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Archaeological Investigations at
Block G, Hungate Development, York

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Abbreviations

AOD – Above Ordnance Datum

BGL – Below ground level

CBM – Ceramic Building Material

CYC – City of York Council

HYRL - Hungate (York) Regeneration LTD

PPE – Personal Protective Equipment

TBM – Temporary Benchmark

WSI – Written Scheme of Investigation

YAT – York Archaeological Trust

NON-TECHNICAL SUMMARY

Between March 6th–29th 2018, York Archaeological Trust (YAT) conducted an evaluation and borehole survey at Block G of the Hungate Development, York (SE 60663 51818).

The work was undertaken on behalf of Hungate (York) Regeneration LTD. (HYRL) to satisfy planning mitigation measures set by the City of York Council (17/03032/REMM). The work was based on a Written Scheme of Investigation produced by YAT (Appendix 7). The works involved the excavation 10m x 9m evaluation trench to a depth of 4m BGL, a borehole survey and the installation of two groundwater monitoring points.

The evaluation trench revealed a deeply-stratified sequence of archaeological deposits ranging in date from the Roman period to the 21st century. A series of Roman and post-Roman deposits were overlain by a low early medieval bank. This was interpreted as the rear boundary of an Anglo-Scandinavian plot fronting on to Hungate. This sequence was heavily truncated by medieval refuse pits which were in turn overlain by post-medieval horticultural soils and 19th–21st century yards and buildings. Archaeological deposits continued beyond the maximum excavated depth of the trench and waterlogged deposits were found below 2m BGL. The borehole survey provided a baseline deposit model for the site and identified natural boulder clays at depths ranging between 6.80m and 8.90m BGL. Natural geological deposits sloped downwards to the south-west towards the River Foss.

KEY PROJECT INFORMATION

Project Name	Block G, Hungate Development, York
YAT Project No.	5000
Document Number	2018/46
Type of Project	Evaluation and borehole survey
Client	Hungate (York) Regeneration LTD
Planning Application No.	17/03032/REMM
NGR	SE 60663 51818
Museum Accession No.	YORYM:2006.5201
OASIS Identifier	yorkarch1-313471

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1 INTRODUCTION

Between March 6th–29th 2018, YAT conducted an evaluation and borehole survey at Block G of the Hungate Development, York (SE 60663 51818) (Figure 1).

The work was undertaken on behalf of HYRL and followed an archaeological mitigation strategy that was originally outlined in the Research Design and Scheme of Archaeological Investigation 3rd Revised Version (issued August 2005, YAT 2005/41) before being updated in Chapter J Archaeology of the Hungate Urban Neighbourhood Revised Masterplan Environmental Statement (ES) (issued July 2015, document 50370/SSL/SP) and revised for the Addendum to the ES (issued in March 2017, document 50370/03/SSL/SP).

In accordance with the Written Scheme of Investigation (WSI), a stepped evaluation trench measuring 10m x 9m was excavated to a depth of 4m BGL to assess the nature and condition of deeply-buried archaeological deposits. The borehole survey produced a more detailed deposit model for the site and a groundwater monitoring station will be left in place during construction works to monitor the effect of the development on the site hydrology.

2 METHODOLOGY

The archaeological investigation of Block G, Hungate aimed primarily to assess the nature and condition of deeply-buried archaeological deposits and followed the scheme of works outlined in the WSI (Appendix 3).

2.1 Evaluation Trench

A north-east/south-west aligned trench measuring 10m x 9m was excavated on the south-east side of the present Hungate marketing suite (Figure 2). The trench was staked out using a Leica GNSS GPS unit working to an accuracy of no less that +/- 100mm. Modern landscaping materials, overburden and concrete surfaces were removed using a 13 ton 360˚ tracked excavator equipped with a hydraulic breaker. All machine excavation was carried out under archaeological supervision. To ensure the stability of the trench edges, the trench was stepped in by 1m for every 1m of excavated depth with the exception of the south-east side which was cut at a shallow batter to a depth of 2m BGL.

The reinforced concrete footings of a mid-20th century structure that stood until 2006 proved to be far more substantial than had been anticipated. A hydraulic breaker and a toothed bucket measuring 0.90m in width were used to break and remove the footings along with a series of concrete encased drains. Disturbance from this process required the upper 1.5m of the north-east side of the trench to also be cut at a shallow batter to ensure a safe working environment.

The later medieval, post-medieval and 19th century archaeology of the Hungate area has been extensively investigated during previous phases of works. To expedite access to deeper deposits, the upper 3m of the trench was excavated by machine using a 1.80m wide toothless bucket. Machine excavation was carried out in stages and periodically ceased to allow for deposits and structures to be quickly recorded.

Upon completion of machining, barrier fencing was erected around the trench and steps were cut to facilitate safe ingress into the trench. A site grid was laid out by GPS which was used to create all hand drawn plans. The GPS unit was also used to create a pre-excavation survey of all major features and the limit of excavation and to install a temporary benchmark (TBM).

Rising groundwater was encountered from a depth of around 2m BGL and the use of a pump was required to maintain access to the excavation area. Initially, a trash pump was used, although the depth of the trench made this ineffective. A submersible pump was used for the remainder of the excavation and groundwater was directed into a soak-away a suitable distance from the trench. No water was allowed to spread beyond the limits of the site. As groundwater was present from a depth of 2m BGL, it was necessary to cut a sump in the south-east corner of the trench. In addition, a shallow channel was cut around the edge of the trench to direct the flow into the sump which was pumped out at regular intervals. This process removed a small amount of archaeological material, but allowed the archaeological horizon to be exposed in plan and hand excavated. Wooden boards were laid around the edge of the third step of the trench to allow safe movement across waterlogged deposits.

Each archaeological feature was recorded using the standard YAT single context methodology, using procedures laid out in the Trust's fieldwork manual (YAT 2009). Every context was assigned a unique context number and recorded on proforma context sheets. Plans were drawn at a scale of 1:20 and, due to their size, sections were also drawn at 1:20. Digital colour photographs were taken of each context and the visual record was supplemented by frequent working shots and area shots. All stratified finds were retained with the exception of corroded non-diagnostic iron objects and finds from modern intrusions. A judgement sampling strategy was employed during the excavation and, due to the lack of primary 'use' deposits, no environmental samples were taken.

The primary archive for the site is currently stored with the York Archaeological Trust under the Yorkshire Museum accession code YORYM: 2006.5201. Each context has been assigned to a Set (representing a single event, such as a pit cut and its backfills). Each Set was in turn allocated to a Group (a closely linked number of sets, such as a group of pits). Finally, each Group was allocated to a Phase (more general units of land use, such as a yard). This phasing forms the basic structure of the report on the archaeological results. Context numbers and the other stratigraphic units outlined above all have the prefix 36.

A series of low-level aerial photographs were taken at various points during the excavation by York Archaeological Trust volunteer David Dodwell using a camera fitted to a telescopic fibreglass pole. David received a full site induction, wore appropriate PPE and was accompanied by a YAT staff member to ensure safe movement around the trench.

To maximise the educational and cultural value of the site, it was agreed with HYRL to pro-actively engage with the general public throughout the excavation. While the depth of the trench made the site unsuitable for events such as open days, daily updates on the progress of the excavation were posted to YAT's social media outlets (https://twitter.com/YATFieldwork https://www.facebook.com/YATFieldwork).

A Ricoh Theta S camera was used to create a series of three dimensional images of the site at regular intervals throughout the project. The equipment was kindly provided by Ebor 360 and

it is anticipated that the processed photographs will provide striking images for future presentations and web articles, alongside the possibility of a virtual reality experience of the excavation.

All excavated material was visually inspected and surveyed with a metal detector by volunteer detectorist Stuart Baron to maximise the recovery of small finds. Stuart received a full site induction and was supervised by YAT staff at all times. Due to the sensitivity of metal detectors to metal, it was not possible for Stuart to wear safety boots and carry out an effective survey. As this contravened the PPE requirements of the site, Stuart did not enter the fenced off excavation area and only operated around the spoilheap.

2.2 Borehole Survey

The methodology followed the strategy outlined in the WSI (Appendix 7). In total, six boreholes and two monitoring points were to be drilled within Block G. The locations were surveyed in using a GPS with co-ordinates agreed with HYRL, CYC Principle Archaeologist John Oxley and YAT.

The six boreholes aimed to gather information on the character and condition of archaeological deposits through to natural geology. While the monitoring points also served the same purpose, these were specifically located to remain in use during and after the development phase to monitor the water table levels over a prolonged period of time, and to assess how the development might affect the long-term condition of waterlogged archaeological deposits.

The drilling was carried out by GA Site Investigation Ltd. using a Competitor Dart Window Sample rig. Cores were produced for inspection in 1.00m sections. These were hand cleaned on site and recorded following the YAT single context recording system as detailed in the YAT Fieldwork Manual (YAT 2009). These were noted on pro-forma borehole log sheets and photographed using a digital camera. The boreholes were then backfilled with the core material and gravel, then capped with tarmac.

Finds were retrieved and bagged by individual context number.

A total of eight 0.30m core window samples were taking during the process for further specialist assessment at Geolabs. These will be tested to ascertain the quality and condition of the waterlogged organic deposits using the following techniques:

- Triaxial permeability testing
- Porosity/bulk density/moisture content testing
- Particle size distribution analysis
- Chemical redox potential testing

Due to underlying obstructions, only one monitoring point was successfully installed (Figure 2). Standpipes measuring 60mm in diameter were inserted into the monitoring point. These were surrounded by gravel and Bentonite surrounds and capped with a lockable cover.

Due to the type of the borehole rig, the deeper window samples were marginally reduced in diameter between each 1m section.

2.3 Groundwater Monitoring

Rainfall, river levels in the Foss and groundwater levels on Block G will be recorded fortnightly for 6 months from April 2018. After this period, an interim report will be compiled and further readings will be taken on a monthly basis for a further 30 months. At this point, a report will be written and an annual review will take place to ascertain whether further monitoring is required.

3 LOCATION, GEOLOGY & TOPOGRAPHY

The site is located at Block G, Hungate Development, York, YO1 7NZ (SE 60663 51818, Figure 1). Block G is a 2514m² plot of land which is currently occupied by the HYRL marketing suite, an associated landscaped garden and, in the southern third of the site, an area of hard standing that has recently been in temporary use as a HYRL compound, facing on to Carmelite Street. The site sits on a gentle slope, falling west-east from around 10.20m AOD to 9.20m AOD. The site lies approximately 350m south-east of the Roman Legionary Fortress and within the area defined by the medieval city walls north-east of the River Ouse, immediately north-west of the River Foss.

The superficial geology of the area consists of riverine alluvium and the Vale of York Formation incorporating clay, sand and gravel. The superficial geology overlies the Sherwood Sandstone Group (1:50 000 scale superficial deposit and bedrock geology descriptions, Geology of Britain viewer: http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed February 2018).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The historical and archaeological background has been covered in detail in the Updated Archaeological Baseline Desk-Based Assessment (Connelly and Johnson 2015) and in Chapter J of the Hungate Urban Neighbourhood Revised Masterplan ES (2015). The following brief overview is taken from these reports:

Due to the built-up nature of the plot at the start of the 21st Century and issues of access, Block G is presently the development block with the weakest archaeological baseline data. Since 2000, only a limited amount of excavation has been carried out in the area (Figure 2). Trenches 19 and 20 of YAT's 2000 evaluation of the Hungate area provided a keyhole deposit model for Block G (Macnab and McComish, 2000) and two trenches were excavated in 2012 as YAT's Archaeology Live! training excavation. These trenches primarily investigated the 19th and 20th century horizon (Savine, forthcoming).

4.1 Prehistoric (30,000BC to 43AD)

To date, no Prehistoric archaeology has been observed in Block G.

4.2 Roman (43AD–410AD)

A securely dated sequence of Roman deposits was encountered in Trench 20 of the 2000 evaluation. The trench was located immediately to the east of Garden Place, within the central segment of Block G, and observed Roman archaeology from c.4.05m AOD to c.5.80m AOD that is suggestive of riverside archaeology and land reclamation. The lowest deposit, between c.4.05m AOD and c.4.36m AOD, contained 2nd/3rd century Roman pottery and would appear to represent deposits forming in a former channel of the River Foss (Connelly and Johnson 2015, 9).

4.3 Early Medieval (410–1066)

To present, only Trench 20 of the 2000 evaluation has successfully identified early medieval archaeology. The earliest feature was a wicker-lined pit with a highly organic fill that was exposed at a depth of 5.80m AOD. The high level of organic survival suggests that anoxic conditions may be present at this depth. Overlying the pit were a sequence of organic deposits of 10th–14th century date that raised the contemporary ground level to 6.90m AOD. This appears to have been a deliberate attempt to raise the ground level (Connelly and Johnson 2015, 9).

4.4 Later Medieval (1066 – 1540)

The 2012 *Archaeology Live!* training excavation focused primarily on 19th and 20th century structures and deposits, however, two small sondages were excavated and identified the uppermost of what appeared to be a sequence of later medieval dumping from 8.20m AOD. Trench 19 of the 2000 evaluation exposed 13th–14th century deposits from 8.37m AOD to the trench's maximum depth of 8.17m AOD. In Trench 20, a complete section was excavated through the medieval horizon. In this part of the site, close to Garden Place, later medieval archaeology was present between 5.80m AOD and 7.80m AOD. No structural remains of the Carmelite Friary that occupied the site between 1295 and 1538 have yet been observed in Block G, although Trench 20 was successful in identifying deposits that would have been contemporaneous (Connelly and Johnson 2015, 9–10).

4.5 Post-Medieval to Modern (1540–Present)

A consistent post-medieval sequence has been observed across much of the Hungate development, including Block G. Between the late 16th century and the early 19th century, much of the area was open space and primarily used for horticulture. A 0.50m thick layer of dark, humic soil relating to this period was identified in the 2012 training excavation at a depth of 8.69m AOD. Over the 19th and 20th centuries, this horticultural soil was built over by a series of domestic buildings and yards and their associated services and, in the 2012 excavation, this raised the ground level to between 9.80m AOD and 9.20m AOD. Trenches 19 and 20 of the 2000 evaluation produced similar results, with post-medieval to modern features and deposits located from 8.37m AOD and 7.80m AOD respectively (Connelly and Johnson 2015, 10).

5 RESULTS

The results of the Block G excavation will be discussed in phase order, beginning with the earliest deposits to be observed.

5.1 Phase 3600 –Romano-British Levelling Deposits

The earliest material observed during the Block G excavation was a deposit comprised of soft, mid-yellowish brown silty sand with occasional flecks of charcoal and CBM (Context 36119; Figures 3, 4, 5 and 6). The deposit was present from a depth of 5.71m AOD and continued beyond the maximum excavated depth of 5.60m AOD; it was interpreted as a levelling layer. At this depth, groundwater rose so quickly that it was impossible to see the deposit in plan, so the context was recorded in section only (Plate 1).

Overlying this deposit was a substantial, 700mm thick levelling deposit of mid-orange brown silty clayey sand that raised the ground level to 6.41m AOD (Context 36118; Figures 3, 4 and 5; Plate 1). Alongside a small amount of 1st–4th century CBM and one fragment of a stone floor tile, eighteen sherds of pottery were recovered from this deposit, all of which dated to the Romano-British period. The lack of notable wear on the fabric would suggest that this material is in a primary context that represents disposal of refuse or material that was deposited deliberately to raise the ground level. The assemblage was of 2nd–3rd century date and comprised a range of locally made and imported domestic wares such as colour coated beakers, Samian, Grey Ware and Ebor Ware mortaria.

Plate 1 North-east facing view of levelling deposits C36099, C36117 and C36118, The earliest deposit (C36119) is obscured by groundwater (1.00m scale).

The latest deposit within this phase was a further levelling dump of friable, mid-brownish orange clayey sand (Context 36117; Figures 3, 4, 5 and 6; Plate 1). This deposit contained three abraded sherds of 1st–2nd century Ebor Ware and was present at a height of up to 6.56m AOD.

5.2 Phase 3601 –Romano-British Cut Features

This phase of activity demonstrated a distinct change in land use, with the deposition of levelling material coming to an end, and the latest levelling dump of the previous phase (Context 36117) now being utilised as an active surface. A series of features cutting into this deposit were observed, the earliest of these being a shallow north-west/south-east aligned gully that fell gently south-east from 6.52m to 6.35m AOD (Group 36018; Figure 7; Plate 2). The feature measured 200mm in width at the north-west end, gradually widening to 400mm as it ran in the direction of the River Foss. A small assemblage of 3rd-century pottery was recovered from the fill of the gully, suggesting that it was cut during the Roman period, although a post-Roman date is also possible. The presence of this gully suggests that drainage remained an ongoing concern even after the ground level had been substantially raised.

Plate 2 North-east facing view of levelling dump C36117 and later truncations (Sets 36057, 36058, 36059, 36060; 0.50m scale).

After fully silting up, the gully was cut by three small pits, although two of these ran mainly beyond the limit of excavation (Sets 36057 and 36059 in Group 36017; Figure 7; Plate 2). As a result of this, only a limited area could be excavated and no finds were recovered. The remaining pit (Set 36058 in Group 36017; Figure 7; Plate 2) was sub-circular in plan and

measured 400mm in diameter and 140mm in depth. A single sherd of Ebor Ware pottery dating to the 1st/2nd century was recovered from the backfill. With only a small area of this horizon exposed, little inference can be made regarding the function of these pits.

5.3 Phase 3602 –Post-Roman/Early Medieval Dump Deposits

The sequence of cut features detailed in Phase 3601 was sealed by a dump deposit comprised of a friable mid-yellowish brown silty sandy clay (Context 36099; Figures 3, 4, 5 and 8). The deposit contained charcoal flecks and a small assemblage of pottery dating to the 3rd century and was interpreted as a levelling dump. A fragment of 14th–16th century brick was also recovered, but appears to be intrusive. The deposit sloped gently from a height of 6.70m AOD in the north-east to 6.56m AOD at the south-west. While the ceramic assemblage was entirely Roman in date, the presence of a worked antler offcut could suggest a post-Roman date for this context as a large volume of worked antler was recovered from Anglo-Scandinavian deposits on the neighbouring Hungate Block H excavation (Kendall, forthcoming). A further levelling dump of friable, mid-brown silty sandy clay was deposited over the south-western half of Context 36099, flattening the area and raising the ground level to 6.72m AOD (Context 36086; Figures 3, 4 and 8). Animal bone, Roman brick and flue tile and a single sherd of Samian Ware were recovered from this context.

Three further contexts are interpreted as being part of the same scheme of deposition that produced a maximum ground level of 6.81m AOD (Contexts 36045, 36060 and 36123; Figures 3, 4 and 5). These were excavated by machine and were therefore only visible in section, although a sherd of Torksey Ware was recovered from Context 36045, providing further evidence for a post-Roman date for this phase of activity.

5.4 Phase 3603 –Anglo-Scandinavian Activity

This phase represents a period of significant change in land use, with the first evidence of deliberate enclosure of plots of land. The levelling deposits of the previous phase were at this point built over by a low, north-west/south-east aligned bank that was exposed to a length of 3.82m and a width of 1.23m (Set 36054 in Group 36015; Figures 3, 4, 5 and 9; Plate 3). The bank survived to a maximum height of 0.58m and comprised three distinct layers of material.

Plate 3 North-west facing view of Anglo-Scandinavian bank (Set 36054) and later truncations visible in section (0.50m scale).

The uppermost deposit (Context 36069) was a layer of soft, light orange brown sand and small stones surviving at a height of 7.35m AOD. At 7.31m AOD, this deposit overlaid a more compacted layer of mid-orange brown sandy clay with frequent cobbles, pebbles and small angular stones (Contexts 36059 and 36070). The basal layer of the bank comprised a compacted layer of mid-greyish brown sandy silty clay that was observed at a height of 7.09m AOD (Contexts 36061 and 36071; Figures 3, 4 and 5). Two sherds of residual Roman pottery and a small amount of Roman CBM were recovered from this layer.

The bank was located approximately 20m to the south-west of Hungate and ran parallel to the street, suggesting that it may have served as a boundary that delineated the rear end of a plot. A number of similar boundary features were observed during the Block H excavation on the north-east side of Hungate (Connelly and Johnson 2015, 10).

Two pits from the same phase of activity were excavated within the area enclosed by the bank. The earlier of the two was sub-rectangular in plan and measured 0.95m x 0.70m and was 0.22m deep (Context 36078 in Group 36015, Figure 9). The pit was truncated by a larger pit, which was circular in plan and measured 0.93m in diameter (Context 36075 in Group 36015; Figures 5 and 9; Plate 4). The cut had vertical sides and was excavated to a depth of 1.00m. The base of the pit was not reached as it extended beyond the maximum excavated depth of 5.68m AOD. The pit was filled by a highly organic deposit of soft, dark-greyish brown clayey silty sand (Context 36073) which contained a large amount of decayed wood, animal bone, oyster shell, charcoal, Roman CBM and pottery. Four of the 13 sherds of pottery recovered from the pit were Roman in date, while the remainder dated to the 10th century. Both pits were interpreted as refuse pits relating to Anglo-Scandinavian occupation of the plot.

A single post-hole was identified in the south-west facing section (Figure 5) and was observed to truncate a dump deposit from Phase 3602 (Context 36045, Section 5.3). The cut of the post-hole (Context 36044) measured 120mm in diameter and 80mm in depth.

Plate 4 South-east facing view of an Anglo-Scandinavian pit (Set 36040) and earlier levelling deposits (1.00m scale)

5.5 Phase 3604 –Early Medieval Levelling Deposits

Following the establishment of new boundaries detailed in Phase 3604 (Section 5.4), the ground level of the area was substantially raised by a series of levelling dumps (Group 36014; Figure 10). This sequence was excavated by machine and primarily comprised soft to friable, mid-greyish brown silty sandy clays, although layers of friable, mid-orangeish brown sandy silts were also observed (Plate 5). In total, around a metre of material was deposited, raising the ground level to between 7.40m and 7.60m AOD.

A relatively small number of finds were recovered from this sequence, possibly suggesting distinct events of concerted deposition as opposed to a more gradual accumulation from nearby activity that may be expected to contain more cultural material. The limited ceramic assemblage means it is difficult to confidently date this process of raising the ground level; however, some inference can be made. Context 36040 was the second in a series of deposits built up against the Anglo-Scandinavian bank (Set 36054; Section 5.4). The deposit ranged in depth from 7.20m and 6.91m AOD and contained a fragment of a whetstone and sherds of Torksey and Stamford A type pottery, suggesting a 10th–11th century date.

Plate 5 North facing view of a sequence of early medieval levelling dumps in lower step. (Group 36014; 1.00m scale).

The only other deposit containing datable material within this sequence was Context 36037, a 180mm thick dump that was present at a height of 7.46m AOD (Figure 4) and contained one sherd of 12th–13th century splash glazed pottery. This evidence provides a broad date range for the sequence covering the 10th–13th centuries and raises the possibility that this scheme of dumping may have taken place over two or more hundred years. While this is certainly possible, with such a scant artefactual assemblage, the impact of residuality in the earlier material must be kept in mind.

5.6 Phase 3605 –Medieval Refuse Pits and Dumping

Between the late-12th/early-13th century and the 14th century the site appears to have been given over to refuse disposal, as evidenced by a sequence of intercutting pits. While the majority of this phase was excavated by machine, it was still possible to identify nine discrete pits and a number of dump deposits from a height of 7.61m AOD (Group 36013; Figures 3, 4, 5 and 11). The pits ranged significantly in size and shape, with the smallest being a circular pit or post-hole measuring 100mm in diameter and 180mm in depth (Context 36042; Figure 5).

The largest pit within this phase was sub-circular in plan and, measured 3.48m in diameter and was excavated to a maximum depth of 0.96m (Context 36047; Plate 6; Figure 4). While the base was not reached, the pit contained eight distinct layers of infilling, with ceramic finds ranging from 10th to 14th century in date (Set 36035). The earliest fill to be excavated was highly organic, suggesting that this pit may have been a substantial cesspit (Context 36055).

The extent of intercutting at the top of this sequence was such that a homogenous layer up to 0.60m thick had formed from upcast infilling deposits (Context 36018, Figures 3, 4 and 5). This was the latest context within the phase and was present from a maximum height of 8.13m AOD.

