre-excavation shot of Trench 1, looking northeast. (Scale of 1m).



Plate 2. Trench 1, skeleton (1008), looking southeast. (Scale of 1m).





Plate 3. Postholes [1015],[1017] & [1019] and pits [1011] & [1013] truncating burial (1008).



Plate 4. Working shot. (Scale of 1m).





*Plate 5. Trench 1, northeast facing section of foundation (1001). (Scale of 0.5m).*



*Plate 6. Trench 1, southeast facing section. (Scale of 1m).*





*Plate 7. Trench 1, southwest facing section. (Scale of 1m).*



*Plate 8. Trench 2, sondage showing linear [2030] & pits [2032] & [2036]. (Scale of 1m & 0.5m).*





*Plate 9. Trench 2 southwest facing section showing pit [2025], clay floor (2027) & posthole [2023]. (Scale of 1m & 0.5m).*



*Plate 10. Trench 2 southwest facing section showing foundation [2013] & pit [2010]. (Scale of 1m).*





Plate 11. Trench 2, pit [2010] cutting clay floor (2027). (Scale of 1m & 0.5m).



Plate 12. Trench 2 post Roman pits [2010] & [2020]. (Scale of 1m).





*Plate 13. Trench 2, southeast facing section. (Scale of 1m).*



*Plate 14. Trench 2 northeast facing section showing foundation (2002) & pit [2020]. (Scale of 1m).*

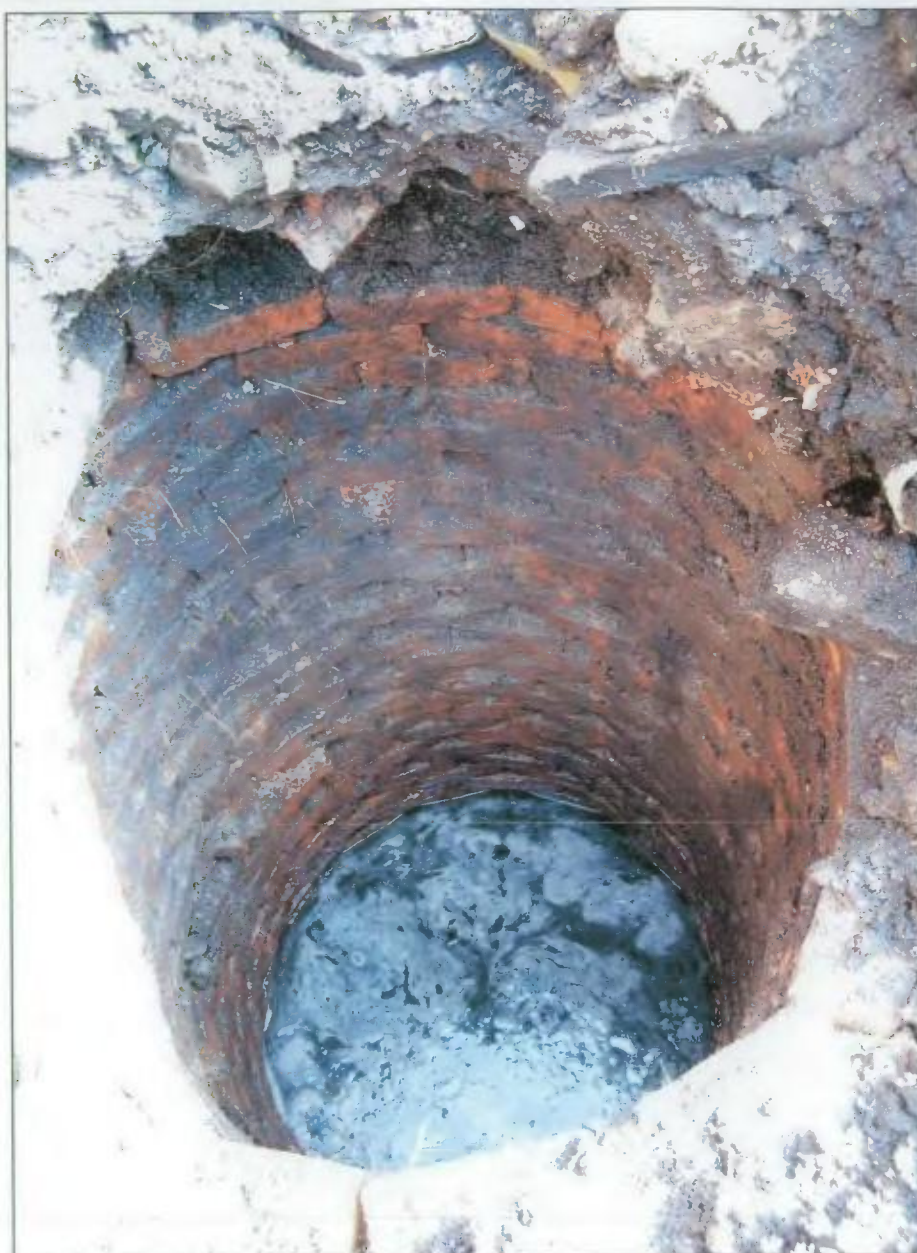




Plate 15. Trench 2 northwest facing section. (Scale of 1m).



Plate 16. Trench 2 final shot. (Scale of 1m).



*Plate 17. Brick well.*