YORK ARCHAEOLOGICAL TRUST

# Archaeological Monitoring of Boreholes at
## 17 Mansfield Street

By Rebecca Wilson

YAT Assessment Report 2018/174 December 2018

# YORK ARCHAEOLOGICAL TRUST

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**Abbreviations**

**AOD – Above Ordnance Datum**

**BGL – Below Ground Level**

**BH – Borehole**

**CBM – Ceramic Building Material**

## NON-TECHNICAL SUMMARY

On the 7th December 2018 York Archaeological Trust (YAT) conducted a watching brief to monitor Geotechnical Boreholes at Simons Auto Services, 17 Mansfield Street, York, YO31 7US (SE 6093 5209).

The work was undertaken for Mr Mark Allan (Swift Fitness York) to help inform a planning application that was under consideration by the City of York Council (CYC) (17/02991/FULM). The work was based on a Written Scheme of Investigation (WSI) produced by YAT. The works involved the monitoring and recording of four Geotechnical Boreholes across the site. Three boreholes were successful while the fourth was abandoned due to an obstruction. The boreholes were intended to reach a depth of 5m below ground level (BGL).

There was potential to encounter deposits associated with the Kings Fish Pond and possible human remains from St Marys Church. Archaeological deposits encountered were predominantly made ground with potential for association with post-medieval clay extraction pits from the wider area. Natural was encountered at between 3.5m BGL and 4.7m BGL.

## KEY PROJECT INFORMATION

| | |
|---|---|
| Project Name | Simons Auto Services, 17 Mansfield Street, York, YO31 7US |
| YAT Project No. | 6107 |
| Document Number | 2018/174 |
| Type of Project | Watching Brief |
| Client | Mr Mark Allan (Swift Fitness York) |
| Planning Application No. | 17/02991/FULM |
| NGR | SE 6093 5209 |
| Museum Accession No. | n/a |
| OASIS Identifier | yorkarch1-336212 |

## REPORT INFORMATION

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| | | | | | | |

# 1 INTRODUCTION

On the 12th December 2018 YAT conducted a watching brief at Simons Auto Services, 17 Mansfield Street, York, YO31 7US (SE 6093 5209) (Figure 1).

The work was undertaken for Mr Mark Allan (Swift Fitness York) to help inform a planning application that was under consideration by CYC (17/02991/FULM).

The work was conducted in accordance with the Written Scheme of Investigation (WSI) produced by YAT. The works involved the monitoring and recording of four windowless sleeved geotechnical boreholes. In the case of three of the boreholes the drilling was precluded by the excavation of the first metre as a test pit due to the consistency and compaction of the building demolition and makeup material across the site. The cores from three of the boreholes were opened, inspected on site, and the variation in strata recorded. The fourth borehole was abandoned due to an obstruction.

Natural boulder clay was encountered in the three successful boreholes between 3 and 5m BGL. Potential archaeological deposits were encountered between 0.5m and 4.7m BGL across the three successful boreholes. The deposits consisted of potential made ground and levelling events as well as infilling within clay extraction pits that have been identified in the area previously. The archaeology is likely late medieval to post-medieval in date though no dateable evidence was recovered within the borehole samples.

# 2 METHODOLOGY

The methodology followed the WSI (Appendix 3) save where variations were required due to obstruction below the surface which prevented the completion of BH04.

## 2.1 Geotechnical Boreholes

A total of four Geotechnical Boreholes were intended to be drilled on the site:

| No. | Depth (m) | Description |
|---|---|---|
| BH01 | 5m BGL | Borehole located in the north corner of site. First metre not monitored. |
| BH02 | 5m BGL | Borehole located in the east corner of site. First metre hand excavated. |
| BH03 | 5m BGL | Borehole located in the west corner of site. First metre hand excavated. |
| BH04 | 1m BGL | Borehole located in the south corner of site. First metre hand excavated. Abandoned before drilling commenced due to obstruction and standing water. |

The boreholes were located to gain optimal coverage across the site. An approximate location for each borehole was ascertained on site by measurement from known points (Figure 2). Accurate coordinates for the boreholes will be confirmed by the geotechnical subcontractor using a GPS and added to this document.

The boreholes were drilled using a tracked windowless sleeved rig to a depth of 5m BGL. The drilling of boreholes 2, 3, and 4 was precluded by hand excavation of the first metre below ground level. This was done due to the nature of the demolition and building make up material spread across the site which included large pieces of CBM (Ceramic Building Material) and concrete. Borehole 4 was abandoned after the hand excavated section due to the presence of a large unidentified obstruction, likely a drainage inspection chamber, and the influx of standing water at 1m BGL. Guidelines for use of the borehole rig state that works must be stopped in the presence of visible standing water, and solid structures which could damage the rig.

Slumping occurred throughout the boreholes but predominantly in BH01 which necessitated the re-drilling of the borehole between 3m and 4m BGL. This was due to the nature of the sand deposit.

Sleeved cores were retrieved from the rig in 1m samples. The sleeved cores were opened and recorded as per the YAT standard deposit pro forma and the YAT environmental borehole log. Digital photographs with an appropriate scale were taken of each core. No samples were taken as no significant organic material was encountered. No finds were recovered.

Reinstating of the borehole is at the discretion of the client and geotechnical subcontractor.

## 3 LOCATION, GEOLOGY & TOPOGRAPHY

The site is located at 17 Mansfield Street within the extent of the demolished Simons Auto Services building, to the northeast of the city centre. It is bounded to the northeast by Swift Fitness LTD at 19 Mansfield Street, and the closed Carpet Right shop to the south west. The site faces Mansfield Street to the south east and backs on to a carpark to the northwest.

The site lies within the City Centre Area of Archaeological Importance and just outside of the Historic Core Conservation Area. It is also within 100m of the River Foss and within 200m of the York City walls and Tower 34.

The underlying geology is Sherwood Sandstone Group. Overlying this is superficial deposits of Alne Glaciolacustrine Formation, consisting of clay and silt formed up to 2 million years ago (https://www.bgs.ac.uk/).

## 4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The location of the site, within an Area of Archaeological Importance and 200m from the River Foss and the medieval City Walls, lends itself to the potential of encountering significant archaeological deposits dating from prehistory to modern day. This section covers a brief chronological overview of the archaeological potential of the site with reference to previous archaeological investigations.

### *4.1.1 Prehistory*

There have been no prehistoric features within the immediate area of the site. Despite lack of prehistoric evidence in the centre of York, potential prehistoric material cannot be ruled out due to the sites location near the convergence of two rivers.

