

Northgate Redevelopment, Phase 1, Chester Archaeological Watching Brief Report

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Northgate Redevelopment, Phase 1, Chester

Archaeological Watching Brief Report

Written by Stephen Morgan

With contributions from Chris Howard-Davis and illustrations by Mark Tidmarsh

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Summary

Oxford Archaeology (OA) North was commissioned by Vinci Construction UK Ltd to undertake an archaeological watching brief at the Northgate Redevelopment, on Hunter Street and St Martin's Way, Chester (NGR: SJ 40312 66457), in respect of Phase 1 of the proposed Chester Northgate redevelopment. A Written Scheme of Investigation (WSI) was produced by OA North, which detailed the requirements for the necessary work. In total, seven watching brief test-pits (Test-pits 1 to 7) were excavated, to determine the depth, below the modern surface, of the uppermost significant archaeological deposits, and to identify any areas where significant archaeology may have been damaged or destroyed. The purpose of this was to determine the potential impact, on significant archaeological remains, of proposed structural features in this area, such as pile caps and lift pits, the trenches being positioned to encompass the proposed locations of as many of these features as was practicable. The fieldwork was undertaken between 13th and 28th January 2020.

The top of significant archaeology was identified in three test-pits (Test-pits 2, 3 and 4). This comprised a fragment of a wall (Test-pit 2), an horizon of sandstone rubble (Test-pit 3), and a dark soil containing Roman ceramics (Test-pit 4). The sandstone rubble deposits identified in Test-pits 2 and 3 are almost certainly associated with buildings in the Roman legionary fortress, probably barrack blocks within the central range. The significant archaeological remains were sealed by a thick build-up of dark soils that appear to have accumulated over a prolonged period, potentially (on stratigraphic grounds), from the early post-Roman period to the post-medieval period.



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Oxford Archaeology would like to Vinci Construction UK Ltd for commissioning this project, and Mark Leah, of the Cheshire Archaeological Planning Advisory Service (CAPAS), for his help and guidance. Thanks are also extended to Robert Symons, Mathew Legg and Jade Pearson of Vinci Construction UK Ltd, for their assistance on site.

The project was managed for Oxford Archaeology by Paul Dunn, the fieldwork being directed by Bryan Antoni and Anne Templeton. Survey and digitising was carried out by Mark Tidmarsh. The report was written by Stephen Morgan, with contributions from Chris Howard-Davis and Ian Smith, and was edited by Rachel Newman.



1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) was commissioned by Vinci Construction UK Ltd to undertake a watching brief during the excavation of seven test-pits along the length of the service diversion route along Hunter Street and the eastern pavement of St Martin's Way, Chester (SJ 40312 66457), in respect of Phase 1 of the proposed Chester Northgate redevelopment (Fig 1).
- 1.1.2 A Written Scheme of Investigation (WSI) was produced by OA North (*Appendix A*), which detailed the requirements for the necessary work. In total, seven test-pits (Fig 2) were excavated to determine the depth, below the modern surface, of the uppermost significant archaeological deposits, and to identify any areas where significant archaeology may have been damaged or destroyed. The purpose of this was to determine the potential impact, on significant archaeological remains, of proposed service diversion trenches in this area. The fieldwork was undertaken between 13th and 28th January 2020, over ten days.