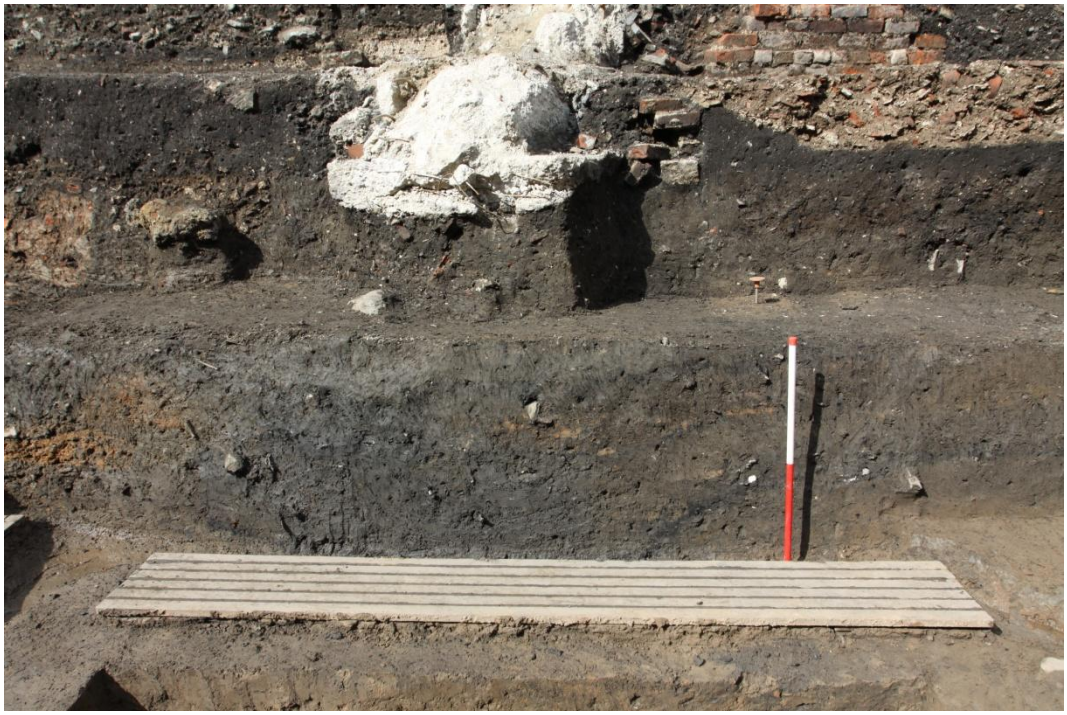

Plate 6 North-west facing view of a large medieval pit (Set 36035, 1.00m scale).

5.7 Phase 3606 –Late/Post-Medieval Pits and Dumping

The archaeological evidence from this phase suggests that a period of reduced activity followed the intensive pitting of the 13th and 14th centuries. Two pits dating to this phase were excavated by machine and recorded in section. The larger pit measured 2.20m in width, was exposed to a depth of 0.82m and survived at a height of 8.52m AOD (Context 36106 within Set 36021, Figure 3). Oyster shell, CBM and charcoal flecks within the backfill may suggest that the feature was used as a refuse pit.

The second pit from this phase measured 1.10m in width, was exposed to a depth of 0.50m and present at a height of 8.16m AOD (Context 36017 in Set 36022, Figure 4). Frequent finds of CBM were present within the backfill and may represent disposal of demolition rubble; the latest example was spot dated to the 17th century. The absence of pottery from these features makes it difficult to provide a definitive date, although the stratigraphy and CBM assemblage would suggest that the pits were cut in the late-medieval or early post-medieval period.

5.8 Phase 3607 –Post-Medieval Pits and Dumping

Post-medieval activity appears to have remained relatively sporadic, with only a small number of features identified within this phase; all of which were machine-excavated and recorded in section. A shallow pit filled with mortar and CBM rubble was observed, measuring 4.40m in length and 0.40m in depth (Context 36022 within Set 36020; Figures 3 and 4). As well as CBM, the pit contained animal bone and a small assemblage of post-medieval pottery and was spot-dated to the 18th century. A second pit measured 0.86m in width and 0.40m in depth and contained a substantial fragment of iron/iron slag (Context 36025 within Set 36018; Figure 4). It was not possible to remove the iron object from the section and no dateable finds or

evidence for the function of the pit were recovered. The final deposit within this phase was a small dump of mortar at a height of 8.10m AOD (Context 36021; Figure 4).

5.9 Phase 3608 –Post-Medieval Horticultural Activity

The pits and deposits described in Phase 3607 (Section 5.8) were sealed by a sequence of features and homogenous deposits of soft to friable, dark brownish grey, sandy clayey silt (Groups 36007 and 36010; Figure 12; Plate 7).

Plate 7 South-east facing, post-excavation view of the evaluation trench with horticultural features and deposits (Groups 36007 and 36010) visible in the second step (1.00m and 2.00m scales).

The earliest of these features was a shallow, flat bottomed cut measuring 2.00m in width and 0.32m in depth that was located in the north-east corner of the excavation area (Context 36027; Figure 4). The feature was interpreted as a horticultural feature, such as a planting bed, and was sealed by a 0.55m thick layer of humic soil that survived to a height of 8.50m AOD (Context 36014; Figure 4). No datable finds were present, but a lead offcut was recovered. A further layer of horticultural soil was observed in the north-west corner of the trench, at a height of 8.50m AOD (Context 36013). Alongside animal bone and a piece of copper alloy wire, 19 sherds of pottery were recovered from this context. These and a small assemblage of pan and ridge tile provided a 17th century or later date for the deposit and included some residual 14th century material.

Context 36013 was cut by a second possible planting bed measuring 2.22m x 0.60m (Context 36122, Figure 4). This was dated to the 18th century by finds of fired clay tobacco pipe and pottery. The latest deposit within this sequence was a 0.18m thick deposit of horticultural soil that was observed at a maximum height of 8.61m AOD (Context 36120).

5.10 Phase 3609 –18th/19th Century Pit

This phase comprises a single flat-bottomed pit filled with CBM rubble and mortar (Group 36009; Figures 4 and 13). In section, the pit measured 2.15m in diameter and 0.50m in depth, although it was not fully exposed in plan. The pit cut into the horticultural soils of Phase 3608 (Section 5.9) from a height of 8.51m AOD and was built over by later structures.

5.11 Phase 3610 –18th/19th Century Features

A pit (Group 36004) and a shallow linear feature (Group 36005; Figure 14; Plate 8) were assigned to this phase as the lack of direct stratigraphic relationships or definitive dating evidence means that it is equally possible for these features to have been contemporaneous with either Phase 3609 (Section 5.10) or 3611 (Section 5.12). The pit cut (Context 36108) was recorded in section at a height of 8.62m AOD and exposed to a width of 0.40m and a depth of 0.40m, at which point the remainder of the feature ran beyond the limit of excavation. The pit was backfilled with a friable, mid-greyish brown sandy clay that contained inclusions of slag, mortar, stones and CBM (Context 36107). No pottery was recovered from the feature.

Plate 8. East facing view of Groups 36005 and 36008 (1.00m scales)

The north-east/south-west linear aligned feature was exposed to a length of 2.20m and measured 0.30m in width and 0.06m in depth (Group 36005, Plate 8). Surviving at a height of 8.73m AOD, the feature contained no datable material and was tentatively interpreted as a late horticultural feature. Due to their position in the stratigraphic sequence, these features were dated between the late 18th and mid 19th century.

5.12 Phase 3611 –19th Century Building

An L-shaped section of brick wall principally aligned north-west/south-east was observed in the north-east corner of the excavation area (Group 36008; Figures 4 and 15; Plate 8). This brick structure was 0.30m wide and enclosed an area of 4.20m x 2.30m. The construction style was rough, with a footing comprising four courses of un-mortared brick over a base course of re-used masonry. The wall itself survived to a maximum height of four courses of stretcher laid brick at 8.84m AOD. The bricks were 19th century in date, measured 220mm x 120mm x 80mm and were bonded with a pale grey lime mortar. An additional wall footing was built flush to the inside face of the north-east/south-west aligned section of wall (Set 36011). The wall was 0.44m wide, was exposed to a length of 2.00m and likely served as a footing for an internal structure. Historic mapping has suggested that this building may have been 6 Foster's Yard, see Section 6 for further discussion.

5.13 Phase 3612 –Demolition of 19th Century Buildings

The 18th, 19th and 20th century dwellings and industrial buildings of the Hungate area were cleared in the 1930s. A clearance cut (Group 36003) was assigned to represent this event.

Plate 9 North-west facing view of archaeologists cleaning sections. Mid-20th century levelling deposits are visible in the top step

5.14 Phase 3613 –Mid 20th Century Activity

Following the clearance of 19th-century buildings and yards, a 1.00m thick sequence of levelling deposits was identified sealing the earlier horizon and substantially raising the ground

level (Group 36005; Figure 16; Plate 9). A variety of materials were deposited, including dumps of mortar, CBM rubble and soil. Only one cut feature was observed during this phase, a cut, 0.70m deep, visible in section in the north-east corner of the trench (Context 36096; Figure 4). This feature cut away the northern end of the demolished 19th century brick wall (Group 36008; Section 5.12) and was interpreted as a disturbance caused by digging for the recovery of building materials.

The latest deposits within this sequence (Contexts 36004 and 36015, Figure 4) created a flat surface at a height of 9.40m AOD. The range of different materials that were deposited within this phase may suggest that the levelling deposits were made up of materials derived from the 1930s clearance event (Phase 3612; Section 5.13).

5.15 Phase 3614 –Mid 20th Century Buildings

This phase comprises the substantial reinforced concrete footings, surfaces and associated drainage of a mid-20th century warehouse building (Group 36002; Figures 4, 17 and 18; Plates 10 and 11).

Plate 10 South-east facing, pre-excavation view of 20th century concrete footings (Group 36002, 2.00m scale)

Three north-west/south-east aligned reinforced concrete beams ran through the excavation area. These measured 0.75m in width and 2.10m in depth, stepping out to 1.10m in width in the bottom 0.20m (Plate 11). These joined a north-east/south-west aligned, 0.20m thick concrete surface at the southern end of the trench; the surface was also laid over a 2.10m deep concrete stanchion. The concrete surface was laid at a height of 9.40m AOD over 100mm of limestone hardcore and a network of concrete encased ceramic drainpipes (Figure 3).

Plate 11 Machine excavation of concrete footings (Group 36002)

5.16 Phase 3615 –21st Century Landscaping

The warehouse buildings described above (Group 36002) were demolished in 2006, although the concrete surface was retained as hard standing for a temporary HYRL compound. The latest deposit within the sequence was a layer of topsoil relating to landscaping for the current Hungate marketing suite, which provided the present maximum ground level of around 9.75m AOD (Context 36001; Figure 4).

Context 36000 was also assigned to this phase and represents unstratified material recovered during machine excavation. Alongside a small assemblage of residual 13th to 18th century pottery, three substantial architectural fragments were recovered (Afs 180, 181 and 182; See Appendix 3). All three were parts of moulded magnesian limestone jambs in decorated in the Perpendicular Gothic style, and therefore dating to 1350–1550. The masonry had clearly been re-used, but little further inference could be made. A number of glass milk bottles from the mid-20th century were also found, including several featuring a design of York Minster and the text, “Monkgate and Jersey Dairy Co. Monkgate, York”.

Plate 12 Detail of mid-20th century milk bottle found during machining

5.17 Borehole Survey Results

BY THOMAS COATES

All of the boreholes have been allocated blocks of context numbers to be assigned to individual deposits identified. For example, BH1 (Borehole 1) starts with context C100 and MP1 (Borehole 7) begins with context C700. These contexts, and ultimately the results of the survey, have been incorporated into a comparative illustration that identifies a deposit model within the environs of Block G (Figure 19).

Only five of the eight boreholes successfully penetrated to the underlying geological deposits. This was due to difficult ground conditions and obstructions encountered during the drilling process.

Installation of Monitoring Point 2 (MP2) was attempted in three separate locations within close vicinity of each other, all of which were obstructed by in-situ concrete foundations between 0.25m and 0.65m BGL. It was decided this should be abandoned as it was causing considerable damage to the rig 'shoes'.

The first attempt at BH2 (BH2.1) encountered a complete void between 4.00m BGL and 7.00m BGL. This may have been a result of the nature of the deposits encountered and/or the nature of the water table. A second attempt (BH2.2) was made one metre south-east of the original position which came upon a timber obstruction at 3.30m BGL (Figure 2).

The first attempt of BH3 came across an obstruction at approximately 0.80m BGL and was relocated one metre south-east of the original position (Figure 2).

While it is difficult to interpret patterns of deposition within the limited window provided by boreholes, some degree of interpretation is nonetheless possible:

5.17.1 Natural Geological Deposits

The contrast between natural geological deposits, alluvial re-deposition and early occupational deposits was very unclear, presumably due to historic fluctuations of the course of the Foss. Definitive Vale of York formation and fluvial deposits were, however, encountered as high as 2.90m AOD within BH6 and as low as 1.51m AOD within BH4.

5.17.2 Roman/Post-Roman Activity

Archaeological deposits from this broad period were observed within BH3, BH4, BH6 & MP1. The height of these deposits varied from 5.31m AOD in BH4 (Contexts 411 and 412) to between 3.80m and 3.40m AOD in BH6 (Context 617, Figure 19).

Archaeological deposits of this date were observed throughout the whole of Block G. These deposits typically consisted of soft orange/yellowish brown silty sands and are likely to relate to the series of levelling deposits detailed in Phases 3601 and 3602. Bone was present within BH4, Context 411 at a height of 4.41m AOD (4.90m BGL). The results of the borehole survey, alongside previous and current excavations in the area suggests that the landscape in this period sloped gently north-east to south-west towards the River Foss. For example, the Roman horizon in MP1 was observed at 4.59m AOD, and at 4.11m AOD in BH4.

5.17.3 Early Medieval and Medieval Activity

A variety of deposits of this date were observed during the survey. While dating evidence was limited, some sequences followed patterns that have been clearly identified on the Block H and Block G excavations and were therefore dated typologically. The more notable features and deposits are described below.

BH5 appears to have been sited over a deep pit as a number of homogeneous deposits of soft, dark brownish grey sandy silts were observed between 5.36m and 2.86m AOD (Contexts 509 through to Context 515; Figure 19). Organic materials, including occasional fragments of leather off-cuts, were present within the upper fills associated with this feature.

This pit appears to have been backfilled and overlain by a 0.40m thick layer of cobbles and sandy clay between 5.76m and 5.36m AOD (Context 508; Plate 13). A similar feature was recorded in BH2.2 (Context 808) between 7.10m and 6.40m AOD. Given the proximity to the Anglo-Scandinavian cobble bank boundary features discussed in Phase 3603 (Section 5.4), it is possible that these two cobble-rich deposits may be part of a north-east/south-west aligned bank running from Hungate. It is, however, equally possible that these are isolated features. Context 808 was also observed to overlie a substantial timber upright between 6.40m and 6.30m AOD (Context 809). This timber was substantial and well preserved enough to prevent further drilling. The cobble bank boundary features discovered during the Block H excavation were built over an earlier wattle fence (Connolly and Johnson 2015, 10). This feature may

relate to a similar structure, although it could also be a separate timber feature and could be as late as 14th century in date if the sequence observed in the evaluation trench is similar in this area (Phase 3605; Section 5.6).

Plate 13 Cobble layer within BH5 (Context 508; 0.50m scale)

BH3 and BH6 contained a multitude of deposits seemingly associated with the proliferation of cess and refuse pits detailed in Phase 3605 (Section 5.6). In BH3, a mixture of compacted dark yellowish brown sandy silt and organic, cessy material and dark blue grey sandy silt organic deposits between 7.07m and 5.47m AOD were interpreted as multiple fills within a large pit (Contexts 307–311).

A similar deposit sequence was observed in BH6 between 6.30m and 3.85m AOD (Contexts 609 through to 614). Context 611 was an upright timber stake that may have been part of a timber revetment within a pit or structure. This was further evidenced by Context 610, an organic deposit that contained elements of wicker lining (Plate 14).

Plate 14 Core samples from BH6 (0.50m scale)

A series of homogenous soils (Contexts 108–115) were noted between 6.19m–2.99m AOD in BH1 that may be associated with this phase as Context 106 contained 12th–13th century pottery. This could also represent a long term phase of deposition.

BH2.1, BH4 and MP1 all contained undated dark homogeneous clayey silts but sit between the earlier post-Roman soil layers and later post-medieval and modern cut features.

5.17.4 Post-Medieval Activity

The archaeological horizon within this phase was relatively similar throughout Block G in the form of horticultural soils and cut features.

Horticultural soils were recorded within all of the boreholes with the exception of MP2. In BH1, these soils were represented by Contexts 102, 104 & 105 between 8.98m–8.02m AOD; in BH2.1 by Context 203 between 8.52m–8.02m AOD, in BH2.2 by Context 804 between 8.80m–8.20m AOD, in BH3 by Contexts 301 & 302 between 8.87m–7.87m AOD, in BH4 by Context 403 between 8.11m–7.81m AOD, in BH5 by Context 504 between 8.26m–7.26m AOD, in BH6 by Context 605 between 8.30m–7.70m AOD and finally MP1 by Context 702 between 8.49m–7.19m AOD (Figure 19).

Possible pit cut features that pre-date these horticultural soils were observed within BH2.2 & BH3 represented by Contexts 805 between 8.20m–7.70m AOD & Contexts 303, 304 and 305 between 7.81m–7.31m AOD respectively.

5.17.5 Modern Activity

Evidence of the demolition and clearance of post-medieval and early modern structures was present within all of the recorded boreholes. These showed a consistency in deposits of ceramic building material (CBM) and mortar rubble rich soils.

6 DISCUSSION

Evaluation trench

The significance of the results will be discussed chronologically in Phase order.

6.1 Phase 3600 –Romano-British Levelling Deposits

The lack of abrasion on the 2nd–3rd century ceramic assemblage that was recovered from this phase would suggest that the finds were deposited in a primary context. This demonstrates the presence of intact Romano-British archaeology from a height of 6.56m AOD that then runs beyond the 5.60m AOD limit of excavation. This sequence of levelling deposits was observed to be quite uniform in nature and, while domestic pottery was recovered, the relative paucity of charcoal, animal bone and other domestic waste in conditions favourable to organic preservation would appear to suggest that this phase represents a deliberate scheme of raising and flattening the ground level. Whether this process utilised material sourced for purpose or recycled incidental soils that had been up-cast from other nearby activity remains uncertain, although a combination of the two is equally plausible.

A similar soil horizon was observed in Phase 3927 of the neighbouring Block H excavation on the north-east side of Hungate (Kendall 2009, 14). The deposition in this area was typically around 0.30m in thickness, although the proximity of Block G to the flood risk of the River Foss may have led to a greater need or desire to raise the ground level in this area.

Within Block G, Trench 20 of the 2000 Hungate evaluation was excavated to a greater depth than the present works and warrants comparison as a similar pattern of deposition was observed (Figure 2). Natural running sands were identified in a small sondage at a height of 4.05m AOD (Macnab and McComish 2000, 62), 1.65m below the limit of excavation within the present trench. The earliest archaeological deposit within the 2000 evaluation was Context 20099, a layer of sandy silt that contained 2nd–3rd century pottery and appeared to have been laid within a water course (ibid., 63). As this trench was only a short distance south-west of the 2018 excavation, this highlights the varying course of the Foss in antiquity and that Block G would have been very much a waterfront environment at this point.

The sequence of archaeology overlying the earliest context within Trench 20 was assigned to Phase 2 and incorporated a shallow gully and six levelling deposits that raised the ground level by 0.70m (ibid., 64). This sequence comprised a similar mixture of silts, sands and clays that were recorded as Phase 3600 in the current works and also contained Roman ceramics, although the 2000 assemblage from the waterfront exhibited a greater level of abrasion. With these similarities in mind, it is certainly possible that these two phases are evidence of a broader scheme of levelling up and reclaiming flood-prone land along the north bank of the Foss.

6.2 Phase 3601 –Romano-British Cut Features

This phase provides further useful parallels with Trench 20 of the 2000 evaluation in understanding the broader patterns of land use in and around Block G. In both cases, a phase of consistent deposition appears to have ceased at this point, with the newly created ground surface now coming into active use. Phase 3601 comprised an intercutting 3rd century sequence of one gully and three small pits/post-holes at a height of around 6.50m AOD. In Trench 20, Phase 3 was represented by a beaten earth surface that was cut by a possible beam slot. This structure was then removed and overlaid by a cobbled surface at a height of approximately 5.60m AOD (Macnab and McComish 2000, 64; Plate 15). It has been suggested that this surface may be part of a Roman road, although no further evidence has been found for this (ibid., 70–71).

Plate 15 Cropped view of cobble surface (Context 20085) and earlier features within Phase 2 of Trench 20, Hungate evaluation 2000.

This sequence of archaeology sloped sharply to the south-west in the direction of the Foss and was dated to the 2nd–3rd century by pottery (Ibid.). The 0.90m height difference between these broadly contemporaneous phases demonstrates the far steeper slope towards the Foss that would have existed at the time. This phase of activity provides good evidence that the flat terrace created during Phase 3600 (Section 6.1) was certainly occupied by cut features and

simple structures in the 2nd and 3rd centuries, although the limited excavation area means that little more can be ascertained about how the space was used.

6.3 Phase 3602 –Post-Roman/Early Medieval Dump Deposits

This phase reveals a marked change in deposition, with no cut features being observed at all. A number of dump deposits were laid at a combined thickness of around 0.30m (Group 36016), although the time frame for this process is very unclear. Pottery from the earlier layers was exclusively Roman, with a small amount of animal bone and a single antler offcut also being recovered. The uppermost deposit in the sequence (Context 36045; Figures 4 and 5) was dated to the 10th century by a single sherd of Torksey type pottery, giving a potential date range of 600 years and a total absence of datable material from the Anglian period.

This in itself is not, however, problematic for the interpretation of the site. Discoveries of the far more extensive excavations on Block H have produced similar evidence for this transitional period. In this case, dumping that began in the later Roman period was put to the plough before being given over to pasture. The result of this, archaeologically, was a relatively finds-poor sequence of deposits that may have remained in continuous or intermittent use for the same purpose across the whole of the Anglian period (Connelly and Johnson 2015, 9).

Trench 20 of the 2000 evaluation offers a further parallel, with the corresponding phase (Phase 4) in that it also contained no cut features. The two deposits assigned to this phase were interpreted as levelling dumps and the only datable finds recovered were 2nd–3rd century ceramics (Macnab and McComish 2000, 64).

The absence of any Anglian finds from Block G may indeed represent a period of abandonment, but doesn't preclude low impact activities such as pastoral agriculture having taken place. Either way, the long transition of *Eboracum* into Eorforwic, and subsequently, Jorvik, seems to have had little dramatic effect on this corner of Hungate.

6.4 Phase 3603 –Anglo-Scandinavian Activity

The Anglo-Scandinavian period brought about far more tangible change to the Hungate landscape, and late- 9th-, 10th- and 11th-century archaeology has previously been identified in Blocks D, G and H of the development as well as other excavations in the vicinity (Connelly and Johnson 2015, 10). Evidence of this Viking Age reorganisation of the Hungate landscape was identified in Block G in the form of a cobble and clay bank that ran north-west/south-east across the trench (Set 36054). This feature was interpreted as a boundary marking the rear of an Anglo-Scandinavian plot due to its location and alignment, but also due to its similarity to contemporary features on Block H.

Plate 16 South-west facing view of an Anglo-Scandinavian cobble bank on Hungate, Block H (Context 48535, 0.50m scale)

The Block H excavation demonstrated that land to the east of Hungate was subdivided by wattle fencing into regimental plots measuring roughly 5m in width in the early 10th century. The second half of the 10th century saw these boundaries redefined by low banks or pathways made of cobbles and the construction of at least seven new sunken featured buildings (Connelly and Johnson 2015, 12). The make-up of the banks on Block H and Block G were very similar, with a uniform height of 0.58m to 0.60m and multiple layers of cobble and pebble rich material (Plate 16). While only a small area of Anglo-Scandinavian archaeology has been investigated on Block G, there is good evidence that new plots were laid out on both sides of Hungate in the 10th century, lining the route that connects the raised terrace of St. Saviourgate to the Foss.

No buildings were identified within the plot on Block G, although this may be due to the location of the excavation at the rear of the plot - there is certainly the possibility that 10th-century structures survive closer to Hungate. Contemporary activity was, however, observed in the form of two pits (Sets 36040 and 36041, Plate 4) that were interpreted as refuse/cess

pits due to their highly organic fills. As the present water table sits around 7.60m AOD, the level of organic preservation in these pits was very good (Plate 17).

Plate 17 Aerial view of excavation in progress showing rising groundwater. Image courtesy of David Dodwell

An Anglo-Scandinavian period cesspit was also found in Trench 20 of the 2000 evaluation (Macnab and McComish 2000, 65-66; Context 20083). As this trench was deeper than the 2018 excavation, the base of the pit was reached and a wicker lining was found to survive in the lower extents of the feature (ibid.). This provides evidence that 10th-century activity occurred across the whole width of Block G.

6.5 Phase 3604 -Early Medieval Levelling Deposits

This phase represents another period of dumping and accumulation of soils and shows that material was being dumped against the cobble bank within the Anglo-Scandinavian plot in some quantity as early as the late- 10th or 11th century. Very few finds were recovered from this metre thick sequence of dumps, but a later example was dated to the 12th–13th century (Group 36014). While limited, this dating evidence provides a potential window of over two centuries for this phase of activity and suggests that occupation of the Anglo-Scandinavian plot may have been relatively brief. The contemporary plots on Block H again display a useful parallel in that they were also beginning to be abandoned and infilled around the end of the 11th century (Connelly and Johnson 2015, 14).

Evidence from the Block H excavation, while heavily truncated by 18th and 19th century intrusions, suggests that the Anglo-Scandinavian plots along Hungate became entirely redundant at this point, with the one exception of a single boundary that appears to have remained in use as the earliest iteration of Haver Lane (ibid., 17). The influence of the Norman Conquest is the most likely catalyst for this change, with the Hungate area being very much affected by the damming of the Foss and subsequent creation of the King's Pool (ibid., 15). A consistent pattern was also observed in Trench 20 of the 2000 evaluation, with an Anglo-Scandinavian pit being sealed by a 1.36m thick sequence of dumps that appear to have been deposited between the 11th and 13th/14th centuries (Macnab and McComish, 2000, 66; Phase 5).