*4.1.2 Roman*

Though the site itself does not lie within the Roman fortress it is within close proximity to its eastern corner. The closest significant roman archaeology encountered in the area is the roman cemetery at Hungate on the opposite side of the river Foss.

*4.1.3 Anglo-Scandinavian*

There has been no archaeological material encountered from the Anglo-Scandinavian period in the immediate area of the site. Archaeological Investigations on the other side of the River Foss, at Hungate, found significant Anglo-Scandinavian material including sunken buildings and occupational deposits. Anglo-Scandinavian activity is primarily focused around the converging of the two rivers to the south, near to Walmgate Bar, though there is evidence that activity occurred along the Foss.

*4.1.4 Medieval*

The King's Fish Pond was founded in 1068 by William I as part of the city's Norman defences and was created by damming the River Foss at Castle Mills. The extent of the Pond has been greatly debated though general consensus locates it primarily between Tower 34 to the north and the Red Tower to the south. The Red Tower itself was not constructed until 1490, 400 years after the creation of the Pond, though its location on its banks completed the defensive circuit of the city. The bounds of the Fish Pond have been subject to alteration over time, particularly during the Late Medieval period.

In archaeological deposits it is generally characterised as alluvial silting with potential waterlogged organic material as seen in excavations and boreholing at Rosemary Place (MAP 1994) and Castle Mills (YAT 2018/105). Boreholes conducted at the Former Foss Island Filling Station, to the south of the site, encountered silting deposits associated with the Pond at between 3m to 5m BGL (YAT 2005/7). Deposits associated with the Pond were also encountered during work at the Foss Island Retail Park in 2005 (YAT 2005/3). These deposits were exposed at a much shallower depth (1m BGL) and it was suggested that this was indicative of shallowing towards the northern banks of the Pond. Silting further to the north and east would instead be related to Tang Hall Beck. There is also potential, as shown in works at 50 Piccadilly in 1992, that the King's Pond did not extend as far east as previously thought which affects the likelihood of encountering silting deposits (YAT 1992/10). Archaeological interventions at Rosemary Place identified infilling of the Pond in the late medieval, either natural silty or purposeful dumping in the form, with the body of water becoming the city dump by the 16$^{th}$ century. Interestingly, archaeological intervention at the Former Bus Depot on Navigation Road did not result in deposits from the Pond but did expose made ground and levelling deposits similar to infilling deposits present at Rosemary Place (YAT 2004/41)

A watching brief on test pits carried out adjacent to the development site was carried out by YAT at the Allied Carpet building (YAT 1986). This confirmed the location of the medieval church of St Mary on Layerthorpe and associated burial ground. Although the church and burial ground were found to have been removed occasional fragments of burials were recorded.

#### *4.1.5 Post Medieval*

The King's Fish Pond remained in place until 1792 when an act of Parliament was obtained to make a navigable channel through the Foss. Boreholes surveys and archaeological interventions from the surrounding areas indicate a large amount of levelling and disturbance in the post medieval and 19th century. In November 1999 YAT undertook a watching brief on the site of the City of York Council depot on Foss Island Road (YAT 1999/88). A series of twenty test pits were excavated. Undulations in the level of natural and possible indication for clay pits were uncovered. The clay extraction pits could date from the post medieval period or earlier though initial investigations also suggested a 19th century date.

## 5 RESULTS

### 5.1 Geotechnical Boreholes

Four Boreholes were attempted on the site using a windowless tracked sleeve rig. Three of the Boreholes reached 5m BGL. The fourth was abandoned due to encountering an obstruction. A simple sequence was encountered in the three successful boreholes with the same deposits identifiable each at varying heights. Potential archaeological deposits were generally first encountered at between 0.5m and 1m BGL. The archaeological deposits were sealed by an extensive layer of modern rubble and demolition material. The profiles for each borehole are illustrated in Figure 3.

#### *5.1.1 Borehole 01*

BH01 was located in the north corner of site, to the rear of former building. Natural (C104) was encountered at 4.5m BGL and consisted of dark silty clay, characterised as Boulder Clay. The earliest potential archaeological deposit was encountered at 2.7m BGL and consisted of a 1.75m thick, waterlogged layer of clayey sand (C103) (Plate 1). Possibly related to levelling activity around the King's Fish Pond in the late and post medieval though no pottery or other determinate finds were recovered. This was sealed by a relatively thin (0.25m) deposit that was differentiated from the earliest deposits by a higher clay content (C102). Possibly an interface deposit between larger levelling deposits or feature which was present at a similar depth (2.5m BGL) in BH02. The latest potential archaeological deposit, C101, was encountered at 1.25m BGL and consisted of sandy clay laminates and are potentially related to accumulation within post-medieval clay extraction pits that have been identified in the area. The archaeology was sealed by the modern rubble and demolition material (C100).

#### *5.1.2 Borehole 02*

BH02 was located in the east corner of site, to the front of the former building, and had a very similar sequence to BH01. Natural was encountered at 4.7m BGL and, as with BH01 and BH02, was characterised as Boulder Clay (C204) (Plate 2). The earliest potential archaeological deposit, which consisted of slightly clayey sand (C203), was encountered at a similar depth and thickness to its counterpart in BH01: 3m BGL and 1.8m thick (Plate 3). The possible interface deposit, C202, is slightly thicker at 0.3m and was encountered at a slightly greater depth of 2.6m BGL (Plate 4). The latest archaeological deposit, C201, was encountered at a slightly shallower depth than in BH01, at 0.7m BGL (Plate 5). The deposit of sandy clay laminates was thicker than what was encountered in BH01 though this encountered for by less truncation at the top of the sequence by the modern rubble. The base of the deposit, at 2.6m BGL is only

slightly deeper than in BH01 where the base was encountered at 2.5m BGL. The sequence was sealed by 0.7m of modern rubble and demolition material.

*5.1.3 Borehole 03*

BH03 was located in the west corner of site, to the rear of the former building, and had a similar sequence to BH01 and BH02 though there were greater discrepancies in the depths of the deposits. Natural, C304, was encountered at 3.5m BGL, at least a metre higher than in BH01 and BH02 (Plate 6). The earliest archaeological deposit, a potential clayey sand levelling deposit or made ground (C303), was encountered at 2.5m BGL which was similar to the depth of the deposit BH01 and BH02. However, compared to the previous boreholes the deposit is much thinner at only 1m thickness compared to 1.8m thick in BH02.This is possibly indicative of the deposit being a levelling deposit with less material needed due to the higher topography of the natural (Plate 7). The potential clay extraction pit deposit, C302, is much the same as in BH01 and BH02 though it was encountered at a shallower depth: 0.5m BGL. A defunct modern drain was encountered at 0.3m BGL (C301) (Plate 8). The drain was bedded with gravel and sealed by the spread of modern rubble and demolition material (C300).