1.2 Location, topography and geology

- 1.2.1 The proposed development area lies within the north-west corner of Chester's historic city centre, roughly centred at SJ 4039 6638 (Fig 1), being bounded by Hunter Street, to the north, St Martin's Way, to the west, Northgate Street to the east, and Watergate Street, to the south. For programming purposes, the scheme was divided into two phases, with Phase 1 being the northern part of the development, between Princess Street and Hunter Street, and Phase 2 covering the area to the south, from Princess Street to Watergate Street. The archaeological works forming the subject of this report were undertaken in respect of Phase 1. The site lies largely on Hunter Street, and is roughly centered on NGR SJ 40312 66457.
- 1.2.2 The Northgate site lies wholly within Chester's Area of Archaeological Importance (AAI), as designated under the terms of the Ancient Monuments and Archaeological Areas Act (1979), and is also within the city's zone of Primary Archaeological Character (considered to have the highest potential for significant heritage assets and the highest sensitivity to change), as defined in the Chester Archaeological Plan (Beckley and Campbell 2014). The latter was endorsed by the Cheshire West and Chester Local Development Framework Panel as a Key Evidence Base Document supporting the preparation of the Local Plan (M Leah *pers comm*).
- 1.2.3 The solid geology of the immediate area is characterised as Triassic sandstone and conglomerate sedimentary bedrock. The overlying drift geology is alluvium, comprising a mix of clay, silt and sand (BGS 2020), which form soils that are classified as slightly acidic loamy clay (Cranfield University 2020).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site is discussed in detail in the desk-based assessment for the whole development (OA North 2016). The area lies



within the north-western quadrant of the Roman legionary fortress, the largest in Britain (Mason 2012), and has also provided evidence of early medieval activity, around Princess Street (Mason 2007). Whilst the northern part of the site was largely open until the nineteenth century, forming gardens, the southern area was quite densely occupied, and medieval burgage plots extended back from both Northgate Street and Watergate Street (Ward 2009).



2 WATCHING BRIEF AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The main aim of the archaeological watching brief was to provide a permanent archaeological presence during the hand excavation of test-pits along Hunter Street and a small part of St Martin's Way (Fig 2). The main objectives were to identify, expose, and record any archaeological remains which were encountered during the work, furthering understanding of the level of preservation of archaeological remains in these locations, and assisting with providing further information so that a subsequent mitigation strategy could be developed.
- 2.1.2 The site-specific aims of the project were as follows:
 - i. to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;
 - ii. to determine or confirm the general nature of any remains present;
 - iii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
 - iv. to quantify the amount of disturbance which has been caused by modern intrusions, *ie* services;
 - v. to provide sufficient information that a fully and accurately costed subsequent mitigation scheme could be developed, should such remains be identified;
 - vi. to compile a professional archival record of any archaeological remains within the site.

2.2 Methodology

- 2.2.1 The project methodology, set out in the WSI (*Appendix A*), was adhered to in full, and was fully compliant with current guidelines and industry best practice (CIfA 2014a: 2014b: 2014c: Historic England 2015). The positions of the test-pits were surveyed by Vinci Construction UK Ltd, the principal contractor, and all service checks were also undertaken by Vinci prior to the commencement of the excavations. Overburden was removed by hand, under constant archaeological supervision, down to the depth required.
- 2.2.2 All information identified during the site works was recorded stratigraphically, using a system adapted from that used by the former English Heritage Centre for Archaeology, with an accompanying pictorial record (plans, sections, and digital photographs). Primary records were available for inspection at all times.
- 2.2.3 Results of all field investigations were recorded on *pro forma* context sheets. The site archive includes a photographic record, and accurate large-scale plans and sections at appropriate scales (1:50, 1:20, 1:10).
- 2.2.4 A full professional archive was compiled in accordance with the WSI, and with current professional guidelines (CIfA 2014c; Historic England 2015). The archive will be deposited with the Grosvenor Museum, Chester.



3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the watching brief are presented below, and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in *Appendix B*. Finds data and spot dates are tabulated in *Appendices C* and *D*.

3.2 Test-pit 1

3.2.1 Test-pit 1 (Pl 1) was situated on the southern side of Hunter Street, towards its western end (Fig 2), close to an earlier test-pit excavated in October 2019 (OA North 2019a, test-pit 7) and was excavated to a maximum depth of 1.20m, at 23.50m above Ordnance Datum (aOD). The earliest deposit encountered was a dark soil (1004; Fig 3), consisting of brownish-grey sandy silt with occasional mortar flecks. This was overlain by a 0.32m-deep dark soil (1003), consisting of a mid- to dark brownish-grey sandy silt containing frequent sandstone rubble and three sherds of medieval pottery, the top of this deposit being seen as the archaeological plane, 23.96m aOD. Dark soil 1003 was found to be sealed by a 0.36m-thick modern sandstone and brick levelling layer (1002), modern hardcore 1001 and tarmac 1000.