To what extent the area was abandoned in this phase is difficult to say, however, it is clear that Block G was certainly not settled at this point. Whether this substantial raising of the ground level was a response to the flooding of much of the Foss Valley by the King's Pool, or a deliberate deposition of new soils as the land reverted to pasture remains open for debate.

6.6 Phase 3605 –Medieval Refuse Pits and Dumping

The century or more of intensive pitting that began on Block G around the turn of the 13th century has been mirrored in excavations across much of the Hungate development. This has led to an overall impression of an open landscape utilised for a variety of purposes, although primarily for the management of refuse, rubbish and cess (Connolly and Johnson 2015, 17).

Within Block G, a different pattern was observed within the 13th and 14th century horizon of evaluation trench 20. A sequence of structural features and gullies were identified, with the most notable feature being the remains of a north-west/south-east aligned timber fence (Phase 6, Macnab and McComish 2000, 65–66). This may be a small variation in land use, or perhaps evidence of the western boundary of the area of Hungate that had been given over to waste management.

6.7 Phase 3606 –Late/Post-Medieval Pits and Dumping

Only limited evidence of late- to post-medieval activity was observed during the excavation of Block G, with two pits being assigned to this phase (Group 36012). No evidence was found for the Carmelite Friary that is known to have occupied the area between 1295 and 1538, with the possible exception of three unstratified moulded jambs that were dated 1350–1550 (AFs 180, 181 and 182; Appendix 3).

Phase 7 of Trench 20 of the 2000 evaluation contained archaeology from 14th to the 15th/16th centuries, although this was characterised by intercutting refuse pits as opposed to ecclesiastical features. Finds from this pit sequence did, however, contain evidence of a high-status diet, with butchered bone from cattle, caprovids, pigs, chicken, geese, fallow and roe deer, razorbill and guillemot being found (Macnab and McComish 2000, 68–69). This may represent waste disposal from the Carmelite Friary, although butchered bone from other sources, such as the butchers of the Shambles, likely to have been deposited here during the medieval period must also be considered.

6.8 Phase 3607 –Post-Medieval Pits and Dumping

The post-medieval period on Block G continued the earlier trend of sporadic pit digging and dumping. Pits filled with rubble and possible iron working waste (Sets 36018 and 36022) may be evidence of nearby industry and building work, but little more can be inferred from such a limited amount of evidence.

6.9 Phase 3608 –Post-Medieval Horticultural Activity

Thick deposits of dark, humic soils have been identified across the whole of the Hungate development. As the dumping of waste across the area drew to a close in the 16th century, an active horticultural soil came into use through to the late 18th/early 19th Century (Connolly and Johnson 2015, 19). The horticultural sequence in Block G contained a number of deposits and shallow cut features that may have served as planting beds (Groups 36007 and 36010, Figures 4 and 12, Plate 7). Alfred Smith's map of 1822 shows the area as gardens, demonstrating that this phase carried on well into the 19th century (Figure 20).

6.10 Phase 3609 –18th/19th Century Pit

This phase comprises a single flat-bottomed pit filled with CBM rubble and mortar (Group 36009, Figures 4 and 13). The pit pre-dates the construction of a 19th century building (Phase 3611), but shares an almost identical shape in plan. While the purpose of the pit is uncertain, a similar pattern was noted in contemporary buildings with associated pits on Block H. This was interpreted as the addition of free-draining material in and around buildings to combat damp (Kendall, pers. Comm..)

6.11 Phase 3610 –18th/19th Century Features

A pit (Group 36004) and a shallow linear feature (Group 36005; Figure 14; Plate 8) were assigned to this phase as the lack of direct stratigraphic relationships or definitive dating evidence means that it is equally possible for these features to have been contemporaneous with either Phase 3609 (Section 5.10) or 3611 (Section 5.12). The pit cut (Context 36108) was recorded in section at a height of 8.62m AOD and exposed to a width of 0.40m and a depth of 0.40m, at which point the remainder of the feature ran beyond the limit of excavation. The pit was backfilled with a friable, mid-greyish brown sandy clay that contained inclusions of slag, mortar, stones and CBM (Context 36107). No pottery was recovered from the feature.

The north-east/south-west linear aligned feature was exposed to a length of 2.20m and measured 0.30m in width and 0.06m in depth (Group 36005; Plate 8). Surviving at a height of 8.73m AOD, the feature contained no datable material and was tentatively interpreted as a late horticultural feature. Due to their position in the stratigraphic sequence, these features were dated between the late 18th and mid- 19th century.

6.12 Phase 3610 –18th/19th Century Features

This phase comprises a pit containing metalworking residues (Group 36004) and a shallow linear cut feature that was interpreted as a late horticultural feature (Group 36005). These features represent sporadic use of the space in the late 18th/19th century.

6.13 Phase 3611 –19th Century Building

Over the course of the 19th century, the Hungate area was rapidly developed, with a proliferation of housing and a suite of industrial buildings along the Foss. The existing streets of Hungate, Haver Lane and Palmer Lane (formerly Pound, or Pond, Lane) were joined by Dundas Street (1815–20), Lower Dundas Street, Carmelite Street and Garden Place, which were all constructed between 1829 and 1850 (Connelly and Johnson 2015, 21). The former precinct of the Carmelite Friary, much of which now falls within Block G, had long been bounded to the east by Hungate, with Fossgate and Stonebow Lane forming the western and northern limits respectively, while the Foss itself marked the southern boundary. This arrangement appears on many early maps and is clearly visible on Smith's map of 1822 (Figure 20). The construction of Garden Place and Carmelite Street cut away much of the medieval layout, creating the south and west boundaries of Block G that survive today. With the exception of the run of Stonebow, which is a mid-20th century addition, this new arrangement can be seen on Bellerby's map of 1847 (Figure 21).

Evidence of this period of industrious change was identified during the excavation in the form of an L-shaped section of brick wall in the north-east corner of the excavation area (Group 36008; Figures 4 and 15; Plate 8). The construction of the wall was rough and made use of recycled masonry as a footing, but not unlike contemporary structures seen elsewhere in Hungate (Kendall 2009, 166). When overlaid on the 1852 OS and the 1907 sanitation survey map (Figures 22 and 23), it is clear that this structure would have formerly been the south-west and south-east walls of 6 Foster's Yard (Plate 18). The cartographic evidence does suggest that other 19th century structures would have existed within the excavation area, although these were totally destroyed by the construction of new warehouses in the 20th century (Phase 3614; Section 5.15).

Plate 18 Number 6, Foster's Yard in the 1930s

No 19th century building remains survived in Trench 20 of the 2000 evaluation, although Trench 19 (Figure 2) did pick up a series of drains and surfaces relating to Foster's Yard (Macnab and McComish, 2000, 71).

6.14 Phase 3612 -Demolition of 19th Century Buildings

The 1930s clearance of the Hungate area is well documented and was clearly visible in Block G with the demolition of the building detailed in Section 6.13 (Phase 3611).

6.15 Phase 3613 –Mid 20th Century Activity

The archaeological sequence covering the late 1930s through to the 1960s was characterised by a series of dump deposits that brought the ground level up to 9.40m AOD (Group 36005; Figures 4 and 16; Plate 9). No evidence of any structures was observed in this phase, with the area seemingly all but abandoned at this point. A different situation was observed in the 2017 Block F excavation, where the 1930s demolition of Leetham's Flour Mill was followed by a refurbishment of the surface of Hungate and the construction of a post-built structure that used the flour mill floor as hard standing (Johnson 2017, 56).

This hiatus is likely to be a consequence of the outbreak of the Second World War

6.16 Phase 3614 –Mid-20th Century Buildings

Hungate was largely given over to light industry in the post-war period, with a suite of new buildings appearing across the area. In Block G, the substantial reinforced concrete footings and associated drainage and surfaces of a two storey warehouse building were found to truncate much of the earlier sequence (Group 36002; Figures 17 and 18; Plates 10 and 11).

An aerial view of Hungate taken in the 1980s shows the post-war landscape prior to recent redevelopment, the building on Block G is highlighted in red (Figure 24). Most of these buildings, including the warehouse on Block G, were demolished in 2006 (Plate 19).

Plate 19 Warehouses on Block G during demolition in 2006 (courtesy of David Dodwell)

6.17 Phase 3615 –21st Century Landscaping

This phase represents the present use of the site as a temporary compound and marketing suite with associated landscaping.

6.18 Borehole Survey

The deposit model identified in the borehole survey presents a similar sequence to that identified during works on Block H and elsewhere in Block G. This begins with the Vale of York formation with a phase of river silts and natural build up of sandy deposits, overlain by a Roman/Anglian phase of levelling deposits. The supposed Anglo-Scandinavian horizon is typified by the remains of timber structures and cess pits – although a later medieval date is also conceivable for these features. The cobble features (Section 5.17.3) do offer an

interesting parallel to Anglo-Scandinavian land divisions seen on Block G and H, although this would require further investigation to prove conclusively.

The medieval sequence appears to comprise the typical range of pits and dumps that has been seen across Block G and Block H (Section 5.6). This is then overlain by a series of post-medieval horticultural deposits and the subsequent buildings and surfaces of the 19th century.

The borehole survey clearly demonstrates that waterlogged material was present from approximately 2.50m BGL and below, with good preservation of timbers present as high as 2.80m BGL.

6.19 Conclusions

The results of the Block G excavation complement the archaeological sequence built up over the last 18 years of excavation in the Hungate area very well. Perhaps the most striking new development is the suggestion of Anglo-Scandinavian plots having been laid out on the west side of Hungate as well as the east. With the good level of organic preservation, it is likely that the remains of timber structures survive *in-situ* in the Block G area similar to those discovered in Block H.

In total, a four metre deep sequence of archaeology dating from the 2nd century to the present day was recovered, revealing the ever changing ways that this parcel of land on the edge of the Foss has been used over the past two millennia.

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APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Context register and sheets	128
Levels register	5
Photographic register	n/a
Sample register and sheets	9
Drawing register	1
Original drawings	78
B/W photographs (films/contact sheets)	n/a
Colour slides (films)	n/a
Digital photographs	2020
Written Scheme of Investigation	1
Report	1

Table 1 Index to archive

APPENDIX 2 – CONTEXT LIST

Context No.	Context Type	Description
36000	Deposit	Number assigned for unstratified finds.
36001	Deposit	Modern overburden within trench.
36002	Deposit	20th century concrete surface and beams.
36003	Cut	20th century concrete construction cut.
36004	Deposit	Demolition layer and 19th century yard surfaces. Same as 36015.
36005	Deposit	19th century cellar wall.
36006	Cut	19th century cellar construction cut.
36007	Deposit	Alteration to 19th century cellar wall.
36008	Cut	Cut for alteration to 19th century cellar wall.
36009	Deposit	19th century cellar construction backfill.
36010	Deposit	19th century rubble dump/spread.
36011	Deposit	Post-medieval linear backfill.
36012	Cut	Cut for post-medieval linear.
36013	Deposit	Horticultural soil. Same as 36014.
36014	Deposit	Horticultural soil. Same as 36013.
36015	Deposit	Demolition layer and 19th century yard surfaces. Same as 36004.
36016	Deposit	Clay pit backfill within 36017.
36017	Cut	Cut contains clay pit backfill 36016.
36018	Deposit	Medieval levelling/dumping.
36019	Deposit	Demolished/disturbed wall footing.
36020	Deposit	Rubble/demolition backfill within 36022.
36021	Deposit	Rubble spread.
36022	Cut	Cut contains rubble/demolition backfill 36020.
36023	Deposit	Medieval dump/levelling deposit.
36024	Deposit	Mortar/slag pit backfill within 36025.
36025	Cut	Cut contains mortar/slag backfill 36024.
36026	Deposit	Horticultural pit backfill within 36027.
36027	Cut	Cut for horticultural backfill 36026.
36028	Deposit	Shallow pit backfill within 36046.
36029	Deposit	Late medieval horticultural soil spread/dump.
36030	Deposit	Small medieval pit backfill within 36031
36031	Cut	Pit cut contains 36031.
36032	Deposit	Medieval levelling/dumping/banking.
36033	Deposit	Medieval levelling/dumping/banking.
36034	Deposit	Medieval levelling/dumping.
36035	Deposit	Medieval levelling/dumping.
36066	Deposit	Medieval levelling/dumping.
36067	Deposit	Medieval levelling/dumping.
36038	Deposit	Medieval levelling/dumping.
36039	Deposit	Medieval levelling/dumping.
36040	Deposit	Medieval levelling/dumping.
36041	Deposit	Post hole backfill within 36042.

Context No.	Context Type	Description
36042	Cut	Post hole cut contains 36041.
36043	Deposit	Post hole backfill within 36044.
36044	Cut	Post hole cut contains 36043
36045	Deposit	Levelling/dumping.
36046	Cut	Pit cut contains 36028.
36047	Cut	Large medieval pit cut contains backfills 36048, 36049, 36050, 36051, 36052, 36053, 36054 and 36055.
36048	Deposit	Organic clay pit backfill within 36047.
36049	Deposit	Charcoal pit backfill within 36047.
36050	Deposit	Silty sandy backfill within 36047.
36051	Deposit	Orange clayey backfill within 36047.
36052	Deposit	Slumping within 36047.
36053	Deposit	Stony backfill within 36047.
36054	Deposit	Charcoal pit backfill within 36047.
36055	Deposit	Sandy silty backfill within 36047.
36056	Deposit	Orangey brown clay levelling.
36057	Deposit	Orangey brown clay dump/levelling.
36058	Deposit	Orangey brown clay and cobble dump.
36059	Deposit	Orangey brown clay and cobble dump. Part of a possible Anglo-Scandanavian bank feature. Possibly the same as 36070.
36060	Deposit	Clay levelling/dump.
36061	Deposit	Clay and cobble dump. Part of a possible Anglo-Scandanavian bank feature. Possibly the same as 36071.
36062	Deposit	Clay backfill within medieval pit/post hole cut 36092.
36063	Cut	Medieval pit cut contains 36064, 36094 and 36095.
36064	Deposit	Pit backfill within 36063.
36065	VOID	VOID.
36066	Deposit	Clay backfill within medieval pit/post hole cut 36092.
36067	Deposit	Medieval orangey brown clayey sandy pit backfill within 36091.
36068	Deposit	Silty clayey levelling/dumping.
36069	Deposit	Sandy levelling/dumping.
36070	Deposit	Orangey brown clay and cobble dump. Possibly the same as 36059, a possible Anglo-Scandanavian bank feature.
36071	Deposit	Clay and cobble dump. Possibly the same as 36061, a possible Anglo-Scandanavian bank feature.
36072	Deposit	Small pit backfill within 36074.
36073	Deposit	Large pit backfill within 36075.
36074	Cut	Small pit cut contains 36072
36075	Cut	Large pit cut contains 36073
36076	Deposit	Pit backfill within 36084. Cut by 36075.
36077	Deposit	Pit backfill within 36078. Cut by 36075. Probably Anglo-Scandinavian.
36078	Cut	Pit cut contains 36077. Probably Anglo-Scandinavian.
36079	Deposit	Upper fill within medieval pit cut 36081.
36080	Deposit	Lower fill within medieval pit cut 36081.
36081	Cut	Medieval pit cut contains 36079 and 36080.

Context No.	Context Type	Description
36082	Deposit	Dump/slumping against possible bank/boundary.
36083	Deposit	Levelling dump. Same as 36058.
36084	Cut	Pit cut contains 36076.
36085	Deposit	Part of a series of dumps filling in the possible Anglo-Scandinavian bank.
36086	Deposit	A levelling or silting deposit from a possible flood event.
36087	Deposit	20th century construction backfill for concrete foundations within 36003.
36088	Deposit	19th century levelling/demolition.
36089	Deposit	19th century levelling dump.
36090	Deposit	19th century levelling dump.
36091	Cut	Medieval pit cut contains 36067.
36092	Cut	Medieval pit cut contains 36062 and 36066.
36093	Deposit	Medieval dumping.
36094	Deposit	Medieval pit backfill within 36063.
36095	Deposit	Medieval pit backfill within 36063.
36096	Cut	19th century construction/demolition cut contains 36009.
36097	Deposit	19th/20th century levelling deposit.
36098	Cut	19th/20th century demolition clearance/cut over 19th century wall 36005.
36099	Deposit	Post-Roman dumping/levelling.
36100	Deposit	CBM and mortar backfill within 36101.
36101	Cut	Pre-19th century pit cut contains 36100.
36102	Deposit	19th century construction backfill within 36006.
36103	Deposit	19th/20th century salt-glazed drainpipe and concrete.
36104	Deposit	Modern concrete surface.
36105	Deposit	Pit backfill within 36106. Possibly medieval or even late medieval in date.
36106	Cut	Pit cut contains 36105. Possibly medieval or even late medieval in date.
36107	Deposit	Pit backfill within 36108. Probably modern in date.
36108	Cut	Pit cut contains 36107. Probably modern in date.
36109	Deposit	Roman linear/gully backfill within 36112.
36110	Deposit	Roman pit backfill within 36113.
36111	Deposit	Small pit backfill within 36114. Possibly Roman.
36112	Cut	Roman linear/gully cut contains 36109.
36113	Cut	Roman pit cut contains 36110.
36114	Cut	Small pit cut contains 36111. Possibly Roman.
36115	Deposit	Small pit backfill within 36113.
36116	Cut	Small pit cut contains 36115.
36117	Deposit	Roman levelling/alluvial deposit.
36118	Deposit	Roman levelling deposit.
36119	Deposit	Probably roman sandy levelling deposit at L.O.E.
36120	Deposit	Thin horticultural deposit.
36121	Deposit	19th century horticultural pit/feature backfill within 36122
36122	Cut	19th century horticultural pit/feature cut contains 36121.

Context No.	Context Type	Description
36123	Deposit	Clay levelling/dump below possible Anglo-Scandinavian cobble bank. Same as 36060 and 36086.

Table 2 Context list

APPENDIX 3 – THE ARCHITECTURAL FRAGMENTS

BY J. M. MCCOMISH

INTRODUCTION

This assessment relates to a collection of 3 architectural fragments (AFs) recovered from the archaeological excavations at Hungate Block G (York Archaeological Trust project code 5000). The AFs were of mid-14th century or later date and probably originated from the nearby Carmelite Friary.

METHODOLOGY

The collection was recorded to a standard YAT methodology (McComish 2015) whereby the fragments are numbered in a sequence for the site, starting at 1, though in the case of the Hungate project, AFS 1–179 had already been allocated, so the numbering here began at Af180. The numbered AFs are recorded on individual pro-forma record sheets which detail the project code, the context number, AF number, the stone type, a simple keyword identifying the form (such as jamb or voussoir), the surviving dimensions (height, width and thickness), a free text description, a sketch (with any relevant measurements noted on the sketch) and any other relevant information. If rubbings of tool marks or 1:1 tracings of the profile are required, these are done on a separate blank sheet of paper which also details the site code, context and AF number. The data on the pro-forma is copied into and stored on YATs internal computer system which is backed up daily to prevent data loss.

DISCUSSION

The AFs comprised three identical moulded jambs, all in magnesian limestone catalogues in Table 1. Af180 is illustrated in Plate 20 as a representative example. The style of the jambs is suggestive of Perpendicular Gothic architecture dating from c.1350 or later. All three were badly damaged and had clearly been reused as thick render was present above the moulded surfaces. They were recovered during the machine clearance of the site and are unstratified.

Plate 20 AF180

In addition, a stone trough (Plate 21) was present which had been re-used in a 19th-century wall footing (Context 36005). This was not brought off site for detailed recording as it was insufficiently diagnostic to obtain a close date, though it was probably medieval.

Plate 21 Stone trough from Context 36005

RECOMMENDATIONS

The collection of AFs is relatively small and offers little potential for further research. If a publication is envisaged, the AF assessment text could be adapted to form a publication report, though time could be required for comparative research into the Carmelite Friary.

None of the AFs offer any potential for museum display.

RETENTION/DISCARD

For excavations with the City of York, YAT routinely adopts a rigorous record and discard policy, to reduce the volume of retained examples. As these three AFs were identical only the best preserved example, AF180 was retained. The remaining Afs were discarded on site.

REFERENCES

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AF no	Context	Date	Description
180	36000	Mid14th +	Moulded jamb. Magnesian limestone block. Part of three faces surviving (F1–3) F1–2 re the moulded exterior surfaces of the jamb at right angles to one another. F3 the side within the thickness of the wall. Both ends broken off. F1 has a chamfer, rebate, chamfer, quirk, roll and hollow roll. Thick mortar on F1 showing re-use. Fine drag tooling on F1. F3 has coarse striated tooling.
181	36000	Mid14th +	Moulded jamb. Magnesian limestone block. Part of three faces surviving (F1–4) F1–2 re the moulded exterior surfaces of the jamb at right angles to one another. F3 the side within the thickness of the wall. F4 the base or top. F1 has a chamfer, rebate, chamfer, quirk, roll and hollow roll. Thick mortar on F1 showing re-use. Fine drag tooling on F1. F3 has coarse striated tooling.
182	36000	Mid14th +	Moulded jamb. Magnesian limestone block. Part of three faces surviving (F1–5) F1–2 re the moulded exterior surfaces of the jamb at right angles to one another. F3 the side within the thickness of the wall. F4–5 the base and top. F1 has a chamfer, rebate, chamfer, quirk, roll and hollow roll. Thick mortar on F1 showing re-use. Fine drag tooling on F1. F3 and F5 has coarse striated tooling.

Table 3 Architectural Fragment catalogue

APPENDIX 4 – POTTERY ASSESSMENT

BY ANNE JENNER

INTRODUCTION

A total of 159 sherds were retrieved from 23 Contexts and another four sherds were obtained from three boreholes (see Tables 1 and 2 below). They date from the Roman period to the 19th century. There appears to be a hiatus in the ceramic timeline during the Anglian and early post-medieval periods. All sherds are from domestic wares such as jugs and jars and some are sooted, suggesting that they were used for warming or heating foodstuffs. Many sherds are broken into relatively small pieces. The fairly low levels of abrasion may suggest that they may not have moved far from where they were initially deposited. Equally sherds broken into such small pieces do occur in tilled soils and are sometimes used to break up clay deposits.

METHODOLOGY

The sherds were examined on a context by context basis. They were grouped into fabric and forms and the number of sherds from each type recorded (see Tables 1 and 2 below).

DISCUSSION

The ceramic assemblage will be discussed chronologically, by period.

Roman

The Roman pottery assemblage consists mainly of late 2nd and early 3rd century types with no evidence of later calcite and shell tempered wares. The Roman assemblage thus may equate with Monoghan's Ceramic Period 2 (Monaghan 1997, 839). The Roman assemblage includes locally made Ebor and grey types as well as colour coated beakers which are probably from the Nene Valley area. Samian wares are the only foreign imports, though it is not clear at this stage of analysis which part of Gaul the Samian originated. Added to this, the sherds are relatively small, abraded and no maker's stamps are present.

Anglo Scandinavian/Early Medieval

The sherds from this period include 10th century Torksey wares and a tubular spout from an early glazed pitcher or socketed bowl which are thought to have been in circulation for a limited period in the 10th century, but are quite rare (Mainman 1990, 445–462). A Stamford 'A' sherd is a type which is in currency during the 11th century, and one jar with a hooked rim may be an 11th century type (C36064). The latter is not a common find on excavations in York. A number of fairly un-diagnostic grey wares, including jar sherds with sagging bases, may span the Anglo-Scandinavian and early medieval periods.

Medieval

There are only a handful of 12th and early 13th century wares including gritty, splashed and York glazed types. Late 13th century mottled green glazed Brandsby jugs (36018; 505) are the most common medieval pottery type, though some Humber type and Walmgate wares may have been in use during the 14th and 15th centuries.

Post-Medieval

There are no 16th century wares, suggesting that limited or no activity involving ceramics occurred at this time. Very little 17th century material is present either, though a sherd of Ryedale type and some post-medieval earthen wares were retrieved from one Context (3103). Only two contexts (36011 and 36021) have 18th-century black glazed wares within them and only one context contains industrially produced wares (36000). These late 18th- and 19th -century types include transfer printed, terracotta and cream ware (C 36000).

Imported Wares

Only one context produced evidence of foreign imports, with two sherds from a Siegburg jug found within Context 36067. Siegburg was produced between 1300 and 1550, although this would appear to be an earlier example. Evidence of regional imports comes from the east of

the County; East Yorkshire/Humberside and Lincolnshire. These wares include Humber ware which may have come from any of the known production sites in East Yorkshire, but may also have been produced at the kilns operating at Walmgate and Blue Bridge Lane in York (Mainman and Jenner 2013, 1275–1282). The Lincolnshire products include 10th century Torksey and similar grey wares, as well as one sherd of Stamford 'A' ware which remained the predominant type from the mid 10th to the end of the 11th century' in Stamford (Kilmurry 1980, 133).

CONCLUSION

The majority of the pottery sherds retrieved from excavations at Hungate Block G provide a fairly typical slice through York's ceramic history. Despite this, there are two major gaps; in the Anglian period as well as the early post-medieval period. There are no Anglian shelly wares or 16th-century Cistercian wares for example. This may be due to truncation on site, or to limited activity during these times. It is hard to make a convincing argument about the absence of material from these periods without more evidence.

RECOMMENDATIONS FOR FURTHER WORK.

There are no recommendations for further work, though more precise dating may be possible in some cases, with a little further investigation. Of particular interest are the hooked rimmed jar (36064), Anglo Scandinavian/early medieval grey wares (C36073) and the possible Lincoln type (C 504).