*5.1.4 Borehole 04*

BH04, located in the south corner of the site, was hand dug to a depth of 1m before encountering an obstruction and standing water (Plate 9). The borehole was abandoned at this point to ensure the rig did not incur any damage. The only deposit encountered was the modern rubble and demolition material (c400).

## 6 CONCLUSION

The successful boreholes exposed a simple sequence of deposits that characterised the archaeological material on site. The primary motive for the archaeological monitoring of the boreholes was to assess the likelihood of encountering deposits associated with the King's Fish Pond and human remains associated with St Marys Church which formerly stood on site. No human remains were encountered during the boreholing survey though this was not conducive to confirming the potential, or lack thereof, of *in situ* or disarticulated remains on site due to the size and number of boreholes.

Though description of each borehole sequence in the results are as one, a simple phasing sequence was applied to broadly differentiate the deposits encountered; this is illustrated in Figure 4. In summation of the phasing they are: Phase 1, natural; Phase 2, potential archaeological deposits; Phase 3, modern rubble and demolition. Though it is likely that there more phases within the deposits of Phase 2, a single Phase has been used in order to easily delineate the potential archaeological deposits from the natural and modern. The results in association with phasing are summarised below.

**Phase 1**

The natural encountered on site was found to be a boulder clay. The varying depths that natural was encountered at are consistent with undulations in the natural that were exposed during work at Foss Island Council Depot in 1999 (YAT 1999/88).

**Phase 2**

Silting within the Kings Fish Pond deposits, where it has been encountered before, has been characterised as dark silt material with some organic potential and mollusc shells. No silting deposits of this type were encountered during this borehole survey indicating that the site is outside the bounds of the Pond. This corroborates the suggestion put forth during work on Foss Island Road in 1999 and 2005 that the Pond did not extend as far to the east as previously thought and that the northern bounds of the Pond are further south along Foss Island Road (YAT 1999/88; YAT 2005/3). The deposits encountered are instead likely to be associated with activity along the edge of the Fish Pond or have a date that postdates its falling into disuse.

The location of a church and cemetery, St Marys, within the boundary of the site is also indicative of the Kings Fish Pond not extending into the site bounds. St Marys was built in the 14$^{th}$ century when the Pond was still in use which suggests that the site may have been within marginal land surrounding the church and the King's Fish Pond would potentially not have extended into site.

The clayey sand deposit stratigraphically above the natural (C103, C203 and C303) is likely made ground, possibly to level the ground during the late medieval period when the Pond was falling into disuse and becoming the city dump. Though not visible during the boreholes themselves it is likely this deposit is actually a series of dumps and levelling events with the sandy, waterlogged nature of the deposit making the boundaries between layers near impossible to detect. The potential interface deposit (C102 and C202) is difficult to characterise beyond having a slightly higher clay content and a greater grey hue compared to the earliest archaeological deposit. Possibly a later levelling deposit or buried ground level. The latest potential archaeological deposit, the sand clay laminations, are possibly associated with the clay extraction pits identified in archaeological interventions in 1999 and 2005, dating from the post medieval period or earlier. It is possible the laminates represent silting within the pits over time though such a small window of analysis makes it impossible to be certain.

**Phase 3**

An extensive layer of modern rubble and demolition material was encountered between 0m and 1m BGL across the entire site. Probably associated with the demolition of the previously standing building. Also includes the modern drain encountered in BH03 which was a defunct service associated with former building. The obstruction encountered in BH04 was probably a drainage inspection chamber

In summary the borehole survey did not encounter any deposits that were conclusively from the King's Fish Pond which supports previous evidence from Foss Island Road Retail park and the Council Depot that the Pond's northern bounds are to the south of the site. Deposits which were encountered are possibly associated with the clay extraction pits, which have been encountered in the area, and levelling after the Pond fell into disrepair. No dateable evidence was recovered from the boreholes in order to date the deposits but previous work in the area indicates that the archaeological material encountered on site is largely late medieval to post medieval in date.

## LIST OF SOURCES

https://www.bgs.ac.uk/

## REFERENCES

MAP Archaeological Consultancy Ltd, 1994. *Archaeological Evaluation: Rosemary Place, York, North Yorkshire*. MAP Archaeological Consultancy Ltd.

YAT 1986. Y.P.S Annual Report

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YAT, 2004. *Former Bus Depot, Navigation Road, York: Report on a Borehole Survey.* YAT Report 2004/41.

YAT, 2005. *Foss Islands Retails Park, York: Report on an Archaeological Watching Brief.* YAT Report 2005/3.

YAT, 2005. *Foss Island Filling Station: Report on an Archaeological Watching Brief.* YAT 2005/7.

YAT, 2018*. Archaeological Borehole Investigations at Castle Mills Car Park, Piccadilly, York.* YAT 2018/105.

## ACKNOWLEDGEMENTS

Many thanks to the client, Mark Allen, and the contractor on site.

## APPENDIX 1 – INDEX TO ARCHIVE

| Item | Number of items |
|---|---|
| Context sheets | 4 |
| Levels register | N/A |
| Photographic register | N/A |
| Sample register | N/A |
| Drawing register | N/A |
| Original drawings | N/A |
| B/W photographs (films/contact sheets) | N/A |
| Colour slides (films) | N/A |
| Digital photographs | 31 |
| Written Scheme of Investigation | 1 |
| Report | 1 |