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Vince, A. and Jenner, A. 1991 in Vince (ed), The Pottery in *Aspects of Saxon and Norman London2: Finds and Environmental Evidence*, London and Middlesex Archaeological Society Special Paper **12**, 19-119.

Context Number	Spot date	Number of sherds	Details
36117	Roman	3	3 Roman Ebor type abraded.
36118	Roman	18	1 colour coated beaker base, 1 Samian. Medium/large sherds, 2 Roman white ware mortaria, 2 colour coated beaker with oxidised fabric, 1 Ebor mortaria, 7 Ebor bowl, 1 colour coated beaker, 1 Samian, 1 Roman grey ware jar rim, 1 Roman oxidised bowl base.
36110	Roman	1	1 Ebor type base abraded.
36109	Roman	4	1 colour coated beaker scrap with oxidised fabric, 1 Grey ware with white concretion inside, 1 Roman red ware base, 1 Roman white ware.
36045	10th century	1	1 Torksey type ware. Small sherd.
36086	Roman	1	1 Samian bowl rim.
36099	Roman	7	2 Roman colour coated indented beaker with vertical applied scales, 1 Samian, 4 Ebor type abraded small.
36061	Roman	1	1 Samian bowl.
36071	Roman	1	1 Roman oxidised bowl rim.
36073	Anglo Scandinavian and Roman residual	13	2 Roman grey ware, 8 Anglo-Scandinavian grey ware with dark surfaces and light core, 1 coarse oxidised Anglo-Scandinavian jar rim, 1 Roman hard buff grey ware, 1 Roman oxidised abraded coarse ware jar.
36037	12th/13th century	1	1 Splashed ware with moderately gritted white fabric and reduced core.
36040	11th century	2	1 Torksey type, 1 Stamford 'A' jug with light greenish yellow, watery glaze.
36018	Late 13th/early 14th century with intrusive post-medieval	8	5 Brandsby jug, 1 Humber jug, 1 terracotta plant pot rim (intrusive), 1 Oxidised gritty ware jar.
36018	Late 13th century	42	38 Brandsby jug with mottled green glaze, 1 York glazed type, 1 York ware jar

Context Number	Spot date	Number of sherds	Details
			base sooted, 2 Grey ware rim with white core.
36028	Anglo Scandinavian	10	1 Course oxidised mercury jar profile with white slip under green glaze, 9 Anglo-Scandinavian grey ware. All small sherds.
36030	10th century	1	1 Early glazed type tubular spout.
36033	12th century	1	1 Splashed ware with fine reduced fabric.
36053	14th century with Anglo Scandinavian material	5	3 Torksey jar including rims from 2 different vessels, 1 Walmgate drinking jug body, 1 Brandsby type squat jug.
36055	11th century	3	2 White gritty ware, 1 York ware sooted.
36064	11th century	1	1 Buff white coarse ware jar hooked rim sooted.
36067	Late 13th century	3	2 Siegburg stone ware jug, 1 White gritty jar sooted.
36080	Roman	2	1 Roman grey ware, 1 Trier colour coated with black surfaces and oxidised fabric.
36020	Post-medieval	5	1 Black glazed flanged bowl, 1 Ceramic building material roof tile, 2 post-medieval oxidised pancheon/deep bowl with white concretion, 1 post-medieval earthen ware closed form with green glaze. Mostly large sherds.
36121	Post-medieval	2	1 terracotta plant pot base, 1 Black glazed fine oxidised earthenware. Large sherds.
36013	Post-medieval with medieval	19	1 Humber ware jug neck and body with 3 incised horizontal lines, 1 Brandsby ribbed strap jug handle with mottled green glaze, 1 Walmgate drinking jug base, 1 post-medieval earthenware with light green brown glaze and fine oxidised fabric, 1 post-medieval bowl rim with fine oxidised fabric and yellow glaze, 1 Ryedale type reduced jug rim with pinched lip, 1 Splashed ware jar with moderately

Context Number	Spot date	Number of sherds	Details
			gritted oxidised fabric sooted, 9 Brandsby jug sooted, 1 Yorkshire red ware jug rim, 1 York white ware with applied rib, 1 finely gritted lightly reduced jug.
36000	Late 18th/19th century	4	1 Cream ware open form, 1 Brandsby jug rod handle, 1 slipware posset with brown pellet decoration and buff fabric, 1 transfer printed open form with willow pattern.
106	12th/13th century	2	From borehole 1. 2 Splash glazed ware with coarse reduced fabric.
504	Late 11th century	1	From borehole 5. 1 Lincoln type jug with moderately gritted lightly oxidised fabric and thick yellow glaze.
505	Late 13th century	1	From borehole 5. 1 Brandsby jug base reduced core interior surface mottled green glazed basal edge.

Table 4 Pottery quantification

APPENDIX 5 – THE CERAMIC BUILDING MATERIAL

BY J. M. MCCOMISH

INTRODUCTION

This assessment relates to 7.135kg of ceramic building material (CBM) recovered from the archaeological excavation at Hungate Block G, including CBM from Borehole 2 (York Archaeological Trust project code 5000). The CBM ranged in date from Roman to post-medieval, though the majority of the collection in terms of volume was of medieval date.

METHODOLOGY

The collection was recorded to a standard YAT methodology (McComish 2014) whereby each sherd is individually recorded on a pro-forma sheet which details the project code, the context number, the weight in grams, the fabric type, the surviving complete dimensions (length, width, thickness, flange height) and any other relevant information (surface marks, glazes, unusual features etc.). A question mark is placed after the form name if the identification is

uncertain, for example 'Imbrex?', while the form of non-standardised sherds is listed as 'Other'. The fabric is determined by comparing the sherd to a York fabric reference collection held by York Archaeological Trust (YAT).

RESULTS

The various forms present are summarised by historical period on Table 5, while a summary of the forms present in relation to context is given on Table 6.

Roman

The Roman CBM accounted for 16.4% of the total volume of CBM from the site. The forms present included roof tiles (*tegulae* and *imbrices*), box flue and fragments of indeterminate form (termed Roman brick). The Roman material was on the whole badly shattered, small fragments, and no complete breadth or length measurements survived.

A single fragment of tegula flange was present but no original dimensions survived. There was also one example of an imbrex which was 17mm thick. There were two box flues present, which were 12mm and 17mm thick respectively. In one case part of two sides, one with the partial remains of a vent was present, while the second example had combed keying on one side. The indeterminate sherds included one with a reduced core. Several of the fragments were abraded. The Roman CBM was typical for York as a whole in terms of fabrics and dimensions present.

Medieval

Medieval CBM accounted for 55.9% of the total volume of CBM from the site. The forms present included roofing tiles 13–16th century date (peg, plain and ridge) and bricks of 14–16th century date. With the exception of the more robust bricks no breadth measurements survived and no length measurements survived. The single example of a peg tile had a square peg-hole 11mm^2. The Three plain tiles all had smoothing lines parallel to one edge. The single sherd of ridge tile was 15mm thick. The three medieval bricks were 42–49mm in thickness two examples) and 128–147mm in breadth (two examples). Medieval bricks were made in sanded moulds resulting in a sanded base and edges; two of the bricks at the site had sand of medium coarseness while the third brick had no surviving edges.

The medieval CBM listed above was in sizes and fabrics typical for York as a whole in terms of fabrics and dimensions, with the exception of the brick at 147mm wide, which is slightly wider than the norm for York as a whole.

Post-Medieval

The post-medieval CBM accounted for 27.7% of the total volume of CBM from the site and comprised two sherds of pan tile of 17th century or later date which were 16–17mm thick, and a single example of a slop-moulded brick 50mm thick and 147mm wide.

The post-medieval CBM was in sizes and fabrics typical for York as a whole in terms of fabrics and dimensions.

SUMMARY

Overall, the collection of CBM was typical for York in terms of the forms, fabrics and dimensions seen. The collection of CBM has little potential for further research, mainly being of use to provide dating evidence for the various contexts seen.

If a publication is envisaged for this site, this CBM assessment text could be adapted to form a publication report. No illustrations would be required given the mundane nature of the material in question.

RETENTION/DISCARD

For excavations within the City of York, YAT routinely adopts a rigorous discard policy. In the case of this site, none of the material was retained as far better examples of any given form have already been retained for the Hungate project as a whole.

Period	Form	No. Of sherds	Weight in Grams	% of Total Weight
Roman	Brick	14	895	12.5
	Flue	2	150	2.1
	Imbrex	1	75	1.1
	Tegula	1	50	0.7
Medieval	Brick	3	2290	32.1
	Peg	1	450	6.3
	Plain	3	1150	16.1
	Ridge	1	100	1.4
Post-medieval	Brick	1	1450	20.3
	Pan	2	525	7.4

Table 5. CBM by form in relation to period

Context	**Dating**	**Forms present**
206	1–4th	Roman brick
36013	17th+	Pan, Ridge
36016	17th+	Medieval brick, pan, post-medieval brick, peg
36018	14–16th	Medieval brick, plain
36061	1–4th	Roman brick, tegula
36072	1–4TH	Roman brick
36073	1–4TH	Roman brick
36086	1–4th	Flue, Roman brick
36099	14–16th?	Medieval brick?
36109	1–4th	Roman brick

Context	Dating	Forms present
36117	1–4th	Roman brick
36118	1–4th	Imbrex, Roman brick

Table 6 CBM in relation to context

APPENDIX 6 -THE STONE FLOOR TILES

BY J. M. MCCOMISH

Two small fragments of stone were present, one of fine grained sandstone weighing 100g and one of micaceous sandstone weighing 200g, from contexts 36099 and 36118 respectively. These had worn upper surfaces suggestive of use as floor tiles. They are probably Roman in date.

APPENDIX 7 – WRITTEN SCHEME OF INVESTIGATION

YORK ARCHAEOLOGICAL TRUST

BLOCK G, HUNGATE DEVELOPMENT, YORK

RISK ASSESSMENT AND METHOD STATEMENT

Document Number 2018/ 31 February 2018

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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KEY PROJECT INFORMATION

Project Name	Block G, Hungate Development, York
YAT Project No.	5000
Report status	Draft
Type of Project	Borehole Survey and Archaeological Condition Assessment
Client	HYRL
Document Number and Date	2018/31

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
1 Draft	AJ	22/2/18	IDM	01/03/18	IDM	01/03/18

1 INTRODUCTION

This Method Statement derives from the Written Scheme of Investigation by York Archaeological Trust (Appendix 1) and incorporates a Risk Assessment conducted by York Archaeological Trust (YAT) (Appendix 2). The programme of works is scheduled to commence in the week beginning February 26th 2018 with a borehole survey followed by a four week excavation commencing March 5th 2018.

2 METHODOLOGY

The site works consist of the excavation of eight boreholes and the installation of two groundwater monitoring points, alongside a 9m x 10m trench excavated to a maximum depth of 4m BGL. The York Archaeological Trust Written Scheme of Investigation (Appendix 1) and York Archaeological Trust Risk Assessment (Appendix 2) form the bases of the Method of Works and contain relevant illustrations.

Mechanical excavation

A series of eight boreholes will be drilled under archaeological supervision (See Appendix 1, Figure 3). Groundwater monitoring points will be installed on two boreholes (MP1 and MP2) while the remainder will be backfilled upon completion (BH1-BH6).

A trench measuring 10m x 9m will be initially stripped of overburden using a 360˚ tracked mechanical excavator fitted with a 1.80m wide toothless ditching bucket (See Appendix 1, Figure 3). To maintain the integrity of the trench edges, the trench will be stepped in by one metre for each metre of excavated depth. The south-east side of the trench which will be cut as a shallow ramp to a depth of 2.00m, allowing safe access to the excavation area.

As the trench is being excavated to assess the condition of deeply buried waterlogged deposits, a stepped trench will allow for a two square metre area at a depth of 4m BGL. The later archaeological sequence of the area is well understood as it has been extensively investigated elsewhere within the Hungate development. To expedite access to deeper deposits, the upper sequence of post-medieval and later archaeology will be excavated mechanically.

Mechanical excavation will continue until medieval archaeology is encountered. If the same density of intercutting medieval pitting is encountered as that observed on the neighbouring Block H excavation, the upper part of this sequence will also be excavated mechanically.

Archaeological supervision shall be maintained throughout machine excavation and a brief photographic record will be made of material that is excavated mechanically.

An archaeological site induction will be provided to all YAT staff by the YAT Site Manager.

Staff shall maintain a safe distance from plant and observe safe working practices as defined in the YAT Risk Assessment.

When undisturbed medieval archaeological deposits or features are identified, excavation shall proceed by hand.

If any below ground deposits that may be contaminated are encountered excavation of that trench will cease and the client will be contacted for further instruction. The machine bucket will be cleaned thoroughly before any further excavation takes place.

Hand excavation

Suitable PPE and lone-working practises shall be observed.

All workers must be within hearing distance of other workers.

As the excavation will involve working at considerable depth, no fewer than two members of staff will be in the trench at all times. Lone working will be strictly prohibited.

General excavation practice

As described above, the depth of the trench will be mitigated by a combination of stepping and cutting at a batter. Staff will be reminded to take great care when entering and exiting the trench.

The excavation area will be inspected for stability at the beginning and end of each working day using the YAT Site Checklist (Appendix 3) and regular monitoring shall take place throughout each working day. If the Site Manager suspects that areas are unstable no staff shall enter those areas until appropriate action had been taken.

The whole excavation area will be fenced with orange barrier mesh secured with road pins, until they have been recorded and backfilled.

Deep excavations will be backfilled by the client as soon as possible to minimise the risk of falls.

Spoil will be stockpiled at a safe distance from the trench. Spoilheaps will be checked daily.

Volunteers

York Archaeological Trust works closely with a number of volunteers who bring a number of useful skills and benefits to projects that are suitable for volunteer involvement.

If available, a volunteer will carry out a metal detector survey of the spoil heap. This is an additional piece of work aiming to increase small finds recovery and does not form part of the WSI. Due to the nature of the survey, it will not be possible for the detectorist to wear steel toe capped boots. Boots with sufficient ankle support will be worn, the detectorist will not enter the trench and they will be supervised by a member of YAT staff at all times.

If available, a volunteer will capture low level aerial photographs using a camera attached to a telescopic pole. This is an additional piece of work and does not form part of the WSI. Additionally, 360° degree photography may be undetaken by an external sub-contractor, who will wear appropriate PPE on site and be supervised at all times by YAT staff. If this service is procured the Risk Assessment will be updated accordingly.

All volunteers and external staff will receive full site inductions from the site manager, will wear appropriate PPE and will be supervised by a member of YAT staff at all times.

HYRL will be notified of the involvement of volunteers in advance and their participation will only take place with the client's consent.

3 PERSONNEL

Project Manager: Ian Milsted/Ben Reeves

Site Manager: Arran Johnson

4 EQUIPMENT

Mechanical plant

1 x 13 ton 360˚ tracked excavator.

Site welfare facilities

Mobile all in one self contained welfare unit.

Hand tools

Shovels, mattocks, hoes, trowels, wheelbarrows, buckets.

5 PERSONAL PROTECTIVE EQUIPMENT

Safety helmets

Hi-visibility vests, jackets, trousers

Gloves

Safety boots – toe and midsole protection. No rigger boots are permitted.

Eye protection

6 EMERGENCY PROCEDURES

In the event of an accident the emergency services (999/112), the YAT Project Manager and the Principal Contractor will be contacted immediately.

HOSPITAL

The nearest hospital is: York Hospital, Wigginton Road, York, North Yorkshire, YO31 8HE

7 WORKING HOURS

08:00 – 16:00 Mon-Fri

8 SAFETY PROCEDURES

YAT Safety Procedures are set out in the YAT Risk Assessment (Appendix 2).

The YAT risk assessment shall form the basis of the archaeological site induction that shall be undertaken by all staff. The induction for YAT staff will be provided by the Site Manager.

9 HAZARDS

The hazards identified below are itemised and control measures provided in the YAT Risk Assessment (Appendix 2).

- Personal Injury
- Lone Working
- Public Access
- Slips, trips etc
- Manual Handling
- Hand tools and equipment usage
- Weather
- Hygiene (Weils disease, vermin)
- Vegetation
- Spillages
- Mechanical Plant
- Live services
- Working at depth

The risk assessment will be reviewed at the beginning and end of each working day via the YAT Site Checklist (Appendix 3) to take in to account any changes in site conditions and working, in particular in relation to interactions with other contractor activities. Variations and additions to this Risk Assessment shall be added by the Site Manager and communicated to all staff immediately following the update.

APPENDIX 1 – WRITTEN SCHEME OF INVESTIGATION

YORK ARCHAEOLOGICAL TRUST

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EXCAVATION

Site Location: **Block G, Hungate Development, York, YO1 7NZ**

NGR: **SE 60663 51818**

Proposal: **Residential and commercial development**

Planning ref: **17/03032/REMM**

Prepared for: **Hungate (York) Regeneration LTD.**

Document Number: **2018/29**

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
1	AJ	15/02/18	PAC	23/02/18	IDM	01/03/18

1 SUMMARY

1.1 Hungate (York) Regeneration Ltd (HYRL) are due to develop Block G of the Hungate area in central York (SE 60663 51818). The scheme will include the erection of an eight storey building containing 196 residential units, 459m² of ground floor commercial space and landscaped gardens, access and associated infrastructure.

1.2 The archaeological mitigation strategy for Block G was originally outlined in the Research Design and Scheme of Archaeological Investigation 3rd Revised Version (issued August 2005, YAT 2005/41), it was updated in Chapter J Archaeology of the Hungate Urban Neighbourhood Revised Masterplan Environmental Statement (ES) (issued July 2015, document 50370/SSL/SP) and revised for the Addendum to the ES (issued in March 2017, document 50370/03/SSL/SP).

1.3 This Written Scheme of Investigation (WSI) has been prepared in response to specific aspects of the Mitigation Measures outlined in the July 2015 and March 2017 documents. The work will be carried out in accordance with the Mitigation Measures and their intended Residual Effect outcomes. This WSI will be reviewed and signed off by the City Of York Council's Principal Archaeologist before implementation.

2 SITE LOCATION & DESCRIPTION

2.1 The proposal site is at Block G, Hungate Development, York, YO1 7NZ (SE 60663 51818, Figure 1). Block G is a 2514m² plot of land which is currently occupied by the HYRL marketing suite, an associated landscaped garden, and a temporary HYRL compound occupying the southern third of the site, facing on to Carmelite Street. The site sits on a gentle slope, falling west-east from around 10.20m AOD to 9.20m AOD.

2.2 The superficial geology of the area consists of riverine alluvium and the Vale of York Formation incorporating clay, sand and gravel. The superficial geology overlies the Sherwood Sandstone Group (1:50 000 scale superficial deposit and bedrock geology descriptions, Geology of Britain viewer:

http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed February 2018).

3 DESIGNATIONS & CONSTRAINTS

3.1 Block G is situated within York's city centre Area of Archaeological Importance, although it is not within the Historic Core Conservation Area.

4 ARCHAEOLOGICAL INTEREST

4.1 The historical and archaeological background has been covered in detail in the Updated Archaeological Baseline Desk Based Assessment (Connelly and Johnson 2015) and in Chapter J of the Hungate Urban Neighbourhood Revised Masterplan ES (2015). The following brief overview is taken from these reports:

4.2 Due to the built-up nature of the plot at the start of the 21st Century and issues of access, Block G is presently the development block with the weakest archaeological baseline data.

Since 2000, only a limited amount of excavation has been carried out in the area (Figure 2). Trenches 19 and 20 of YAT's 2000 evaluation of the Hungate area provided a keyhole deposit model for Block G (Macnab and McComish, 2000) and two trenches were excavated in 2012 as YAT's Archaeology Live! training excavation investigated the 19th and 20th century horizon (Savine, forthcoming).

4.3 Prehistoric (30,000BC to 43AD)

To date, no Prehistoric archaeology has been observed in Block G.

4.4 Roman (43AD – 410AD)

A securely dated sequence of Roman deposits was encountered in Trench 20 of the 2000 evaluation. The trench was located immediately to the east of Garden Place, within the central segment of Block G, and observed Roman archaeology from c.4.05m AOD to c.5.80m AOD that is suggestive of riverside archaeology and land reclamation. The lowest deposit, between c.4.05m AOD and c.4.36m AOD, contained 2nd/3rd century Roman pottery and would appear to represent deposits forming in a former channel of the River Foss (YAT 2015, 9).

4.5 Early Medieval (410 – 1066)

To present, only Trench 20 of the 2000 evaluation has successfully identified Early Medieval archaeology. The earliest feature was a wicker lined pit with a highly organic fill that was exposed at a depth of 5.80m AOD. The high level of organic survival suggests that anoxic conditions may be present at this depth. Overlying the pit were a sequence of organic deposits of 10th-14th century date that raised the contemporary ground level to 6.90m AOD. This appears to have been a deliberate attempt to raise the ground level (YAT 2015, 9).

4.6 Later Medieval (1066 – 1540)

The Archaeology Live! training excavation in 2012 focused primarily on 19th and 20th century structures and deposits, however, two small sondages were excavated and identified the uppermost of what appeared to be a sequence of later medieval dumping from 8.20m AOD. Trench 19 of the 2000 evaluation exposed 13th-14th century deposits from 8.37m AOD to the trench's maximum depth of 8.17m AOD. In Trench 20, a complete section was excavated through the medieval horizon. In this part of the site, close to Garden Place, later medieval archaeology was present between 5.80m AOD and 7.80m AOD. No structural remains of the Carmelite Friary that occupied the site between 1295 and 1538 have yet been observed in Block G, although Trench 20 was successful in identifying deposits that would have been contemporaneous (YAT 2015, 9-10).

4.7 Post-Medieval to Modern (1540 – Present)

A consistent post-medieval sequence has been observed across much of the Hungate development, including Block G. Between the late 16th century and the early 19th century, much of the area was open space and primarily used for horticulture. A 0.50m thick layer of dark, humic soil relating to this period was identified in the 2012 training excavation at a depth of 8.69m AOD. Over the 19th and 20th centuries, this horticultural soil was built over by a series of domestic buildings and yards and their associated services and, in the 2012 excavation, this raised the ground level to between 9.80m AOD and 9.20m AOD. Trenches 19 and 20 of the 2000 evaluation produced similar results, with post-medieval to modern

features and deposits located from 8.37m AOD and 7.80m AOD respectively (YAT 2015, 10).

5 AIMS AND OBJECTIVES

5.1 The proposed development works in Block G are scheduled to be less intrusive than those elsewhere on Hungate, however, as the archaeological resource is relatively poorly understood in this area, a scheme of investigation has been agreed upon between HYRL and the City of York Council Principal Archaeologist John Oxley. This investigation will include a borehole survey of the site and a 9m x 10m evaluation trench.

5.2 The aim of the borehole survey is to provide a deposit model for the site. This deposit model will assist in understanding how the topography of the site has developed and to what depth archaeological deposits are present. The deposit model will assist in managing the Residual Effects that the forthcoming development works will have upon the archaeological resource.

5.3 The purpose of the evaluation trench is to provide a more detailed assessment of both the nature and condition of the archaeological resource. Previous phases of the Hungate investigation have identified areas of well-preserved, waterlogged archaeology and at present the condition of potentially similar deposits in Block G is not adequately understood. The condition assessment will also aim to assess the impact that neighbouring 20th and 21st century development has had on this waterlogged horizon.

5.4 The evaluation area will provide the most comprehensive sample of the archaeology of Block G to date. This will allow for comparison with the deposit model of the rest of the Hungate excavation.

6 EXCAVATION METHODOLOGY

Borehole Survey

6.1 A scatter of eight boreholes will be spread evenly across the site (Figure 3). These will be excavated to a depth of up to 10m BGL (until natural deposits are encountered) and will be monitored archaeologically. Monitoring points will be installed in two of the boreholes (MP1 and MP2, Figure 3) to monitor the long term effects of the development on the underlying hydrology. The remaining boreholes (BH1-6, Figure 3) will be backfilled immediately upon completion.

Evaluation Trench

6.2 A north-west/south-east aligned trench measuring 9m x 10m will be located to the southeast of the Hungate marketing suite. The trench will be laid out using a GPS unit working to an accuracy of no less than +/-100mm. The trench and boreholes will be locatable on a 1:2500 Ordnance Survey map.

6.3 The evaluation area is currently in use as a site compound for ongoing construction works elsewhere on the Hungate development. The present surface is a mixture of concrete and asphalt hard standing and soil and rubble overburden. This present surface will be removed using a 360˚tracked excavator equipped with a toothless bucket.

6.4 As the primary aim of this excavation is to assess the nature and condition of the full archaeological sequence and provide a better understanding of the deeply buried medieval and earlier horizons, the upper deposits, most likely dating to between the late 16th and mid-20th centuries, will be removed under fully supervised watching brief conditions. It is anticipated that the uppermost archaeological sequence will be typified by 18th-19th century yards and buildings overlying a substantial layer of horticultural soil that was laid down between the late 16th and early 19th centuries. As archaeology of these periods has been investigated in detail across neighbouring blocks within the development zone and the character/nature of this archaeology is well understood, this material will be machine excavated following the creation of a suitable photographic and written record.

6.5 If the archaeology of Block G follows the broad trends observed elsewhere on the Hungate development, a sequence of densely intercutting later medieval pits will be present beneath the post-medieval horticultural soil. In this instance, machine excavation will remove the upper extent of this sequence, which has already been comprehensively investigated in the neighbouring Block H excavation (Kendall 2009), to help define the stratigraphic series. Machine excavation will cease when relatively undisturbed medieval archaeology is exposed and the stratigraphic sequence understood. Hand excavation will be carried out from this point. In the event of an unexpected archaeological sequence being present, the machining strategy will be adapted following consultation with HYRL and CYC Principal Archaeologist, John Oxley.