**Table 1 Index to archive**

## APPENDIX 2 – CONTEXT LIST

| Borehole Number | Context Number | Phase | Depth of Deposit (BGL) | Description |
|---|---|---|---|---|
| BH01 | 100 | 3 | 0.0m- 1.0m | Modern Rubble. Friable, mottled grey/brown, mixed sand/gravel and silt. Frequent small to large stones, CBM fragments, mortar fragments. |
| BH01 | 101 | 2 | 1.2m- 2.5m | Sand/Clay Laminates. Soft, mid brown, silty clay. |
| BH01 | 102 | 2 | 2.5m- 2.7m | Interface. Soft, mid grey to orange brown, sandy clay. |
| BH01 | 103 | 2 | 2.7m- 4.5m | Made Ground. V. soft, orange brown, clayey sand. |
| BH01 | 104 | 1 | 4.5m- 5.0m | Natural. Soft, mid grey/brown, clay. Occasional stones. |
| BH02 | 200 | 3 | 0.0m- 0.7m | Modern Rubble. Friable, mottled grey/brown, mixed sand/gravel and silt. Frequent small to large stones, CBM fragments, mortar fragments. |
| BH02 | 201 | 2 | 0.7m- 2.6m | Sand/Clay Laminates. Soft, mid brown, silty clay. |
| BH02 | 202 | 2 | 2.6m- 2.9m | Interface. Soft, mid grey to orange brown, sandy clay. |
| BH02 | 203 | 2 | 2.9m- 4.7m | Made Ground. V. soft, orange brown, clayey sand. |
| BH02 | 204 | 1 | 4.7m- 5.0m | Natural. Soft, mid grey/brown, clay. Occasional stones. |
| BH03 | 300 | 3 | 0.0m- 0.3m | Modern Rubble. Friable, mottled grey/brown, mixed sand/gravel and silt. Frequent small to large stones, CBM fragments, mortar fragments. |
| BH03 | 301 | 3 | 0.3m- 0.5m | Modern Drain. Ceramic drain pipe. |
| BH03 | 302 | 2 | 0.5m- 2.4m | Sand/Clay Laminates. Soft, mid brown, silty clay. |
| BH03 | 303 | 2 | 2.4m- 3.5m | Made Ground. V. soft, orange brown, clayey sand. |
| BH03 | 304 | 1 | 3.5m- 5.0m | Natural. Soft, mid grey/brown, clay. Occasional stones. |
| BH04 | 400 | 3 | 0.0m- 1.0m | Modern Rubble. Friable, mottled grey/brown, mixed sand/gravel and silt. Frequent small to large stones, CBM fragments, mortar fragments. |

**Table 2 Context list**

**APPENDIX 3 – WRITTEN SCHEME OF INVESTIGATION**

# WRITTEN SCHEME OF INVESTIGATION FOR

# ARCHAEOLOGICAL WATCHING BRIEF

| | |
|---|---|
| **Site Location:** | Simons Auto Services 17 Mansfield Street York YO31 7US |
| **NGR**: | SE 6093 5209 |
| **Proposal:** | Erection of 4-storey residential block with 10no. flats and associated parking following demolition of car repair garage |
| **Planning ref:** | 17/02991/FULM |
| **Prepared for:** | Mr Mark Allan (Swift Fitness York) |
| **Document Number:** | 2018/168 |

## 1 SUMMARY

1.1 Swift Fitness York have received planning consent for the Erection of 4-storey residential block with 10no.flats and associated parking following demolition of car repair garage at Simons Auto Services 17 Mansfield Street York YO31 7US (SE 6093 5209).

The following archaeological condition has been imposed:

> *Prior to groundworks associated with the development hereby approved the following archaeological evaluation shall be carried out and approved in writing by the Local Planning Authority.*
>
> *A) No archaeological evaluation or development shall take place until a written scheme of investigation (WSI) has been submitted to and approved by the local planning authority in writing. The WSI shall conform to standards set by the Chartered Institute for Archaeologists.*
>
> *B) The site investigation and post-investigation assessment shall be completed in accordance with the programme set out in the Written Scheme of Investigation approved under condition (A) and the provision made for analysis, publication and dissemination of results and archive deposition will be secured. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the WSI.*
>
> *C) A copy of a report on the evaluation and an assessment of the impact of the proposed development on any of the archaeological remains identified in the evaluation shall be deposited with City of York Historic Environment Record to allow public dissemination of results within 6 weeks of completion or such other*

*period as may be agreed in writing with the Local Planning Authority.*

*D) Where archaeological features and deposits are identified proposals for the preservation in-situ, or for the investigation, recording and recovery of archaeological remains and the publishing of findings shall be submitted as an amendment to the original WSI. It should be understood that there shall be presumption in favour of preservation in-situ wherever feasible.*

John Oxley, City Archaeologist has agreed that a watching brief be carried out on geotechnical site investigations and during the excavation of foundations.

1.2 This Written Scheme of Investigation (WSI) has been prepared in response to a specification from John Oxley. The work will be carried out in accordance with this and the WSI.

## 2 SITE LOCATION & DESCRIPTION

2.1 The proposal site is at Simons Auto Services 17 Mansfield Street York YO31 7US (Figure 1). The site is currently occupied by Simons Auto Services, consisting of a brick and corrugated metal single storey building. To the south of the site is Mansfield Street, to the east is Swift Fitness York gym, to the west is the Carpetright building and to the north is a car-park.

2.2 The underlying geology is Sherwood Sandstone Group. Overlying this is superficial deposits of Alne Glaciolacustrine Formation, consisting of clay and silt formed up to 2 million years ago.

## 3 DESIGNATIONS & CONSTRAINTS

3.1 The site lies within the Area of Archaeological Importance (AAI) City Centre Area of York. The site is not within a Conservation Area, Registered Historic Park and Garden or Registered Battleground site.

## 4 ARCHAEOLOGICAL INTEREST

4.1 A watching brief on test pits carried out adjacent to the development site was carried out by YAT at the Allied Carpet building (YAT 1986). This confirmed the location of the medieval church of St Mary on Layerthorpe and associated burial ground. Although the church and burial ground were found to have been removed occasional fragments of burials were recorded.

4.2 In November 1999 YAT undertook a watching brief on the site of the City of York Council depot on Foss Island Road. A series of twenty test pits were excavated. Undulations in the level of natural and possible indication for clay pits were uncovered. The clay extraction pits could date from the post medieval period or earlier (YAT 1999/88).

## 5 GROUNDWORKS TO BE MONITORED

5.1 This work will comprise a **continuous** watching brief, on the coring of at least 4 window-less sample geotechnical boreholes.

## 6 DELAYS TO THE DEVELOPMENT SCHEDULE

6.1 All earth-moving machinery must be operated at an appropriate speed to allow the

archaeologist to recognise record and retrieve any archaeological deposits and material.

6.2 It is not intended that the archaeological monitoring should unduly delay site works. However, the archaeologist on site should be given the opportunity to observe, clean, assess and, where appropriate hand excavate, sample and record the sample cores. In order to fulfil the requirements of this WSI, it may be necessary to halt the earth-moving activity to enable the archaeology to be recorded properly.

## 7 RECORDING METHODOLOGY

7.1 If a base plan of intervention areas is available, the areas being monitored will be determined using this information. If a plan is not available, or the watching brief work involves monitoring of long linear works, interventions which are not mapped, or large open areas, the location of the monitoring will be determined using appropriate survey equipment (i.e. GPS, TST) providing an accuracy of no less than 100mm.

7.2 Unique context numbers will only be assigned if artefacts are retrieved, or stratigraphic relationships between archaeological deposits are discernable. In archaeologically 'sterile' areas, soil layers will be described, but no context numbers will be assigned. Where assigned, each context will be described in full on a pro forma context record sheet in accordance with the accepted context record conventions.

7.3 Archaeological deposits in the cores will be recorded in appropriate detail using pro-forma record sheets. All drawings will be related to Ordnance Datum. All drawings will be drawn on inert materials. All drawings will adhere to accepted drawing conventions.

7.4 Photographs of the cores. All site photography will adhere to accepted photographic record guidelines.

7.5 Areas which are inaccessible (e.g. for health and safety reasons) will be recorded as thoroughly as possible within the site constraints. In these instances, recording may be entirely photographic, with sketch drawings only.

7.6 All finds will be collected and handled following the guidance set out in the CIfA guidance for archaeological materials. Unstratified material will not be kept unless it is of exceptional intrinsic interest. Material discarded as a consequence of this policy will be described and quantified in the field. Finds of particular interest or fragility will be retrieved as Small Finds, and located on plans. Other finds, finds within the topsoil, and dense/discrete deposits of finds will be collected as Bulk Finds, from discrete contexts, bagged by material type. Any dense/discrete deposits will have their limits defined on the appropriate plan.

7.7 All artefacts and ecofacts will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds,* and recording systems must be compatible with the recipient museum. All finds that fall within the purview of the Treasure Act (1996) will be reported to HM Coroner according to the procedures outlined in the Act, after discussion with the client and the local authority.

7.8 A soil sampling programme will be undertaken for the recovery and identification of charred and waterlogged remains where suitable deposits are identified. The collection and processing of environmental samples will be undertaken in accordance with Historic England guidelines (Campbell, Moffatt and Straker 2011). Environmental and soil specialists will be consulted during the course of the evaluation with regard to the implementation of this sampling programme. Soil samples of approximately 30 litres for flotation (or 100% of the features if less than this volume) will be removed from selected contexts, using a combination of the judgement and systematic methodologies.

- **Judgement sampling** will involve the removal of samples from secure contexts which appear to present either good conditions for preservation (e.g. burning or waterlogging) or which are significant in terms of archaeological interpretation or stratigraphy. (Given the nature of an archaeological watching brief, it is anticipated

that the implementation of a systematic sampling methodology will not be possible).

7.9 If industrial activity of any scale is detected, industrial samples and process residues will also be collected. Separate samples (c. 10ml) will be collected for micro-slags (hammer-scale and spherical droplets) (Historic England 2015).

7.10 Other samples will be taken, as appropriate, in consultation with YAT specialists and the Historic England Regional Science Advisor, as appropriate (e.g. dendrochronology, soil micromorphology, monolith samples, C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies. Material removed from site will be stored in appropriate controlled environments.

7.11 In the event of human remains being discovered during the evaluation these will be left *in-situ*, covered and protected, in the first instance. The removal of human remains will only take place in compliance with environmental health regulations and following discussions with, and with the approval of, the Ministry of Justice. If human remains are identified, the Ministry of Justice and curator will be informed immediately. An osteoarchaeologist will be available to give advice on site.

- If **disarticulated** remains are encountered, these will be identified and quantified on site. If trenches are being immediately backfilled, the remains will be left in the ground. If the excavations will remain open for any length of time, disarticulated remains will be removed and boxed, for immediate reburial by the Church.
- If **articulated** remains are encountered, these will be excavated in accordance with recognised guidelines (see 7.12) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.12 Where a licence is issued, all human skeletal remains must be properly removed in accordance with the terms of that licence. Where a licence is not issued, the treatment of human remains will be in accordance with the requirements of Civil Law, CIfA Technical Paper 13 (1993) and Historic England guidance (2005).

## 8 REPORT & ARCHIVE PREPARATION

8.1 Upon completion of the groundworks, a report will be prepared to include the following:

a) A non-technical summary of the results of the work.

b) An introduction which will include the planning reference number, grid reference and dates when the fieldwork took place.

c) An account of the methodology and results of the operation, describing structural data, associated finds and environmental data.

d) A selection of photographs and drawings, including an overall plan of the site accurately identifying the areas monitored.

e) Specialist artefact and environmental reports as necessary.

f) Details of archive location and destination (with accession number, where known), together with a catalogue of what is contained in that archive.

g) A copy of the key OASIS form details

h) Copies of the Brief and WSI

i) Additional photographic images may be supplied on a CDROM appended to the report

8.2 Copies of the report will be submitted to the commissioning body and the HER/SMR (also in PDF format).

8.3 The requirements for archive preparation and deposition will be addressed and undertaken in a manner agreed with the recipient museum. In this instance The Yorkshire Museum is recommended and an agreed allowance should be made for the curation and storage of this material.

8.4 Provision for the publication of results, as outlined in the Brief, will be made.

8.5 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, would grant a licence to the County Council and the museum accepting the archive to use such documentation for their statutory functions and provide copies to third parties as an incidental to such functions. Under the Environmental Information Regulations (EIR), such documentation is required to be made available to enquirers if it meets the test of public interest. Any information disclosure issues would be resolved between the client and the archaeological contractor before completion of the work. EIR requirements do not affect IPR.

## 9 HEALTH AND SAFETY

9.1 Health and safety issues will take priority over archaeological matters and all archaeologists will comply with relevant Health and Safety Legislation.

9.2 A Risk Assessment will be prepared prior to the start of site works.

## 10 TIMETABLE & STAFFING

10.1 The timetable will be decided by the client

10.2 Specialist staff available for this work are as follows:

- Human Remains - Malin Holst (York Osteoarchaeology Ltd)
- Palaeoenvironemtal remains – PRS Limited
- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Medieval Pottery Researcher - Anne Jenner
- Finds Officers – Nienke Van Doorn
- Archaeometallurgy & Industrial Residues – Dr Rod Mackenzie & Dr Roger Doonan
- Conservation – Ian Panter

## 11 MONITORING OF ARCHAEOLOGICAL FIELDWORK

11.1 As a minimum requirement, John Oxley, City of York Archaeologist will be given a minimum of one week's notice of work commencing on site, and will be afforded the opportunity to visit the site during and prior to completion of the on-site works so that the general stratigraphy of the site can be assessed. York Archaeological Trust will notify John Oxley of any discoveries of archaeological significance so that site visits can be made, as necessary. Any changes to this agreed WSI will only be made in consultation with John Oxley.

## 12 COPYRIGHT

12.1 York Archaeological Trust retain the copyright on this document. It has been prepared

expressly for Swift Fitness York, and may not be passed to third parties for use or for the purpose of gathering quotations.