6.6 The trench will be excavated to a maximum depth of 4.00m BGL (approx. 5.40m AOD) or to the top of natural geological deposits. To prevent collapse, the trench will be stepped in by 1m for every 1m of excavated depth. This will allow for a 2.00m square area at the base of the trench. To facilitate safe access, the south-east side of the trench will be ramped to a depth of 3.00m BGL.

6.7 Excavated material will be stockpiled in a safe and suitable location on-site. Where possible, all features will be 100% excavated.

7 RECORDING METHODOLOGY

7.1 A site grid and several benchmarks will be laid out using a GPS unit following completion of machine excavation and will form the basis of all site records.

7.2 Unique context numbers will be assigned to all archaeological contexts. Each context will be described in full on a pro forma context record sheet in accordance with the accepted context record conventions. All context numbers will begin with the prefix 36.

7.3 Archaeological contexts will be planned at a scale of 1:20. Cross-sections of features will be drawn to a scale of 1:10 or 1:20 depending on the size of the feature. Two complete sections of the full stratigraphic sequence revealed by the trench elevations will be drawn. All drawings will be related to the Ordnance Datum. Where it aids interpretation, structural remains will also be recorded in elevation. All drawings will be drawn on inert materials. All drawings will adhere to accepted drawing conventions

7.4 Digital photographs of archaeological deposits and features will be taken. This will include general views of entire features and of details such as sections as considered necessary. 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 if relevant. 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.

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 will 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 professional judgement and systematic methodologies.

7.9 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.

7.10 Despite the proximity of significant industrial archaeology on Block F (Johnson 2017), Block G is unlikely to contain similar material. 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).

7.11 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.

7.12 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 7.15) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.13 Where a licence is issued, all human skeletal remains will 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 SPECIALIST ASSESSMENT

8.1 The stratigraphic information, artefacts, soil samples, and residues will be assessed as to their potential and significance for further analysis and study. The material will be quantified (counted and weighted). Specialists will undertake a rapid scan of all excavated material. Ceramic spot dates will be given. Appropriately detailed specialist reports will be included in the report.

8.2 Materials considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration will be given to possible investigative procedures (e.g. glass composition studies, residues on or in pottery, and mineral-preserved organic material). Allowance will be made for preliminary conservation and stabilization of all objects and a written assessment of long-term conservation and storage needs will be produced. Once assessed, all material will be packed and stored in optimum conditions, in accordance with Watkinson and Neal (1998), CIfA (2008) and Museums and Galleries (1992).

8.3 All finds will be cleaned, marked and labelled as appropriate, prior to assessment. For ceramic assemblages, any recognised local pottery reference collections and relevant fabric Codes will be used.

8.4 Allowance will be made for the recovery of material suitable for scientific dating and contingency sums will be made available to undertake such dating, if necessary. This will be decided in consultation with John Oxley, Principal Archaeologist, CYC.

9 REPORT & ARCHIVE PREPARATION

9.1 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

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

9.3 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.

9.4 Where appropriate, the provision for the publication of results, as outlined in Research Design and Scheme of Archaeological Investigation 3rd Revised Version (YAT 2005), will be made.

9.5 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, will grant a licence to the City 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 will be resolved between the client and the archaeological contractor before completion of the work. EIR requirements do not affect IPR.

9.6 Upon completion of the project an OASIS form will be completed at http://ads.ahds.ac.uk/project/oasis/

10 HEALTH AND SAFETY

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

10.2 A Risk Assessment & Method Statement will be prepared prior to the start of site works.

11 TIMETABLE & STAFFING

11.1 The timetable will be as agreed with the client. At time of writing the excavation is due to commence on Tuesday 6th March 2018 and proceed for 4 weeks. The boreholes are currently scheduled for 6th - 7th March 2018. The trench will be backfilled by the client after the excavation is complete in consultation with the CYC Principal Archaeologist.

11.2 Specialist staff available for this work are as follows:

- Human Remains - Malin Holst (York Osteoarchaeology Ltd)
- Palaeoenvironemtal remains – PRS Ltd

- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Pottery Researcher - Anne Jenner
- Finds Officer – Nienke Van Doorn
- Archaeometallurgy & Industrial Residues – Dr Rod Mackenzie & Dr Roger Doonan
- Conservation – Ian Panter

12 MONITORING OF ARCHAEOLOGICAL FIELDWORK

12.1 As a minimum requirement, the CYC Principal Archaeologist, John Oxley 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 the CYC Principal Archaeologist 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 the CYC Principal Archaeologist.

13 COPYRIGHT

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For the latest Historic England guidance documents see:

https://historicengland.org.uk/advice/latest-guidance/

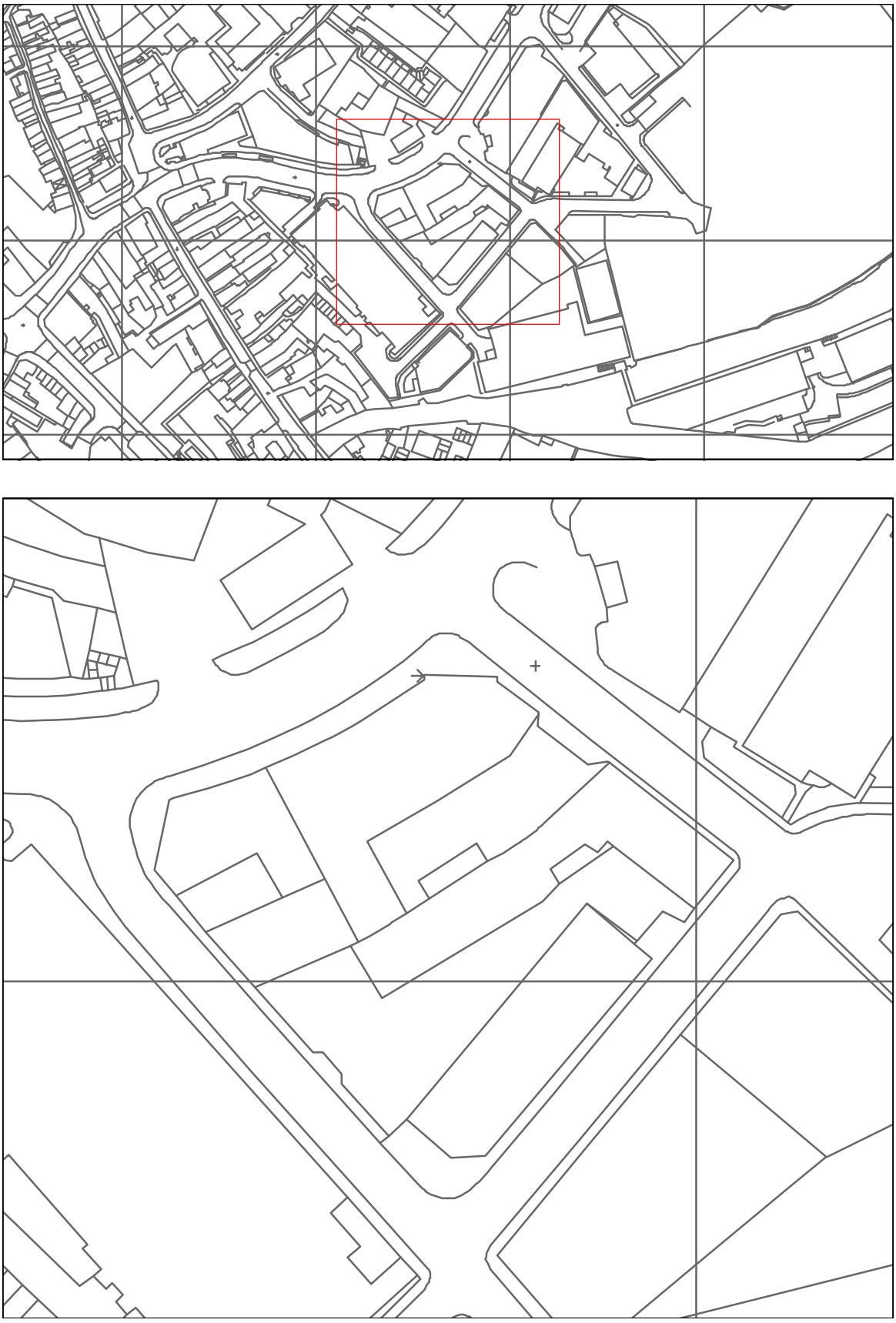

Fig. 1 Site location

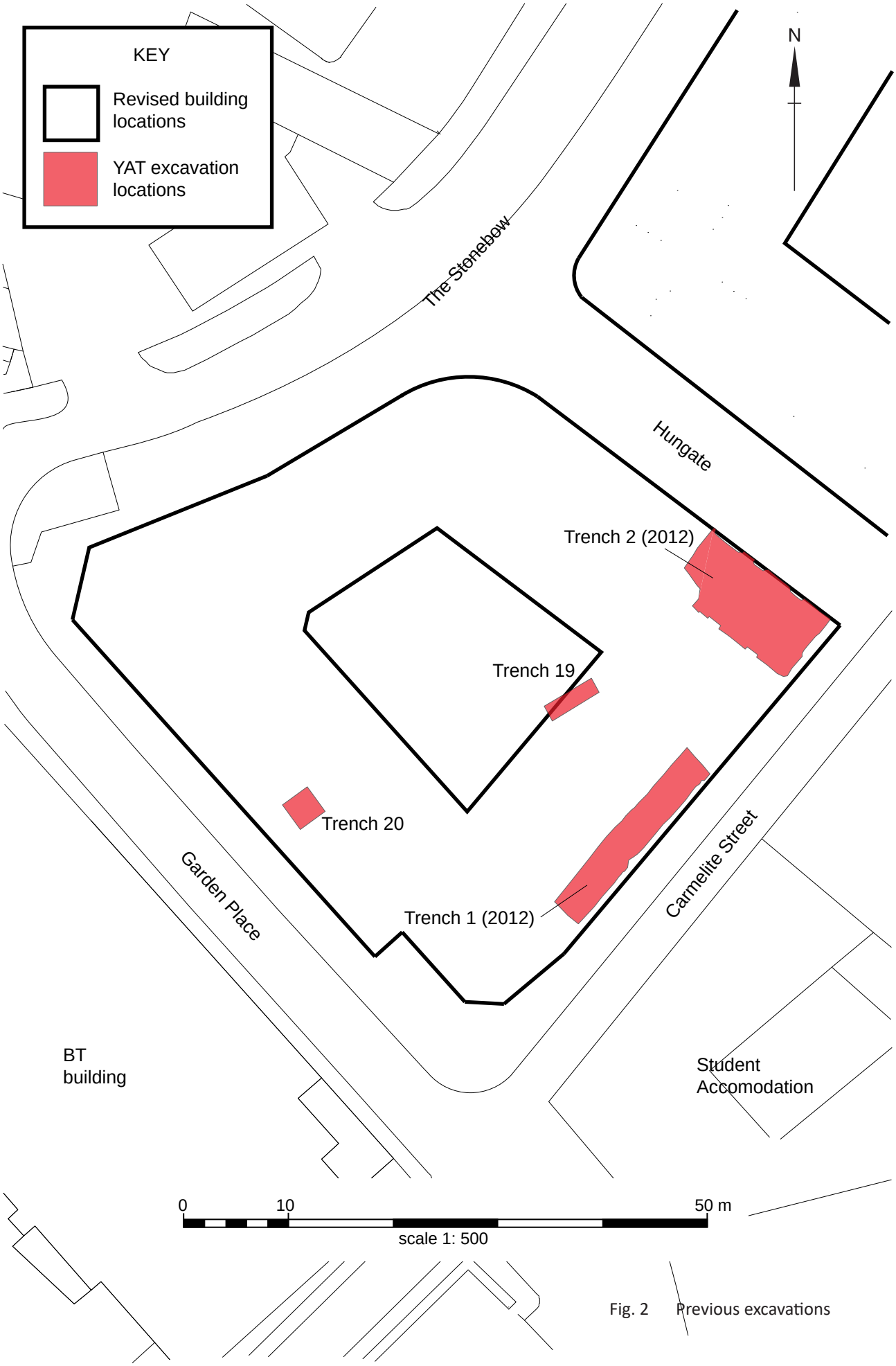

Fig. 2 Previous excavations

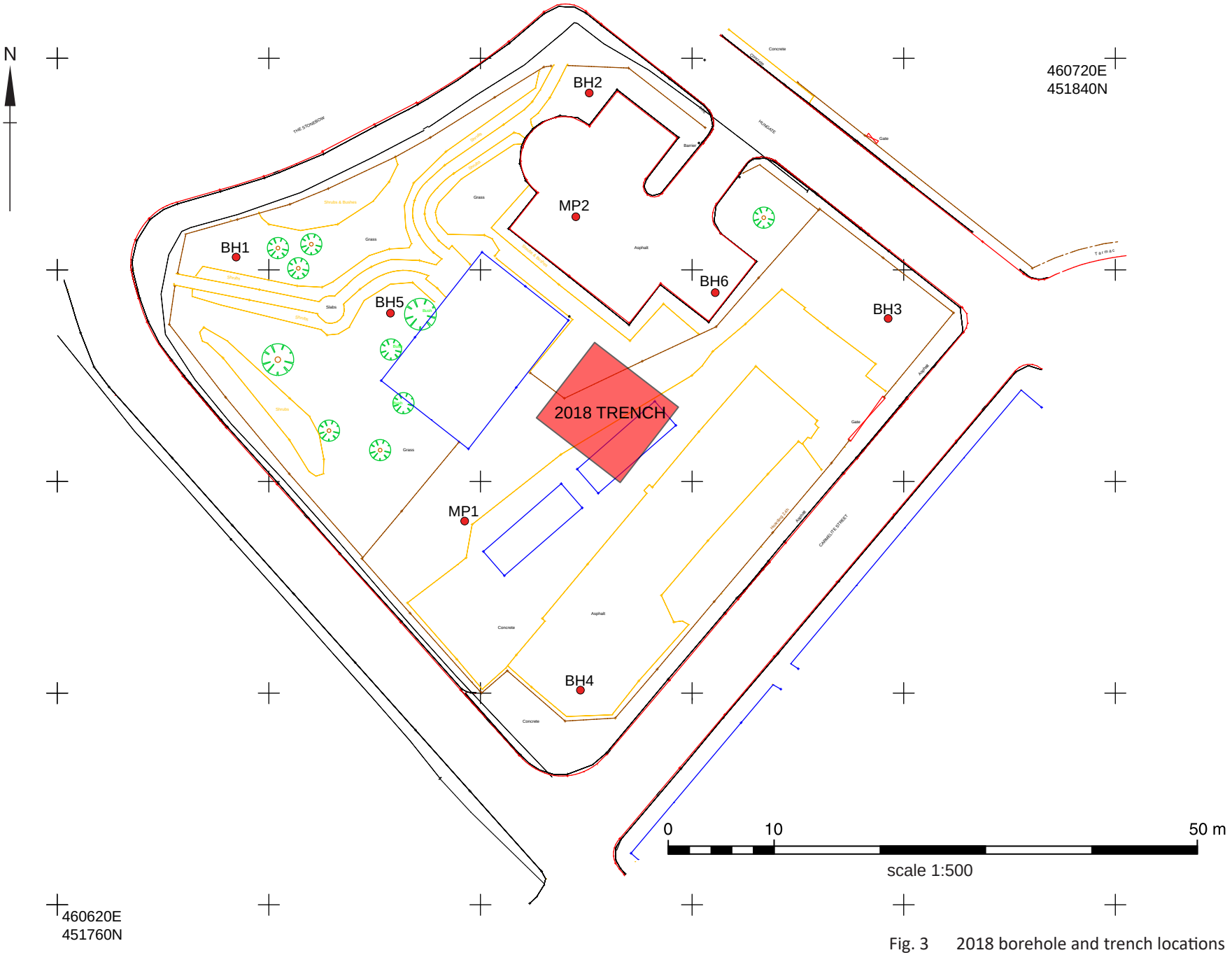

Fig. 3 2018 borehole and trench locations

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APPENDIX 2 – RISK ASSESSMENT

YORK ARCHAEOLOGICAL TRUST
RISK ASSESSMENT

Site Name:	Hungate Block G	Risk Assessment by:	Arran Johnson	Checked by:	Ian Milsted
Grid Reference:	SE 60663 51818	Date:	22/2/18	Date:	01/03/18
Nearest A&E Department:	York Hospital Wigginton Road, York, North Yorkshire, YO31 8HE	Telephone:	01904 631 313	Other emergencies:	**Dial 999 or 112** and ask for the appropriate service National Gas Emergency line: 0800 111 999
		Distance from site:	1.1 miles		
YAT contact details:	Cuthbert Morrell House, 47 Aldwark, York, YO1 7BX	Telephone:	01904 663000		

Duty of care	YAT staff, other workers, members of the public	1. Duty of employer to take reasonably practical steps to ensure health, safety and welfare of employees. 2. Duty of employee to take reasonable care for his/her own safety and for that of his/her co-workers. 3. A mobile phone will be on site at all times; and where multiple teams are working phones will be available for each team. 4. The wearing of appropriate personal protective equipment (PPE), such as steel-toe capped boots, safety helmets and high-visibility vest or jackets is compulsory and will minimise injuries from falling or projecting objects, moving plant or machinery. 5. Ensure all staff are issued with copies of the YAT safety manuals and this risk assessment and that they understand the requirements set out in those documents. 6. Site inductions will be provided by the Principal/Main Contractor where relevant. 7. Inexperienced staff will be closely supervised.

YORK ARCHAEOLOGICAL TRUST
RISK ASSESSMENT

Risks identified prior to work commencing

Likelihood of occurrence	**Probably severity before control measures**
L: Low	L: No or only slight injury
M: Medium	M: Moderate injury
H: High	H: Severe injury/Possible fatality
N/A: Not assessable	N/A: Not assessable

Hazard	**Who is at risk**	**Likelihood of occurrence**	**Probable severity**	**Control measures**	**Monitoring**
General site safety					
Accidents, near misses and reportable occurrences	YAT staff, other workers	N/A	N/A	1. All accidents however minor will be reported and recorded in the site accident book. 2. Near misses will be recorded on the risk assessment and new control measures list at the end of the risk assessment and control measures identified. 3. Any RIDDOR reportable occurrences must be recorded in the accident book and reported to the YAT Project Manager and RIDDOR forms completed and submitted.	Project Officer to update the risk assessment and report to the Project Manager
Personal Injury	YAT staff	M	L	1. YAT staff to wear appropriate PPE, normally as a minimum steel-toe capped boots, safety helmet and high-visibility vest or jacket; gloves and protective eyewear. 2. An appropriate first aid kit will be present on site during all working hours. 3. An appropriately qualified first aider will be present on site at all times.	
Lone working	YAT staff	L	H	1. No one will work on the site unaccompanied. 2. All workers must be within hearing distance of other workers. 3. No one will enter or work in a trench deeper than 0.5m in depth unaccompanied. 4. No one will enter a confined space unaccompanied and without confined spaces training.	

YORK ARCHAEOLOGICAL TRUST
RISK ASSESSMENT

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Fire	YAT staff, other workers and members of the public	L	H	1. No naked flames will be used during fieldwork.	
Public Access	YAT staff, members of the public	M	M	1. There is no public access to the fieldwork areas; access will only be with prior agreement of the client/site agent or main/principal contractor. 2. Authorised visitors will be accompanied at all times by a member of staff unless suitably briefed and will have read and signed this risk assessment. 3. Visitors will be required to wear appropriate PPE. 4. If members of the public are encountered during fieldwork who do not have access to the site, staff must assess the situation and will ask them to leave if appropriate. If their behaviour is perceived to be threatening or aggressive in any way staff will withdraw if necessary; contact senior YAT staff, the site agent, and the Police.	Staff to monitor frequency of public accessing the site. If it is regular and threatening then site security measures will be considered.
Potential dangers	YAT staff, other workers, members of the public	L	H	1. The Project Officer responsible for the site (or other appropriate member of staff) will inspect the site at the beginning and end of each working day. This risk assessment will be updated with any new identified risks and work will not proceed until appropriate control measures have been put in place.	
Slips and trips, uneven ground	YAT staff, other workers, members of the public	M	L	1. Site is to be maintained in a tidy and workmanlike fashion at all times. 2. All survey grid pegs will be brightly coloured or have a coloured cap, and all personnel will be notified of their location. 3. Trip hazards in the form of upstanding machine anchors, stands, or open gullies will be noted when entering each area of the site and safe routes of access established. These will be noted by all staff and observed at all times. 4. Staff to wear footwear with ankle support.	Project Officer to inspect the site daily.

YORK ARCHAEOLOGICAL TRUST
RISK ASSESSMENT

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Falls from Height	YAT staff, other workers	L	M	1. Staff will not climb on structures, walls or trees or enter unstable buildings. 2. Deep excavations will be fenced and signed.	Project Officer to ensure that all staff adhere to control measures.
Manual Handling	YAT staff	L	L	1. Care will be taken to lift and carry all equipment properly. 2. If loads are deemed too heavy additional trips will be made to carry the equipment and/or loads will be spread between staff. 3. As the works will include deep excavations, buckets will not be overfilled.	Project Officer to ensure that all staff adhere to control measures.
Hand tools and equipment	YAT staff	L	L	1. Tools will be maintained in suitable working order. 2. Tools will not be used if partially broken or damaged. 3. Workers should maintain a safe working distance from each other to avoid danger of injury to co-workers. 4. Risk from slight injuries will be minimised by the maintenance of a first-aid kit on site. 5. The wearing of appropriate PPE is mandatory, safety helmet, safety boots, eye protection and hi-visibility vest/jacket as a minimum.	Project Officer to check condition of tools daily and update risk assessment if new tools are introduced to site (e.g. hand auger, wheel barrow).

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Environmental Hazards					
Weather	YAT staff	M	M	1. In wet conditions suitable waterproof clothing and footwear will be worn. 2. In hot/sunny conditions suitable protection for the skin and head will be worn on site. This will include appropriate sun screen/block products. Water will be readily available on site at all times. 3. In cold/snowy weather appropriate warm clothing will be worn on site. 4. In all cases PPE requirements will be adhered to.	Staff to note weather and ground conditions and notify supervising archaeologist if they think it is unsafe to work.
Weils disease (Leptospirosis)	YAT staff	M	H	1. Rats and cows carry Weils disease in their urine. Staff will practice good hygiene at all times. 2. Staff will be made aware of the symptoms of Weils disease.	Staff will be aware of and will note the evidence for the presence of rats, cows on site.
Vermin Traps and Poison	YAT staff	M	M	1. If vermin traps, or substances suspected to be rat poison are encountered during the work then care will be taken to avoid disturbing them. 2. If traps or exposed trays of poison come in to contact with bare skin the affected areas will be thoroughly washed and monitored over the following days to ensure that no risk to personal health has occurred.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Sharps	YAT staff	M	H	1. To minimise the risk from discarded hypodermic needles staff must be alert at all times when entering working areas. Safety boots with steel midsoles will be worn at all times. Gloves will be worn if the risk is deemed to be high. 2. Removal of needles from site must only be undertaken by a designated member of staff using pliers and placed within an approved medical 'sharps' container. Advice may be sought from local council staff or the HSE executive if the quantity of needles is deemed to be excessive and unsafe for YAT staff to remove.	To minimise the risk from discarded hypodermic needles staff must be alert at all times when entering working areas.
Asbestos	YAT staff	M	H	1. Upon entering a survey or excavation site a visual inspection will be made to identify any potential sources of asbestos are present. If potential sources are identified senior YAT staff will be informed and no work will commence until appropriate action has been taken. 2. If potential sources of asbestos are encountered during excavation work in the area will cease and senior YAT staff informed. Work will only recommence when appropriate action has been taken.	All staff will be alert to the possibility of encountering potential asbestos sources during excavation.
Asphyxiation	YAT staff	L	H	1. Check previous use of site and ground investigation report where available for potential heavy gas presence. 2. Internal combustion engines will be kept away from excavation wherever possible. 3. Where necessary an appropriate air quality monitor will be used.	
Infection from human remains	YAT staff	L	L	1. Gloves will be worn when excavating human remains. 2. Good hygiene practice will be exercised at all times.	
Falling debris	YAT staff	L	H	1. Hard hats will be worn within all working areas. Additional care will be taken where there is a perceived risk of falling debris. 2. When working adjacent walls staff will be aware that walls may be unstable. If the wall is believed to be unstable work in that area will cease and the Project Officer informed. No work will commence until appropriate action has been taken.	