## 13 KEY REFERENCES

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For the latest Historic England guidance documents see:

**HTTPS://HISTORICENGLAND.ORG.UK/ADVICE/LATEST-GUIDANCE/**

## PLATES

**Plate 1 Waterlogged sandy made ground deposit (C103) in BH01, at 3 to 4m BGL.**

**Plate 2 Boundary between the clayey sand made ground (C203) and natural Boulder Clay (C204). Encountered at 4.7m BGL in BH02.**

**Plate 3 Clayey sand made ground deposit in BH02 (C203), same as visible in BH01, Plate 1.**

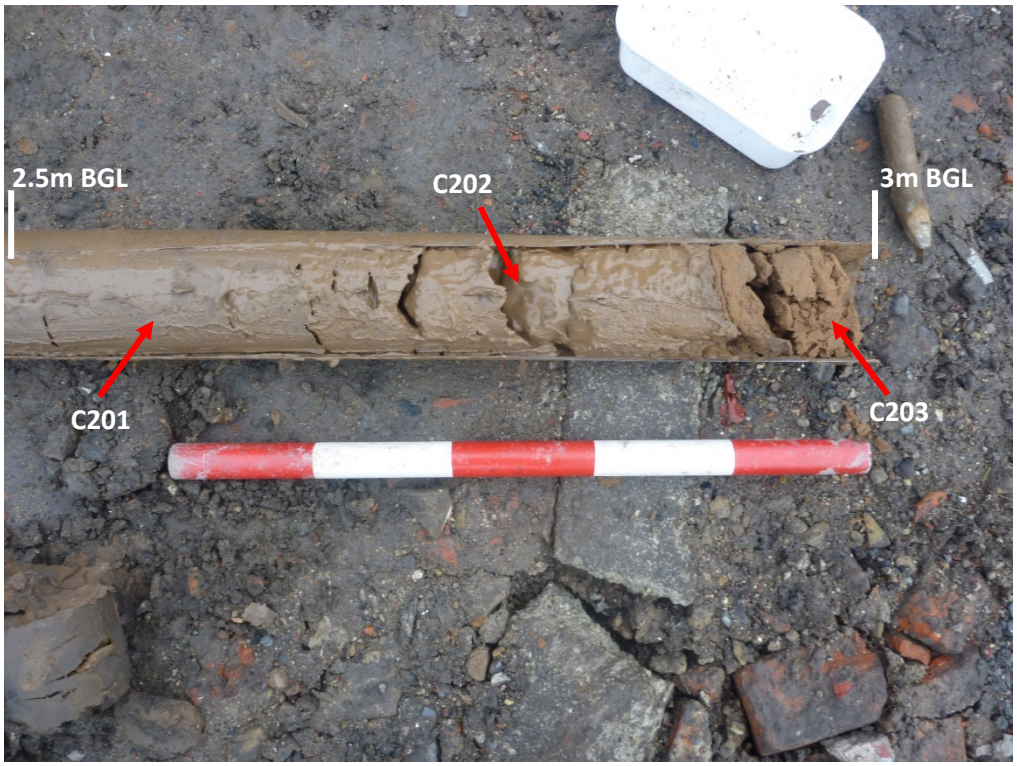


**Plate 4 Sequence of strata within BH02. Relationship between the sandy clay laminates (C201), the interface deposit (C202) and the clayey sand made ground (C203). Between 2.5m and 3m BGL.**

**Plate 5 Clay/sand laminates between 0.7m and 2.6m BGL in BH02.**

**Plate 6 Sample from between 4m and 5m BGL in BH03. Natural boulder clay.**

**Plate 7 Boundary between clayey sand made ground and natural boulder clay in BH03. Natural was encountered at a much shallower depth of 3.5M BGL compared to the boundary in BH02 (Plate 2).**

**Plate 8 First metre of BH03, hand excavated. Frequent CBM visible in rubble/demolition deposit (C300) and gravel from drain bedding material (C301).**

**Plate 9 Hand dug test pit of first metre in BH04. Standing water where obstruction was encountered resulting in the borehole being abandoned.**

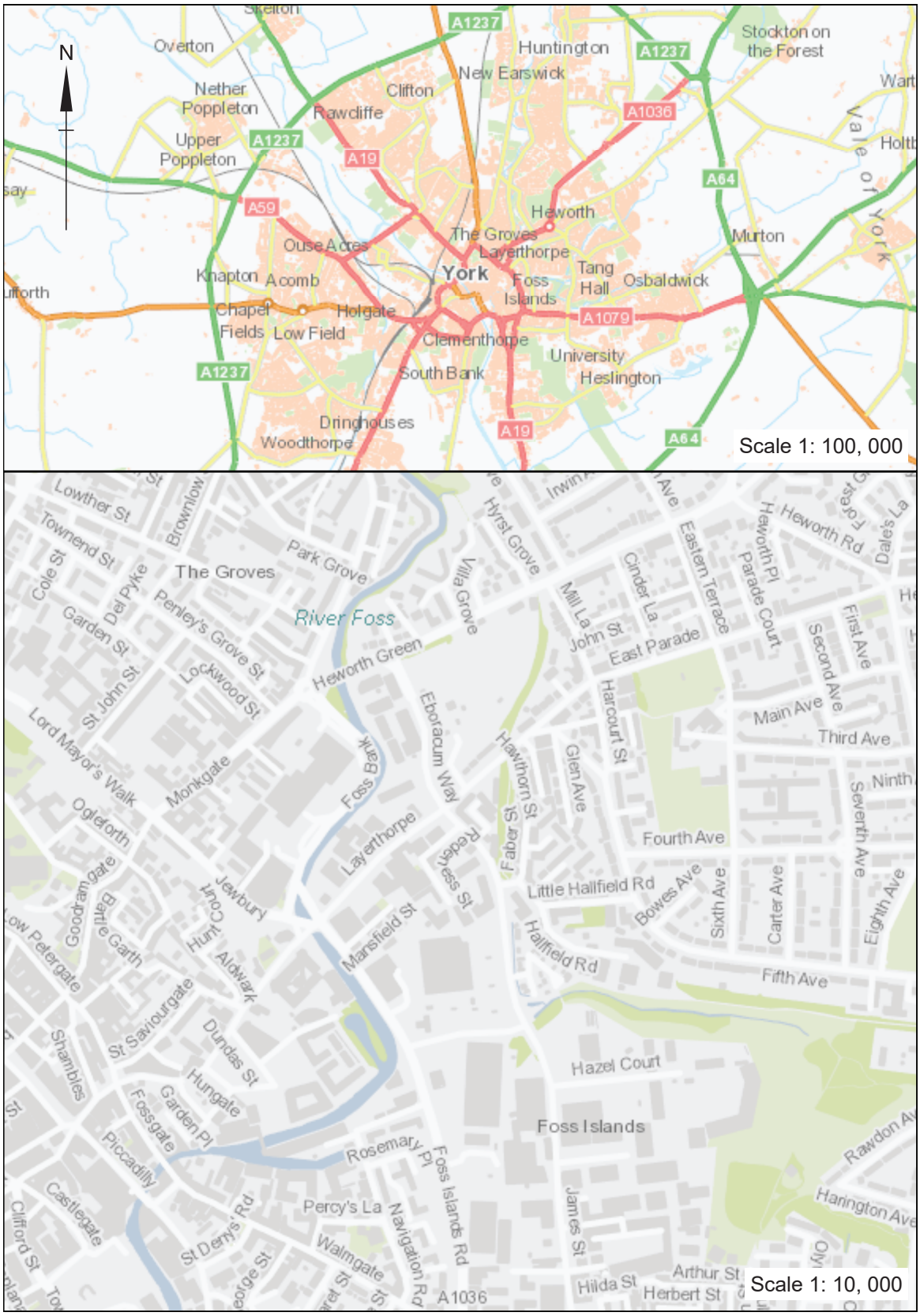


Figure. 1 Site Location (contains OS data © Crown Copyright and database rightn 2019)

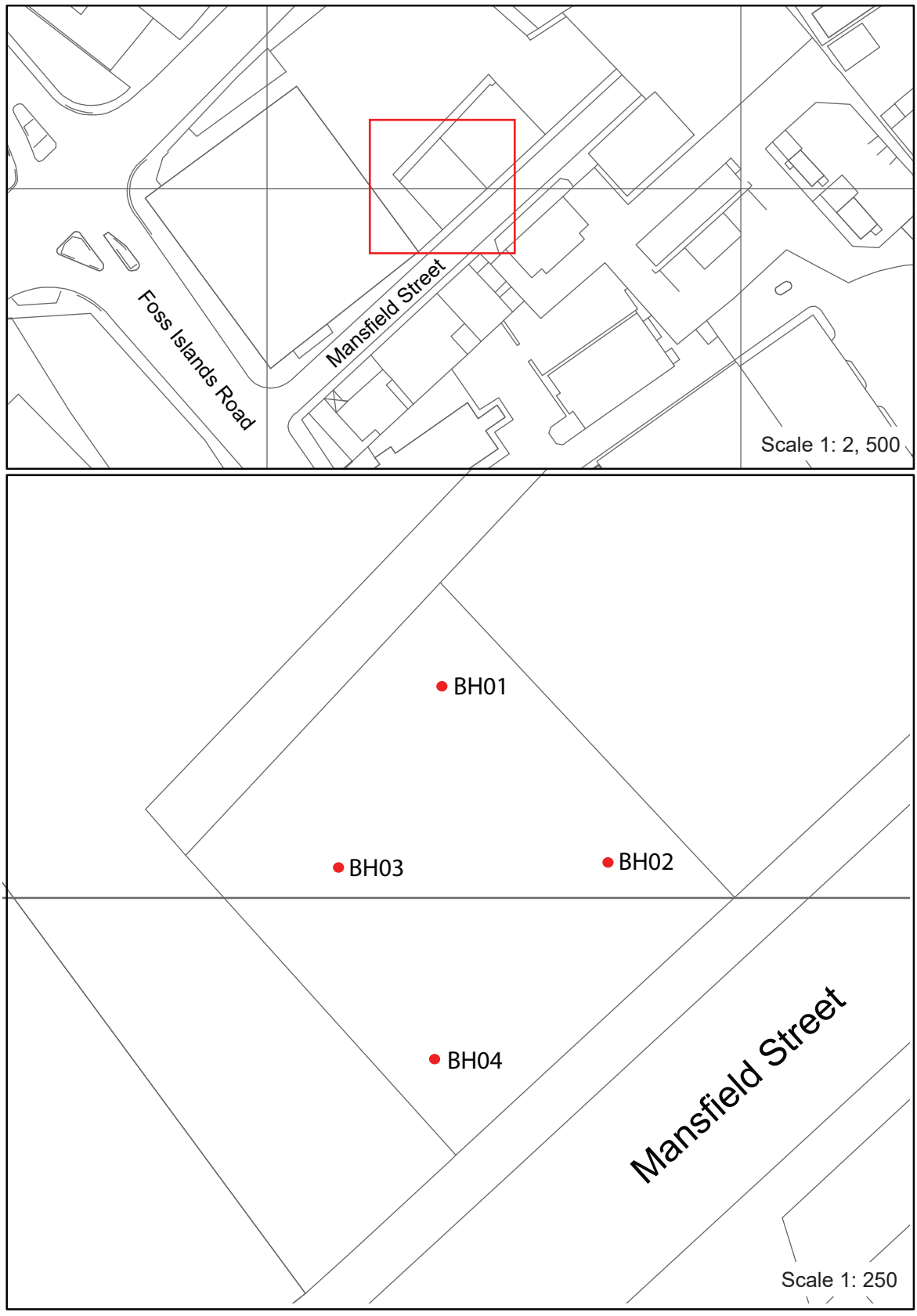


Figure. 2 Works Location (contains OS data © Crown Copyright and database rightn 2019)