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Ground contamination	YAT staff, other workers	M	M	1. Existing ground contamination surveys will be examined to assess the potential for hazardous materials to be present. 2. Appropriate gloves will be worn during all excavation activities. 3. Staff will implement good hygiene practice. 4. Protective clothing will be provided when necessary.	
Spillages	YAT staff, other workers	M	L	1. YAT will not use hazardous chemicals on site 2. Where machines are fuelled from bowsers spill kits will be available to control and mop up any spillages. Any spillage will be cleaned up and disposed of at an appropriate dump.	
Excavation					
Deep excavations	YAT staff, other workers and members of the public	M	H	1. The trench will be stepped in by 1m for every 1m of excavated depth. One trench edge will be battered to a depth of 2m to allow safe access. 2. Trenches will be inspected for stability at the beginning and end of each working day. If staff suspect a trench is unstable they will leave the area and inform the Project Officer/senior YAT management as appropriate. Staff will not enter the trench deemed to be unstable until appropriate action has been taken. 3. Fencing / barriers / warning signs will be erected to clearly define archaeological excavation areas.	Project Officer to inspect trenches each day before work commences.
Mechanical plant	YAT staff	M	H	1. Minimal risk to YAT staff maintaining a safe distance from plant. Such plant will be routinely checked for its safety before operation, and will be operated by suitably experienced personnel. 2. Appropriate PPE to be worn in working areas at all times. 3. Any staff working with plant must stay in the operator's field of view and establish and maintain good communication with the operator at all times. 4. Staff will not enter the arc of the acting arm of any mechanical excavator until such time as the driver has been informed and the bucket is grounded.	Project Officer to check plant safety certificate and drivers qualification certificate before mechanical excavation starts.

Hazard	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Monitoring
Presence of services	YAT staff, other workers	L	L	1. Check with Principal Contractor, Gas and Water companies for the presence of services within the area of the works. 2. All trench locations will be CAT scanned by an appropriately trained member of staff prior to excavation commencing. 3. If services are encountered during archaeological ground investigations these will be investigated to confirm they have been disconnected before work continues. 4. No mechanical excavation will be carried out below overhead services. If overhead services are present and restrict mechanical excavation the Project Manager will liaise with the employer to establish suitable safe working practices.	Project Officer supervising machine excavation to be alert to the potential presence of unknown services.
Compressors, pumps, peckers or other hired machinery	YAT staff	L	M	1. Minimal risk to archaeologists maintaining a safe distance from the plant. Such plant will be routinely checked for its safety before operation, and will be operated by suitably experienced personnel. 2. Staff to maintain a safe distance from plant operating 'peckers' and appropriate ear defenders will be provided where necessary.	
Transport and Traffic					
Live traffic	YAT staff	L	H	1. Staff will maintain a safe working distance from live carriageways at all times.	

Additional risks and/or control measures identified during works

Hazard/near misses	Who is at risk	Likelihood of occurrence	Probable severity	Control measures	Residual risk

I confirm that I have read and understood the nature of the potential risks on this site and the control measures needed to mitigate them.		
Print Name	**Signature**	**Date**

APPENDIX 3 – YAT SITE CHECKLIST

York Archaeological Trust Site Checklist

To be completed by the field officer responsible for the site

Project Name:

Project Code:

Type of Fieldwork:

Week beginning:

Note: All site staff should read, understand and sign the risk assessment before starting work on site. If the risk assessment is amended all site staff should be made aware of any changes and initial the risk assessment.

	Frequency	Monday	Tuesday	Wednesday	Thursday	Friday
First Aid kit	At start of works and at beginning of each day					
Tools	Daily before start of work					
Fencing	Daily prior to leaving site					
Trench stability	Daily Morning					
	Afternoon					
Main contractor briefing received (if working under main contractor)	Daily before start of work					
Valid permit to dig (if required)	Daily before start of work					
Mechanical plant safety certificate	On delivery of mechanical plant					
Mechanical plant (walk around with driver)	Daily before start of work					
Presence of sharps in working areas	Daily before start of work					

FIGURES

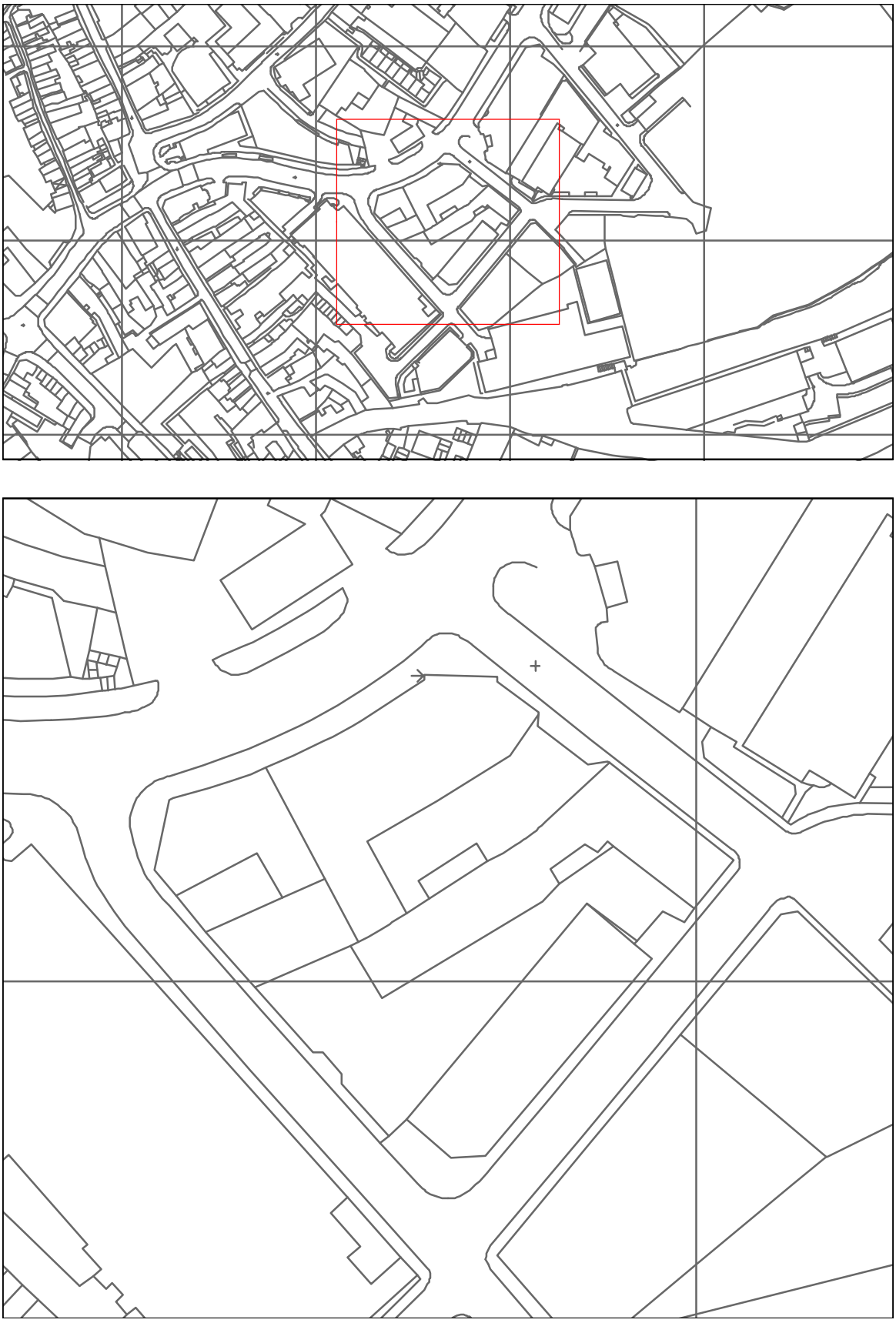


Fig. 1 Site location at 1:750 and 1:3000

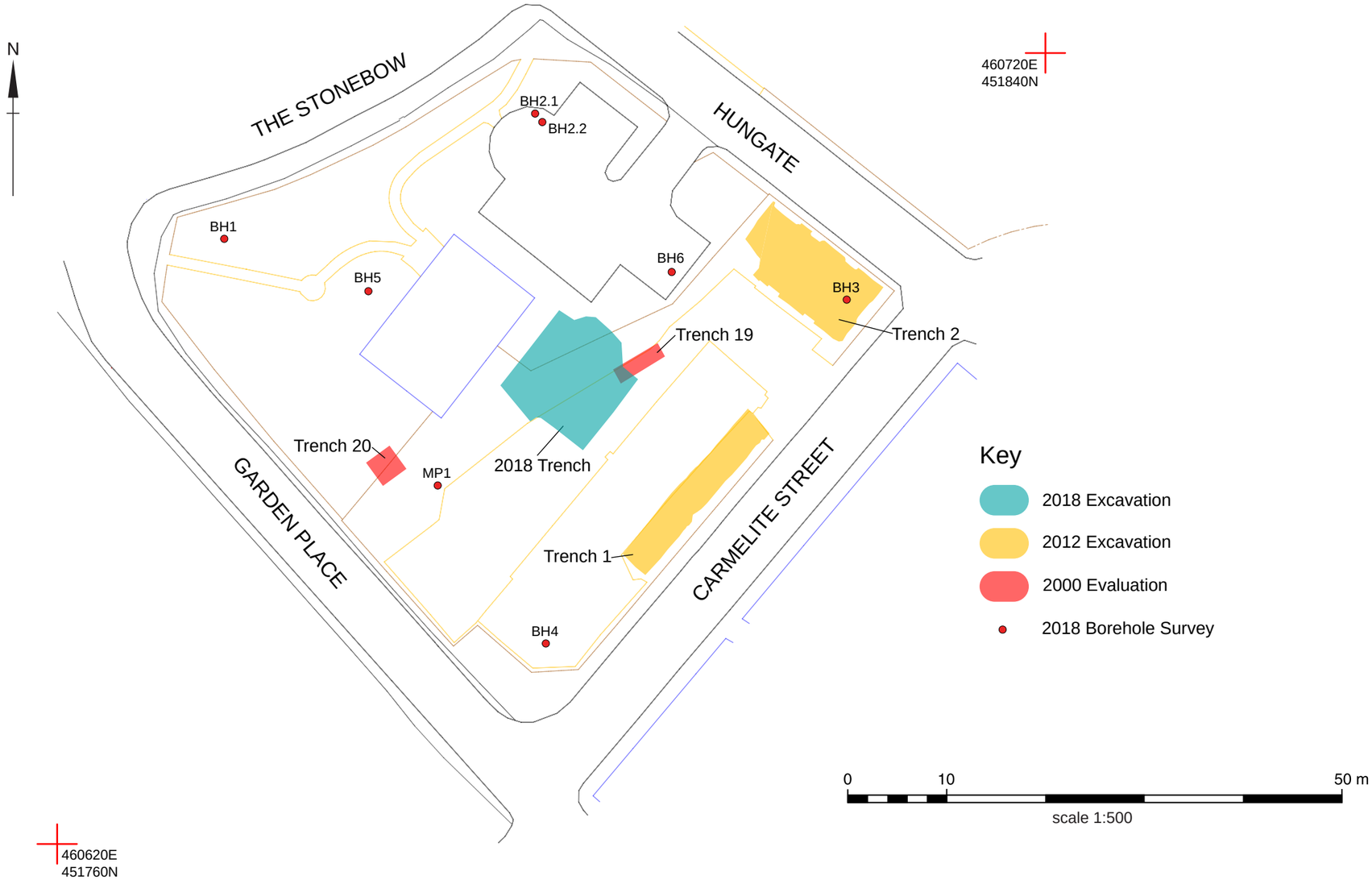


Fig. 02 Previous and Current Trench and Borehole Locations

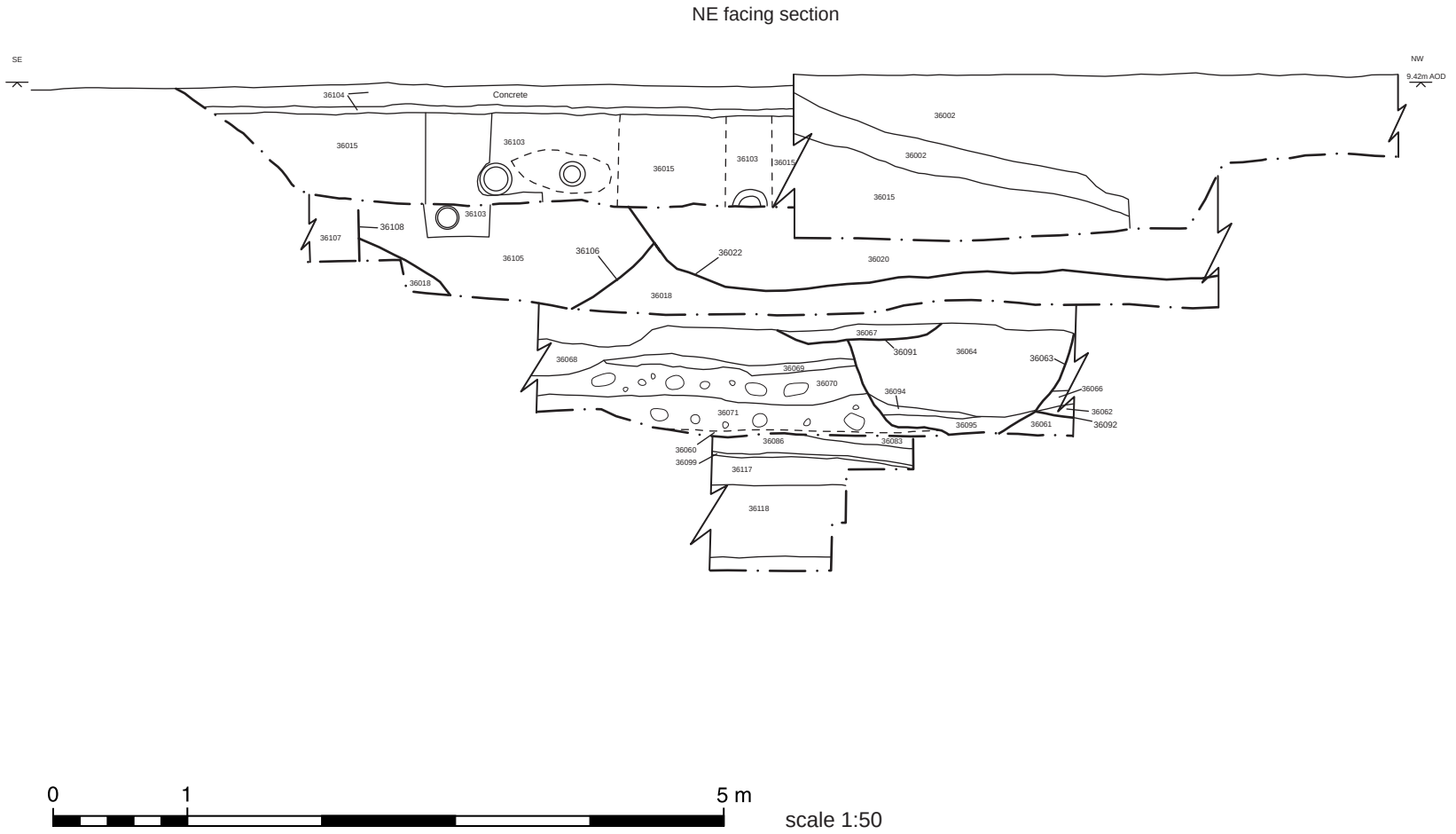


Fig. 03 North East facing section in Hungate Block G 2018 evaluation trench.

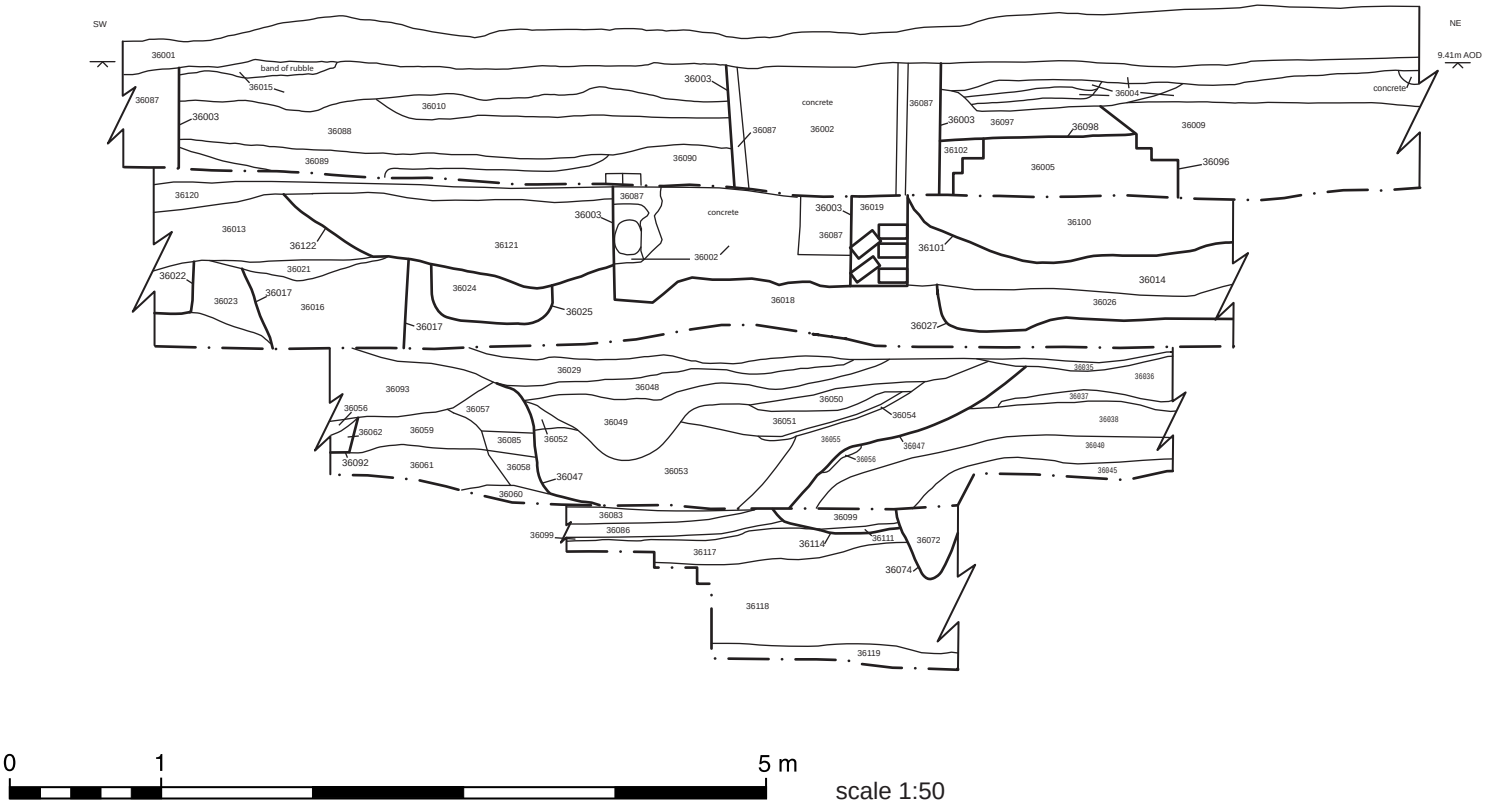


Fig. 04 South East facing section in Hungate Block G 2018 evauation trench.

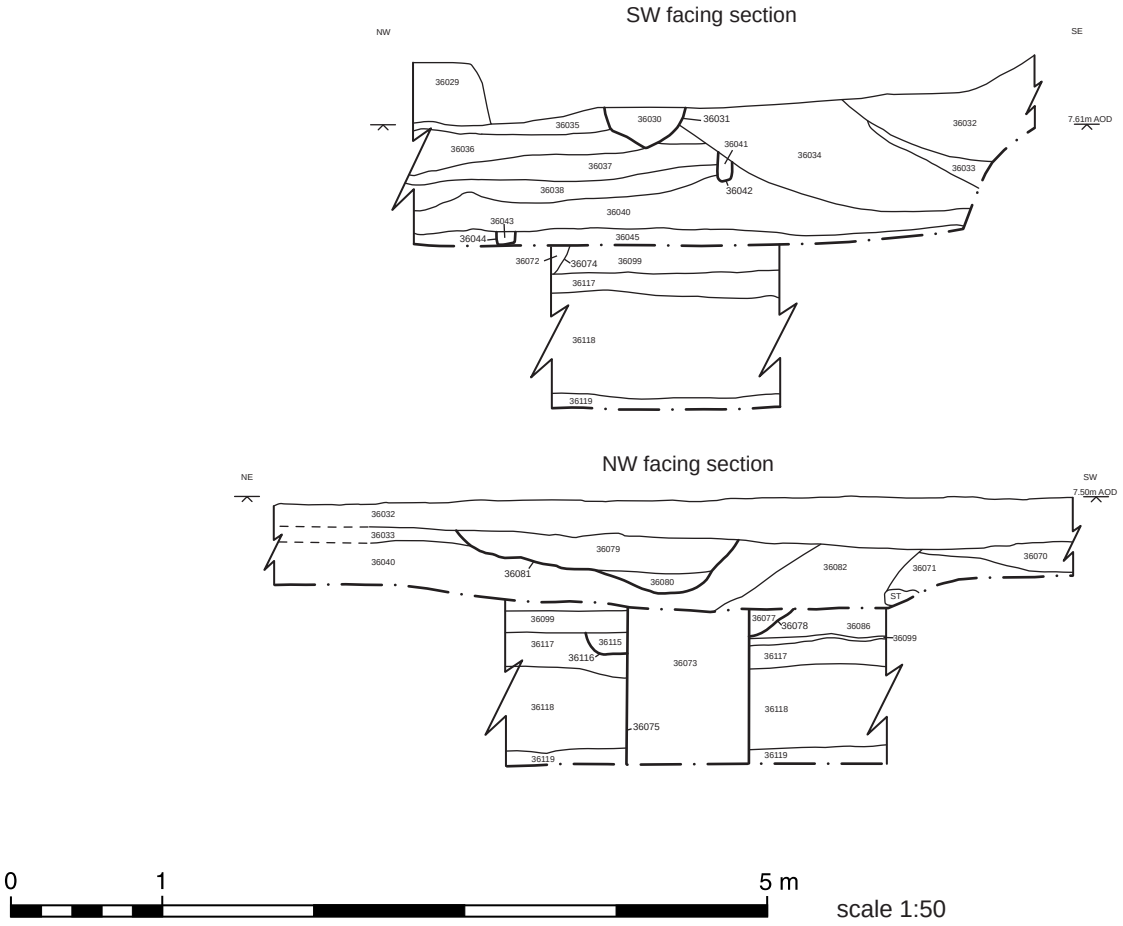


Fig. 05 South West (top) and North West (bottom) facing sections in Hungate Block G 2018 evaluation trench.