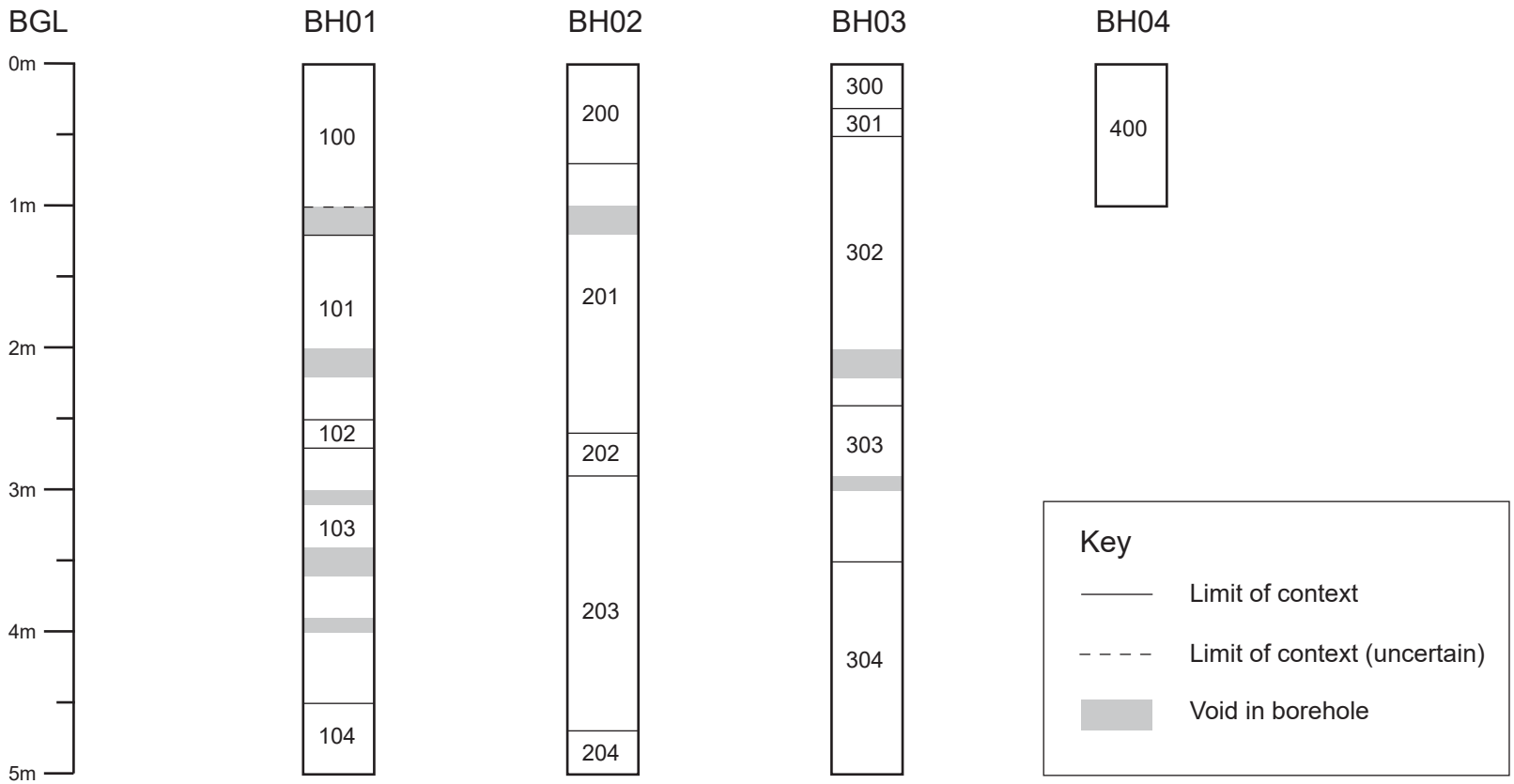


Figure. 3 Profile of Boreholes 1, 2, 3 and 4

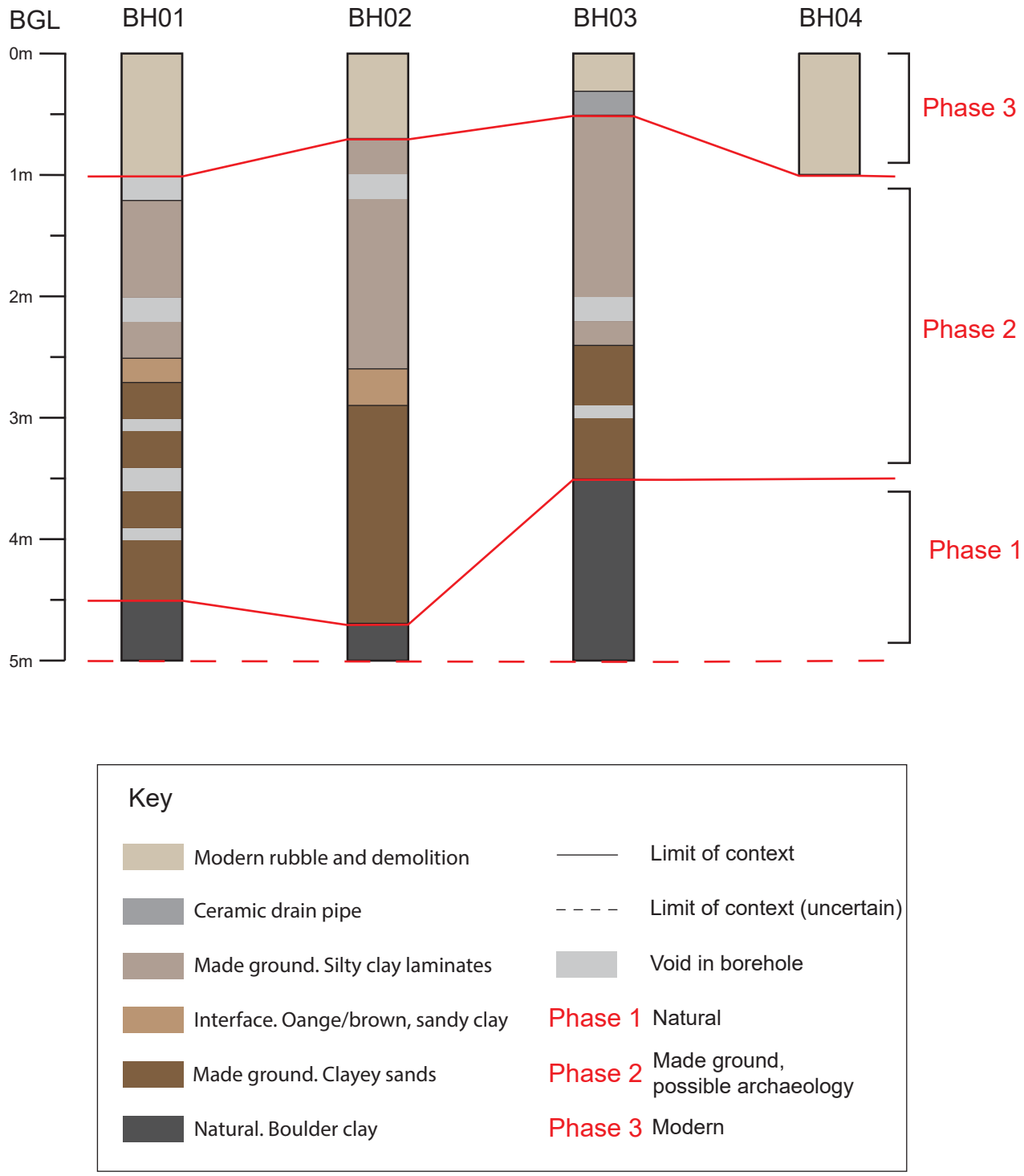


Figure. 4 Depositional Phases

# YORK ARCHAEOLOGICAL TRUST

York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.



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