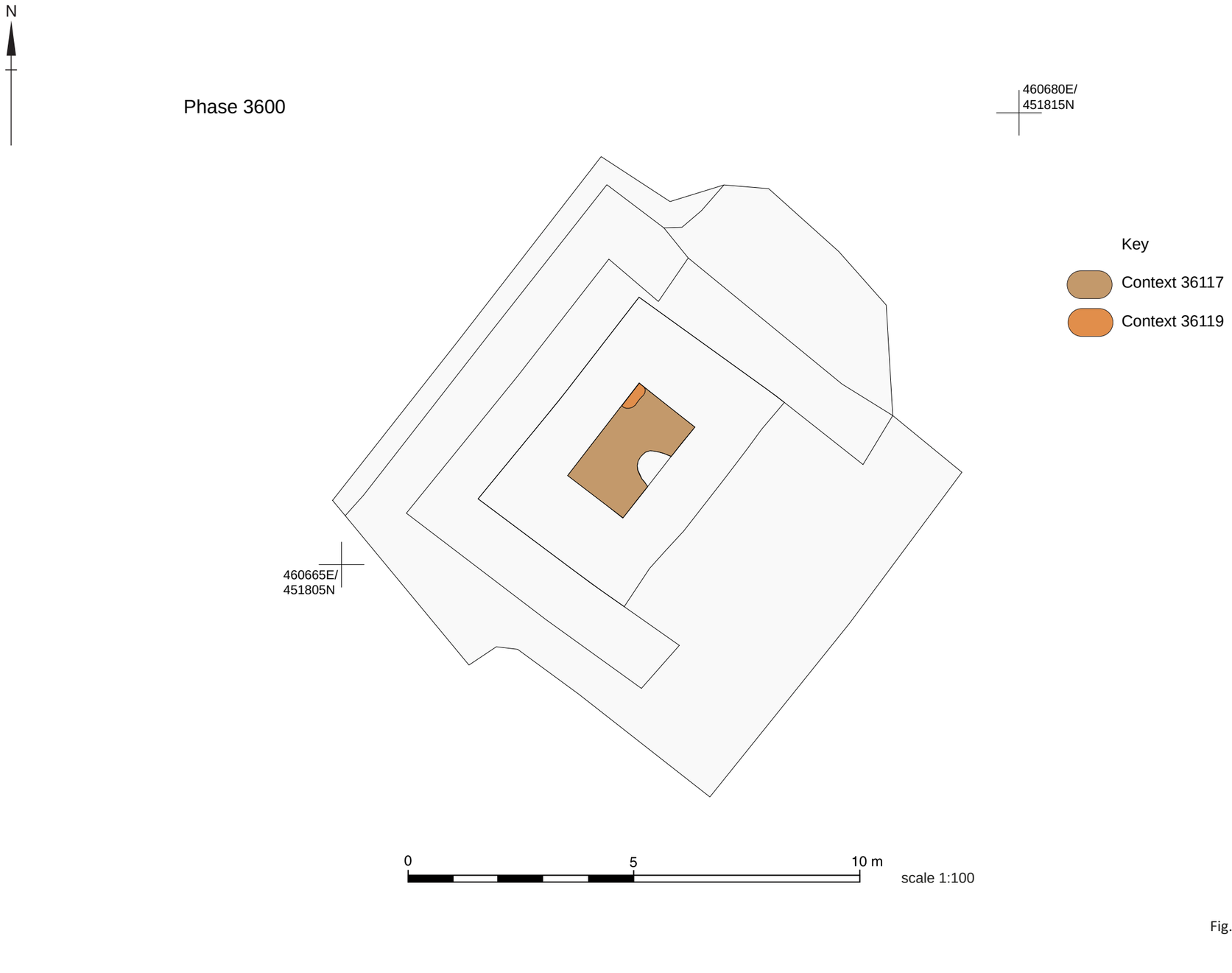


Fig. 06 Phase 3600 and trench outline

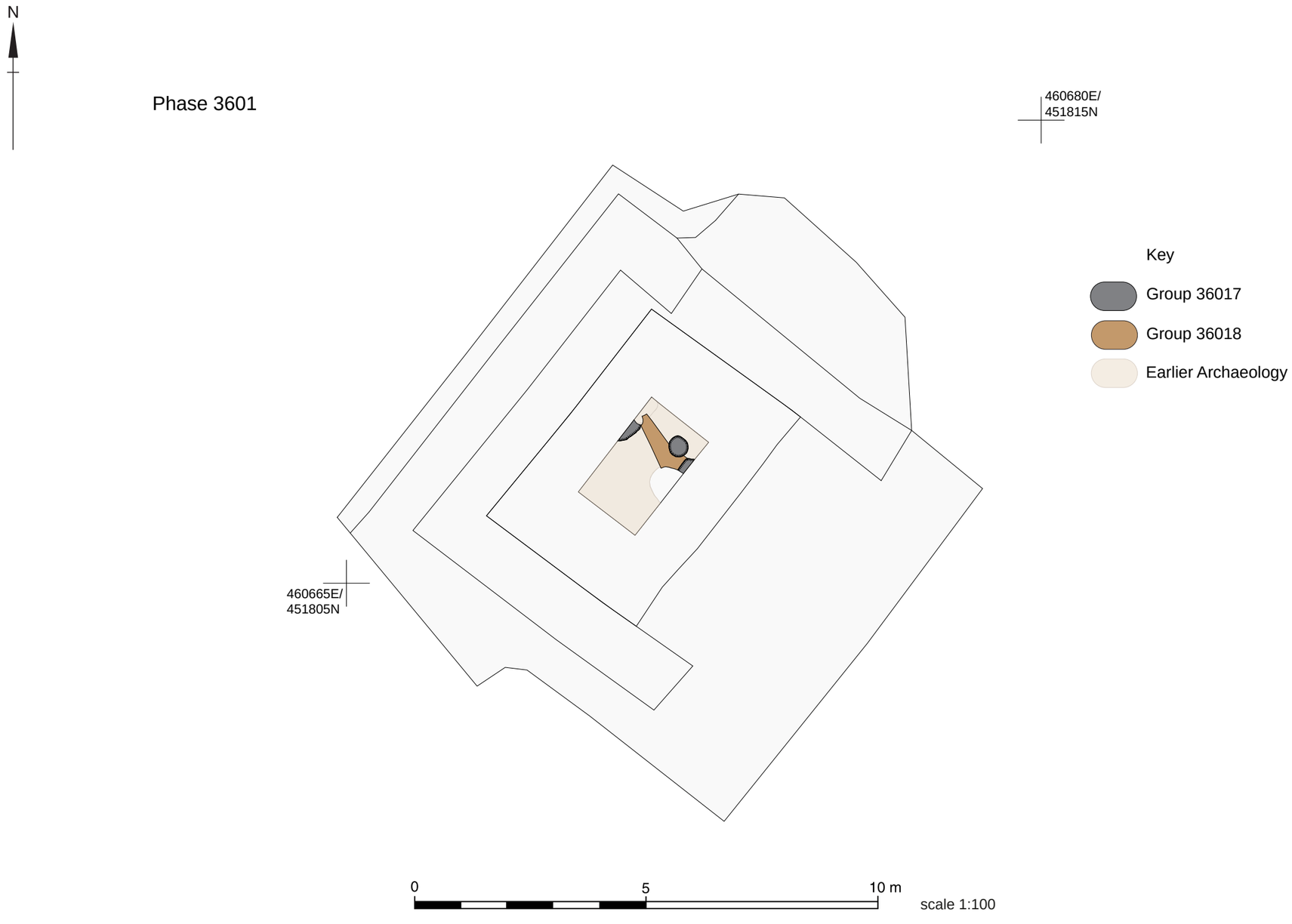


Fig. 07 Phase 3601, earlier archaeology and trench outline

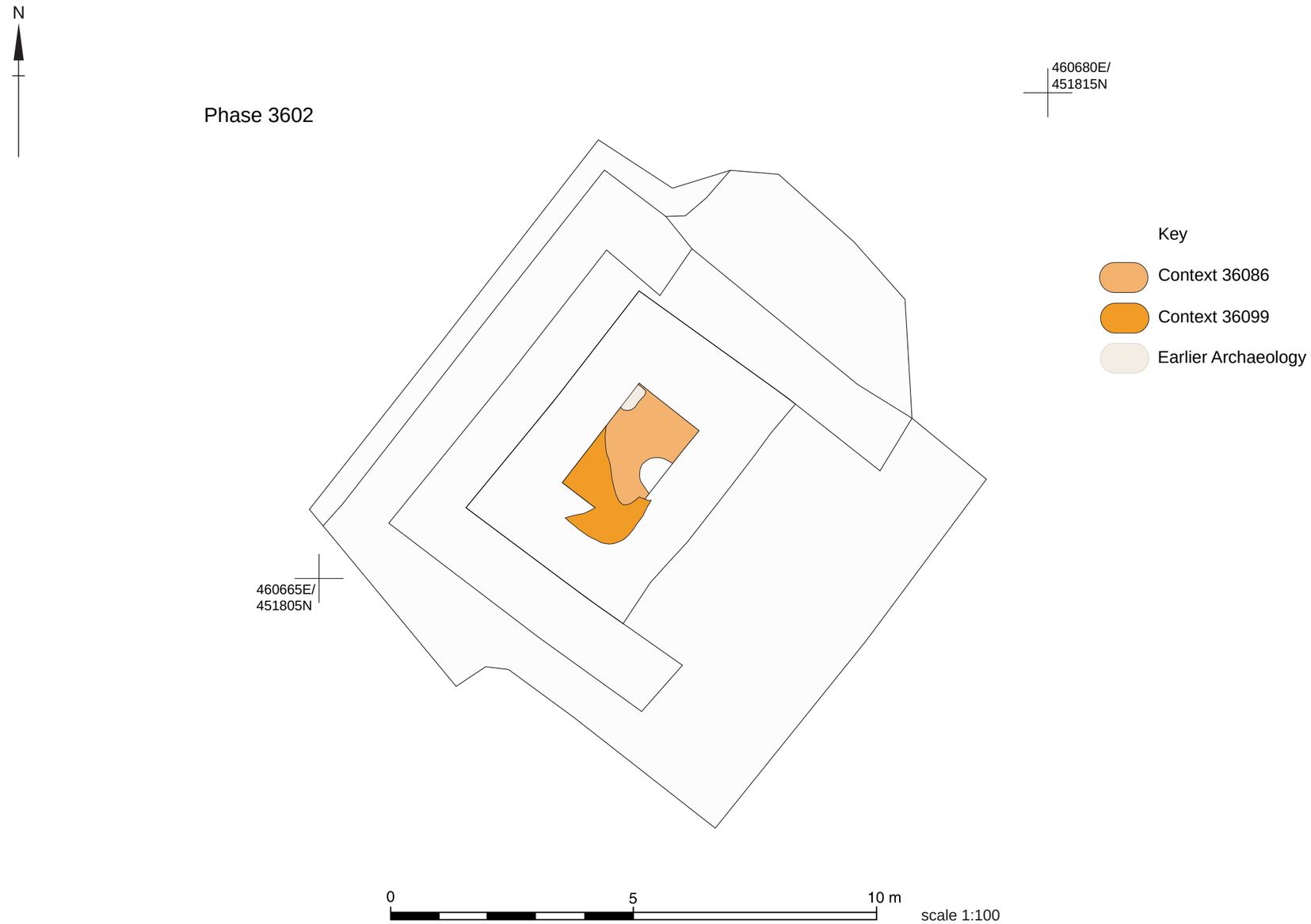


Fig. 08 Phase 3602, earlier archaeology and site outline

Fig. 09 Phase 3603, earlier archaeology and trench outline

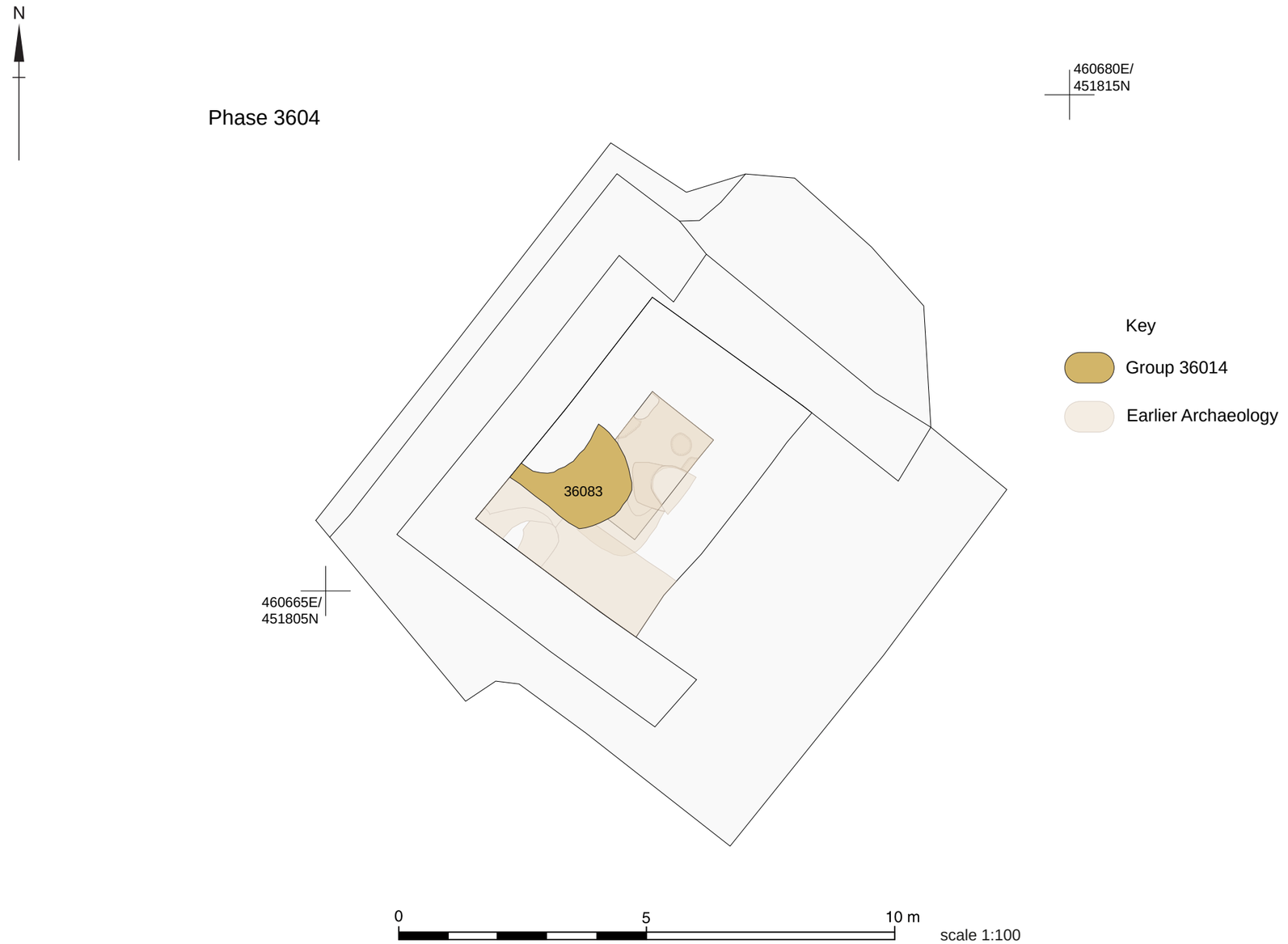
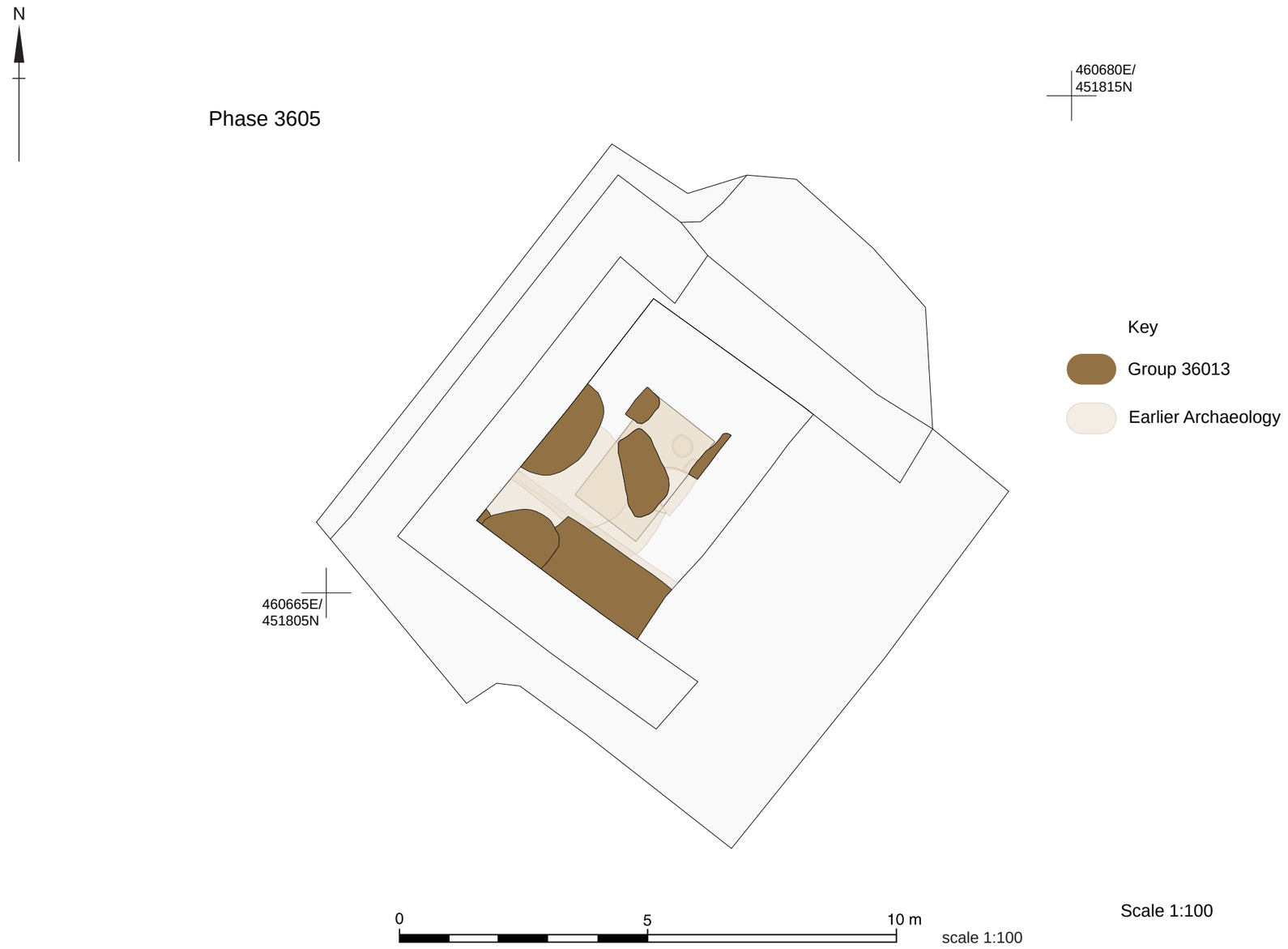


Fig. 10 Phase 3604, earlier archaeology and trench outline



Scale 1:100

Fig. 11 Phase 11, earlier archaeology and trench outline

Fig. 12 Phase 3608, earlier archaeology and trench outline

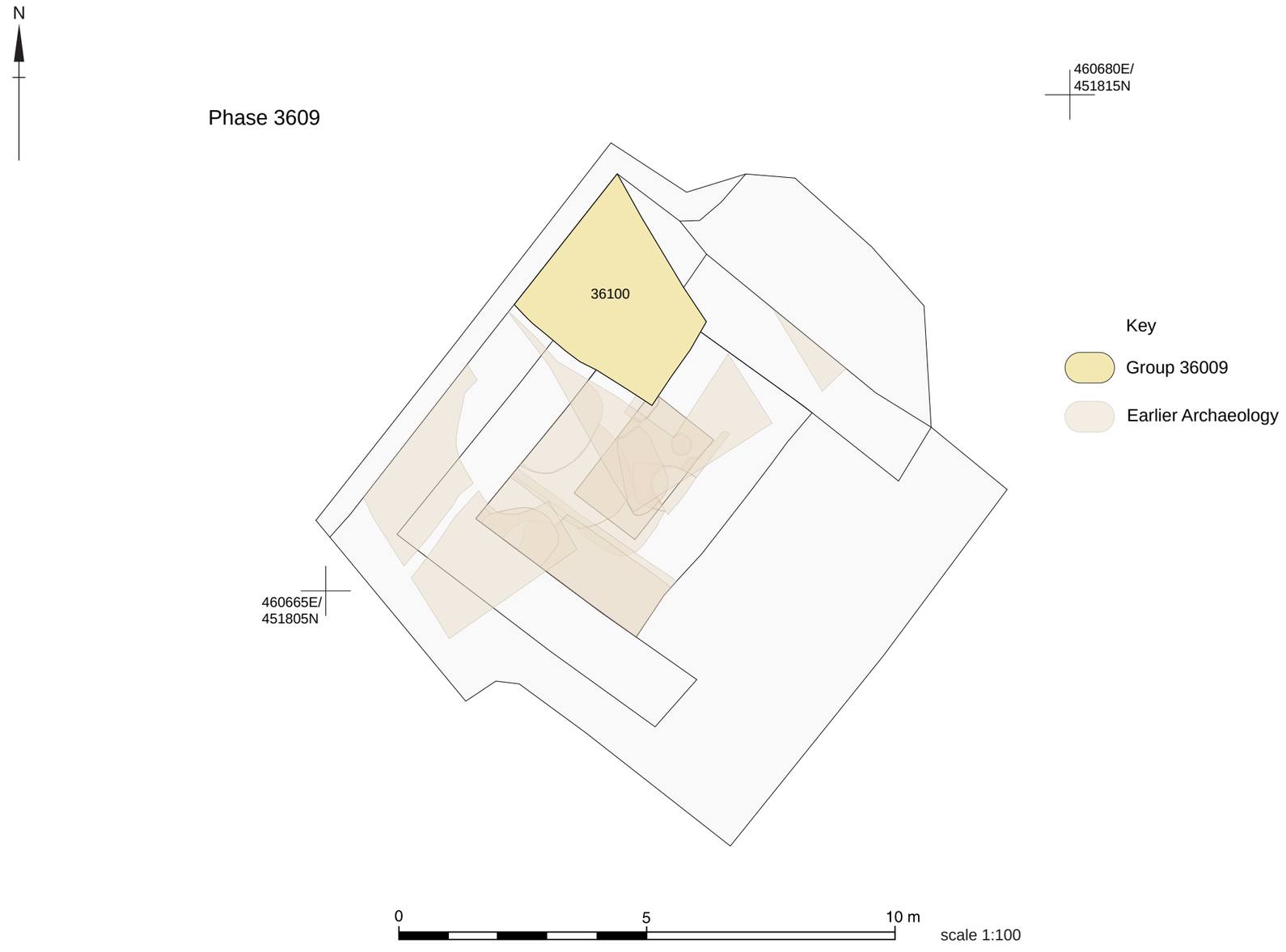


Fig. 13 Phase 3609, earlier archaeology and trench outline

Fig. 14 Phase 3610, earlier archaeology and trench outline

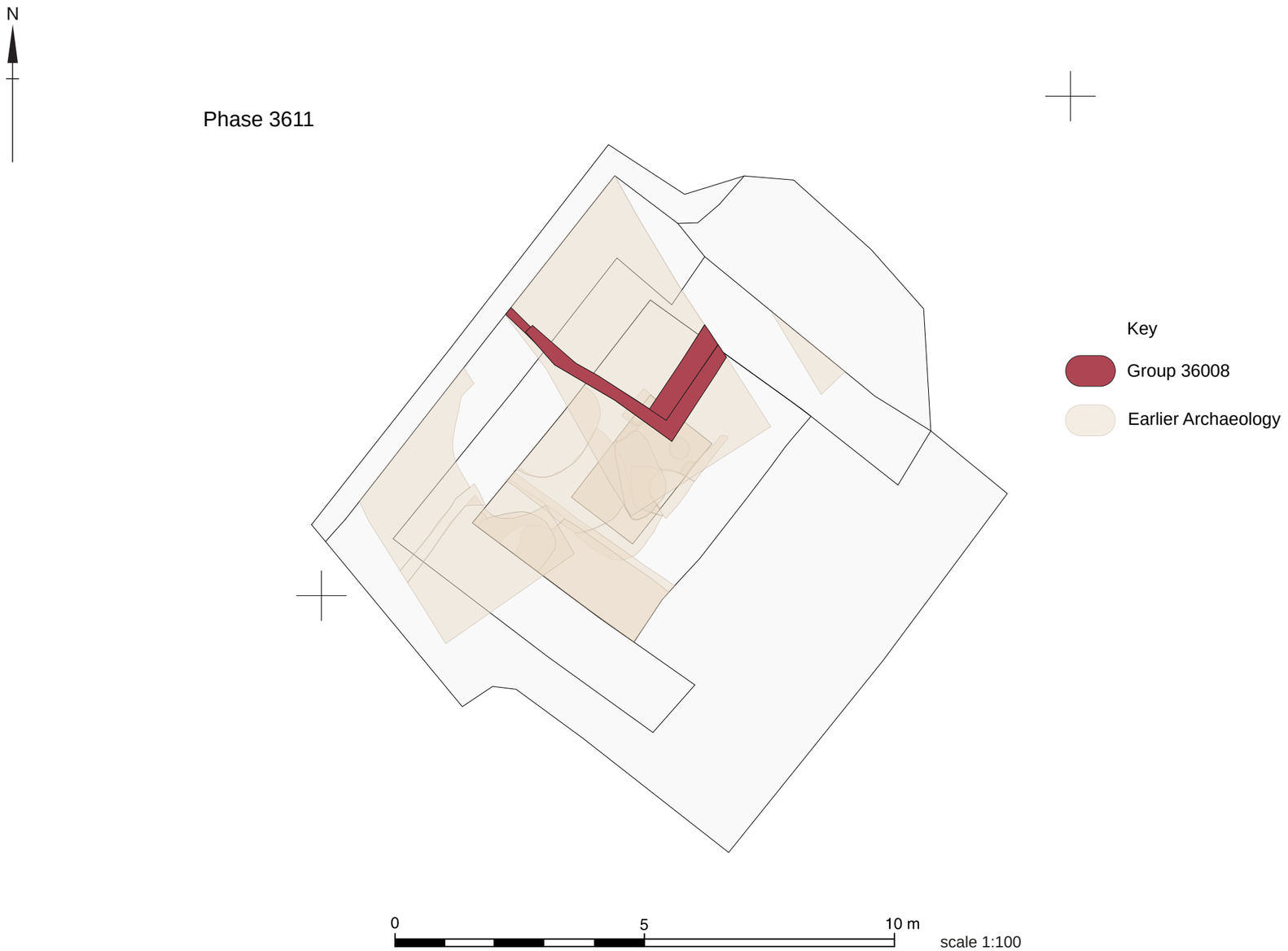


Fig. 15 Phase 3611, earlier archaeology and trench outline

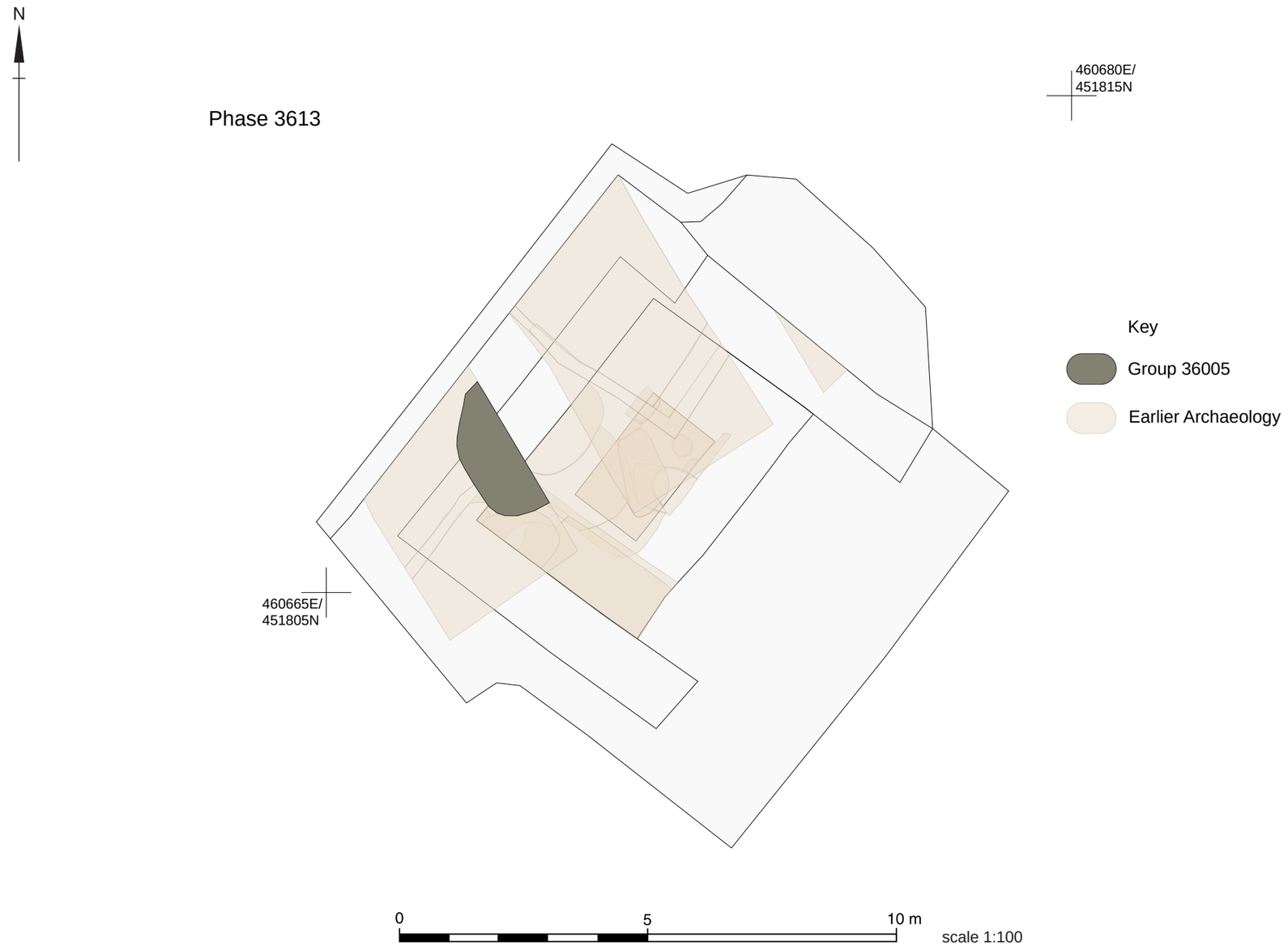


Fig. 16 Phase 3613, earlier archaeology and trench outline

Fig. 17 Phase 3614, earlier archaeology and trench outline

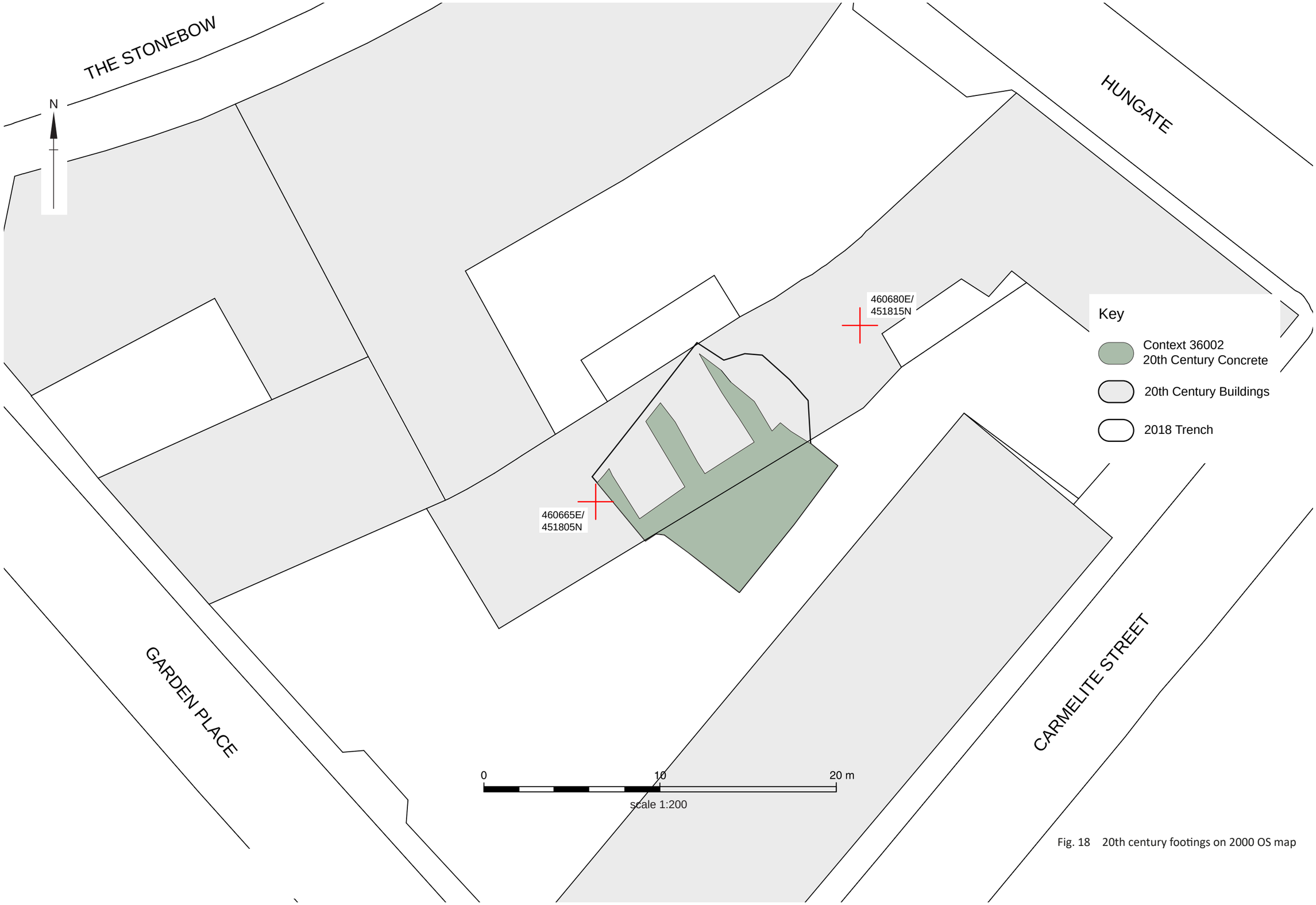


Fig. 18 20th century footings on 2000 OS map

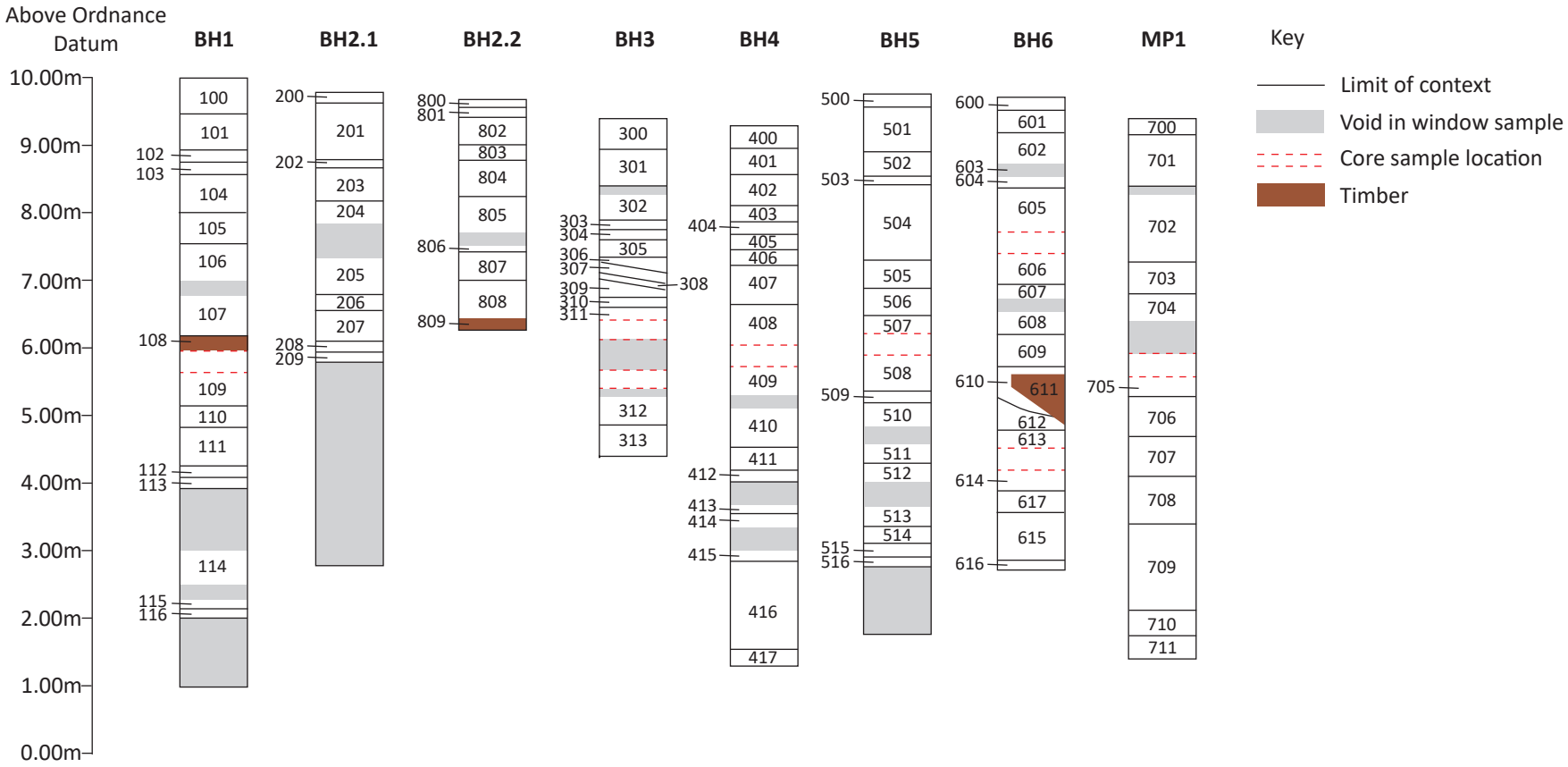


Fig. 19 Borehole Profiles

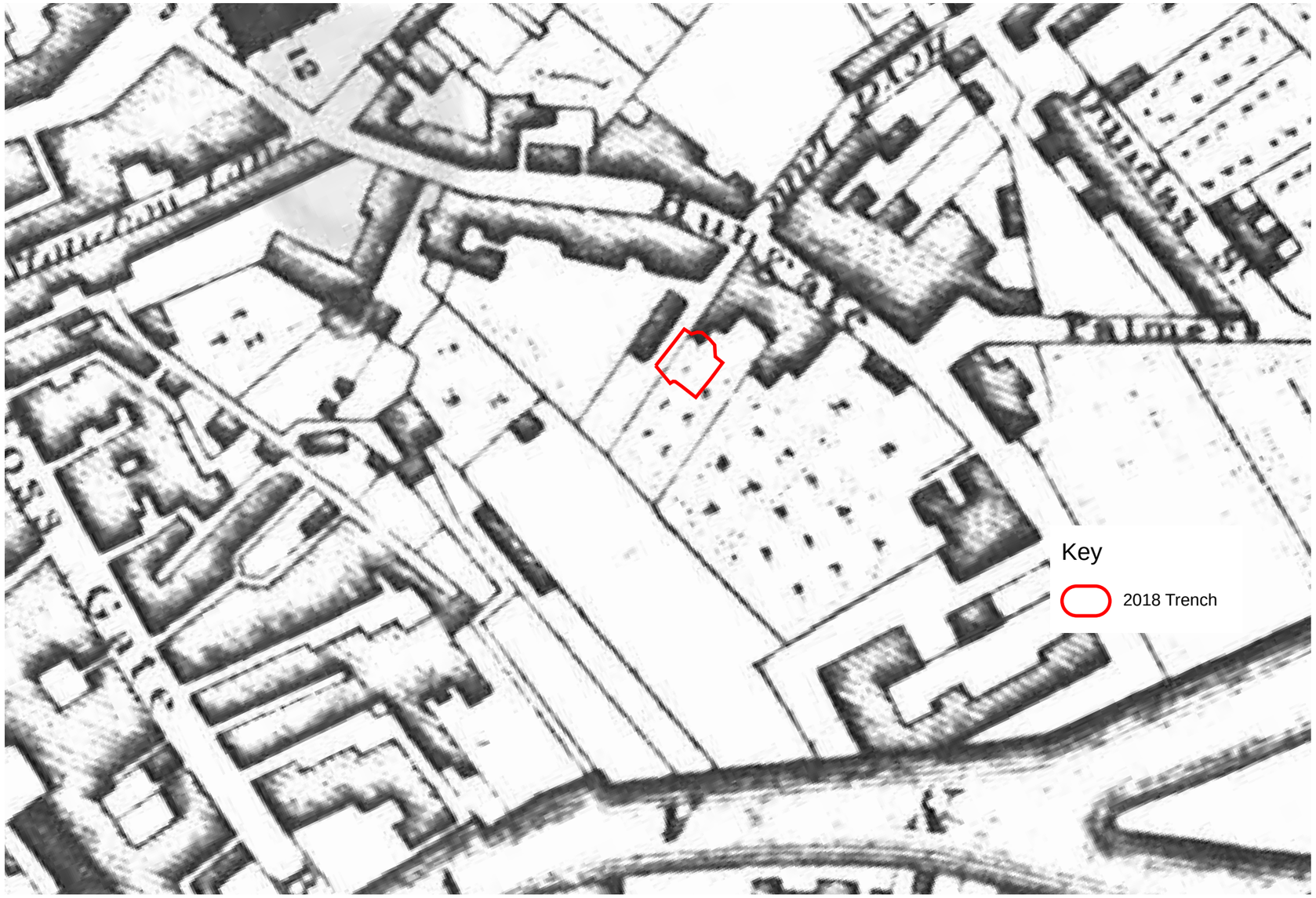


Fig. 20 Trench Location on Smith's 1822 map

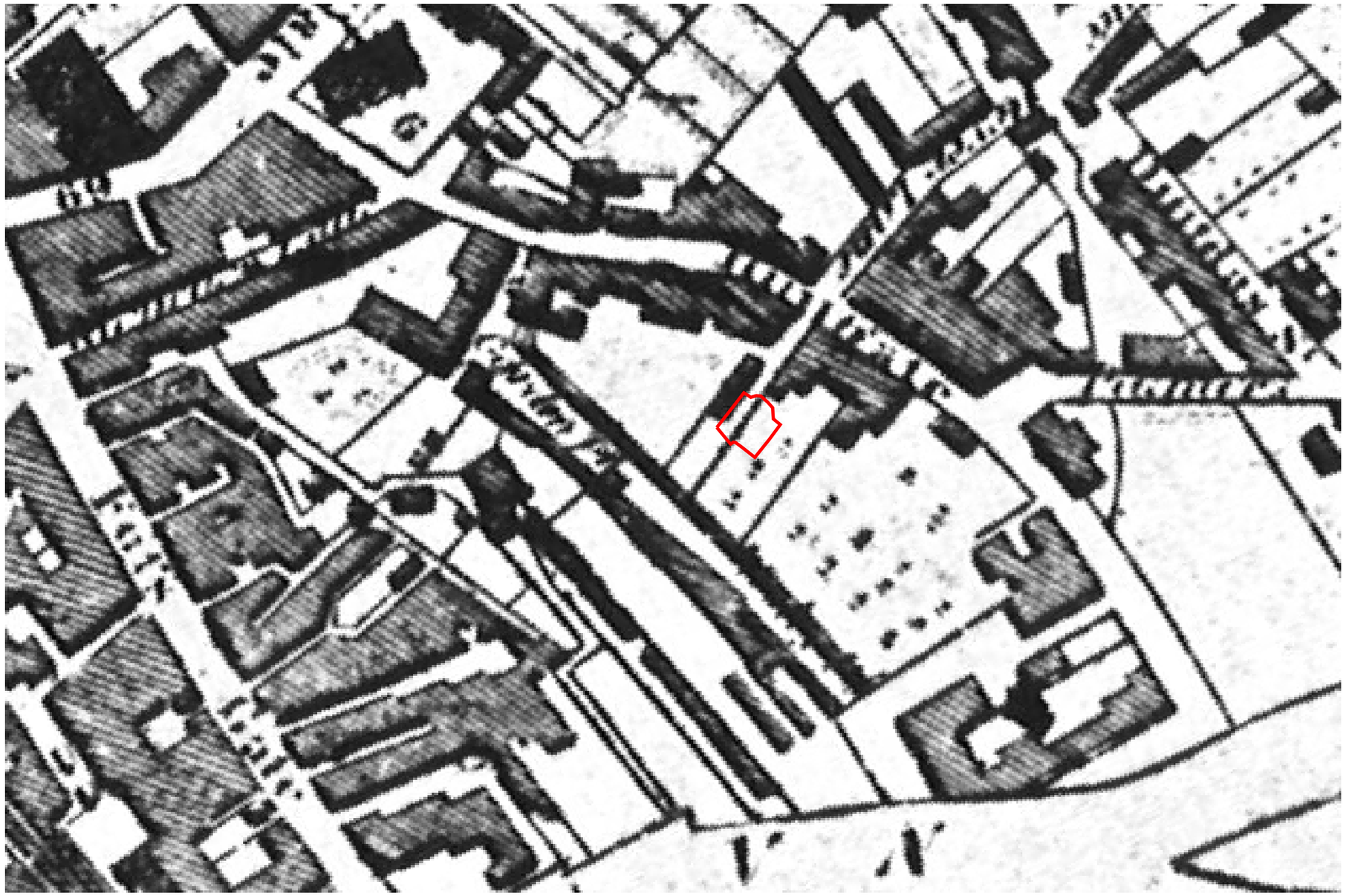


Fig. 21 Trench Locationa and Bellerby 1847

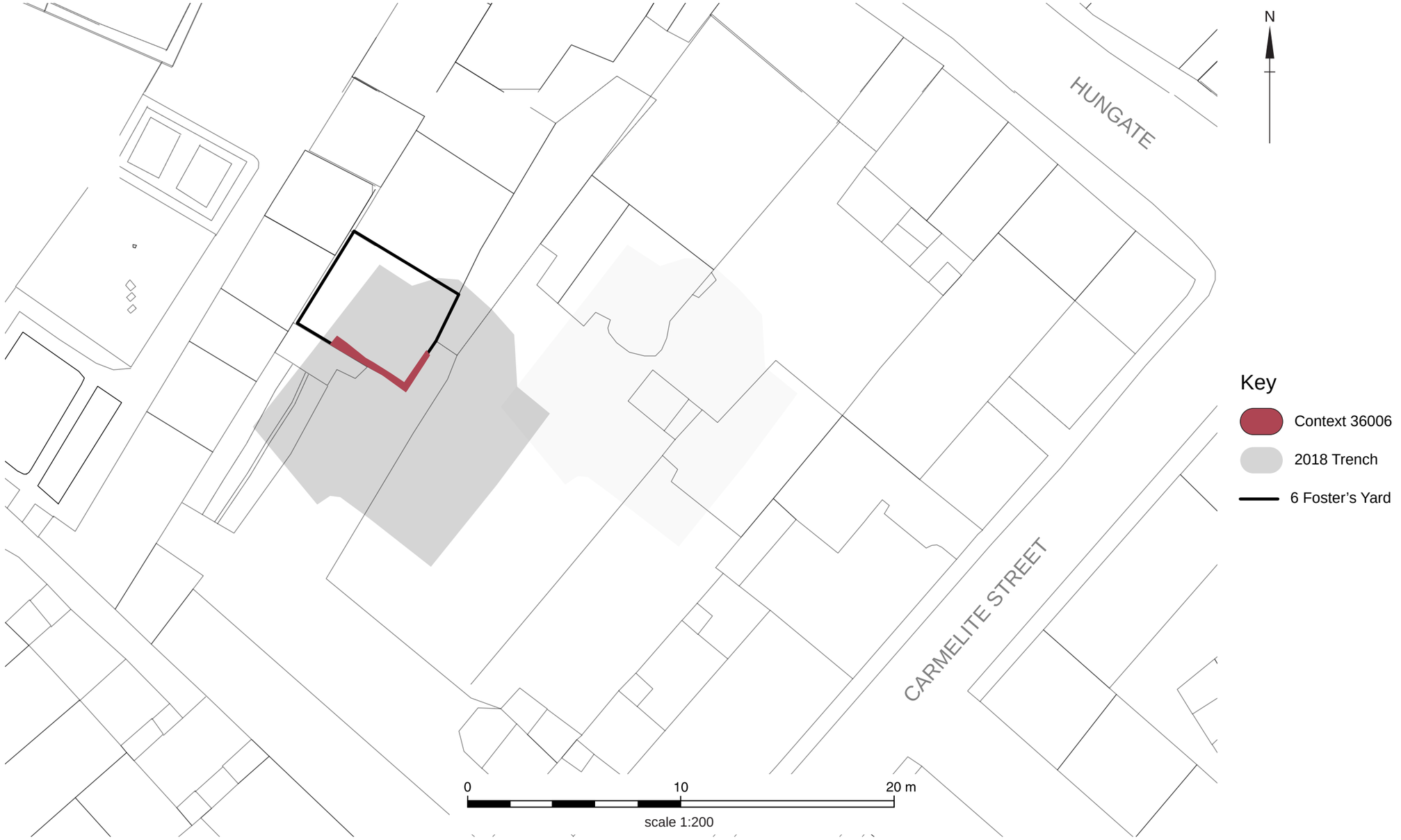


Fig. 22 1852 OS and Wall C36006

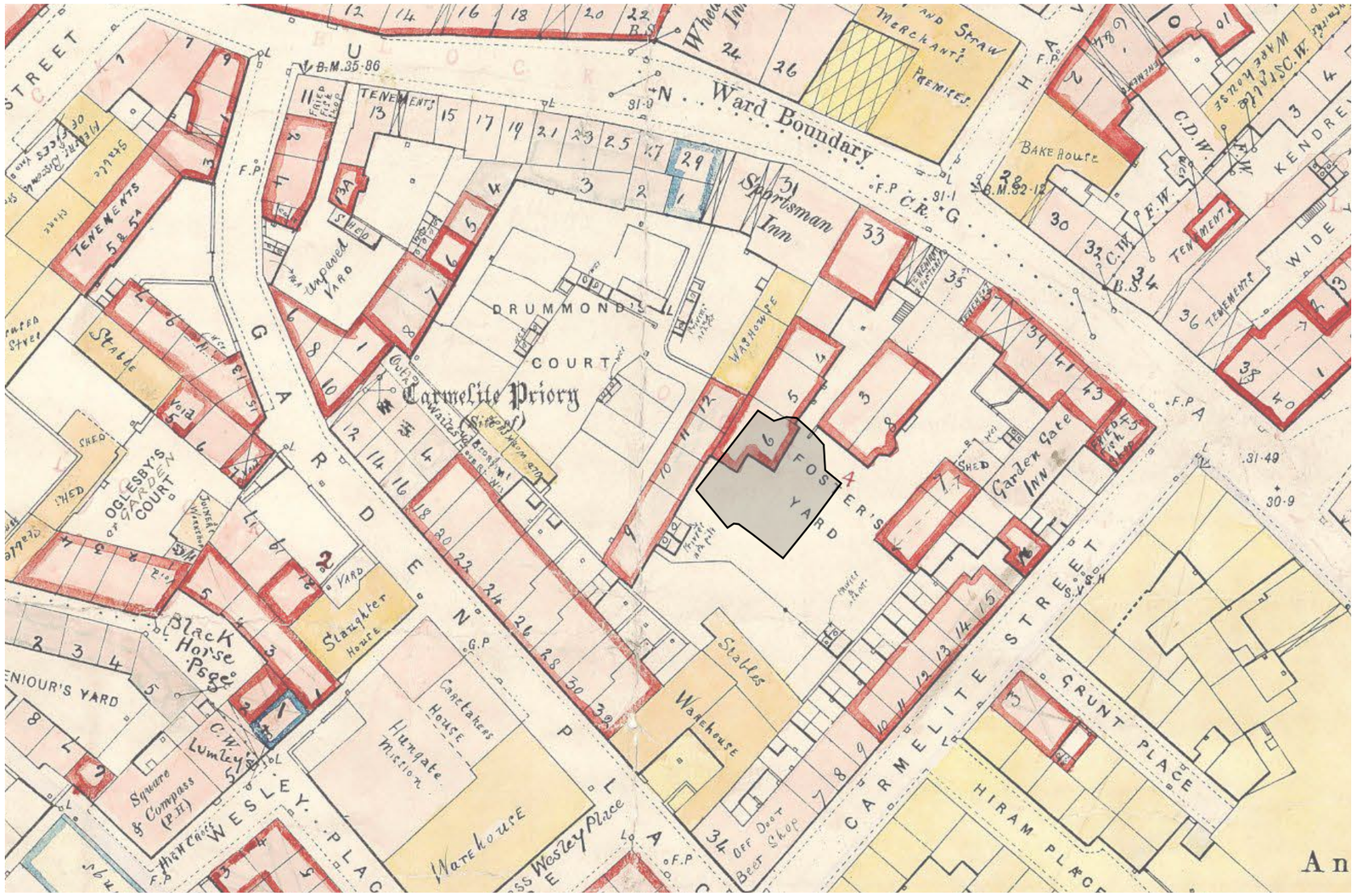


Fig. 23 Trench Location and 1907-8 Sanitation Survey Map

Fig. 24 Late 20th century aerial view of Hungate with warehouse building (Group 36002) highlighted in red.

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