Plate 1: Test-pit 1, looking east (scale 1m)

3.3 Test-pit 2

3.3.1 Test-pit 2 (Pl 2; Fig 2) was situated in carriageway of Hunter Street, to the east of Test-pit 1, and also several test-pits excavated in October 2019 (OA North 2019a, test-pits 3, 5 and 6) and was excavated to a maximum depth of 1.2m (24.76m aOD). A small fragment of a red sandstone wall (*2005*; Fig 4) was identified at a depth of 24.46m

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aOD, which probably formed part of one of the barrack blocks of the Roman legionary fortress.



Plate 2: Test-pit 2, looking south (scales 1m and 0.2m)

3.3.2 Wall **2005** was overlain by a 0.25m-thick mid-brown silty clay deposit (**2004**), which contained frequent red sandstone and mortar fragments, with occasional fragments of ceramic building material. This would seem to relate to the build-up of soils over the demolished structures of the legionary fortress shortly after their demolition, and constitutes the archaeological plane at this locale, at 25.11m aOD. It was overlain by a dark greyish-brown clayey silt (**2003**), presumably a dark soil that had accumulated over sevaral centuries. This lay directly beneath modern rubble make-up (**2002**), hardcore (**2001**) and tarmac (**2000**).

3.4 Test-pit 3

3.4.1 Test-pit 3 (PI 3; Fig 2) was situated in the carriageway of Hunter Street, to the east of Test-pit 2, and was excavated to a maximum depth of 1.1m (25.23m aOD). Potentially significant archaeology was identified at a depth of 25.27m aOD, in the form of a midbrown silty-clayey-sand with frequent mortar and sandstone fragments (**3004**; Fig 3). This was overlain by a 0.44m-thick layer of dark grey-brown clayey silty sand (**3003**), which had clearly been disturbed by services (**3005**), and itself underlay a modern make-up layer (**3002**), hardcore (**3001**) and tarmac (**3000**).



Northgate Redevelopment, Phase 1, Chester



Plate 3: Test-pit 3, looking east (scale 1m)

3.5 Test-pit 4

3.5.1 Test-pit 4 (PI 4; Fig 2) was situated in the carriageway of Hunter Street, to the east of Test-pit 3, and was excavated to a maximum depth of 1.2m, at 26.04m aOD. The earliest deposit encountered was a greyish-brown clayey silt (**4003**; Fig 3), which contained a sherd of Roman pottery and five fragments (98g) of wall plaster, therefore, the top of this deposit is the level of the archaeological plane, 26.65m aOD. This deposit was directly overlain by a modern sandstone make-up layer (**4002**), hardcore (**4001**) and tarmac (**4000**).



Plate 4: Test-pit 4, looking south (scale 1m)



3.6 Test-pit 5

3.6.1 Test-pit 5 (PI 5; Fig 2) was situated in the carriageway of Hunter Street, and was the easternmost test-pit to be excavated, immediately south of another test-pit excavated as part of the previous phase of test-pitting on Hunter Street (OA North 2019b, test-pit 4). It was excavated to a maximum depth of 1.15m, at 27.28m aOD. A modern cast-iron water pipe was identified at the base (**5003**; Fig 3), which was within a yellow-brown sand (**5002**). This deposit was overlain by modern hardcore (**5001**) and tarmac (**5000**).



Plate 5: Test pit 5, looking east (scale 1m)

3.7 Test-pit 6

3.7.1 Test-pit 6 (PI 6; Fig 2) was situated within the footpath on the eastern side of St Martin's Way, in the vicinity of other test-pits excavated in October 2019 (OA North 2019a, test-pits 8 and 9). It was excavated to a maximum depth of 0.90m, at 20.80m aOD. The earliest deposit identified was a mid-brownish-red silty sand with occasional modern brick fragments (*6007*; Fig 5). This was cut by several modern services, which were in turn sealed by modern hardcore (*6001*) beneath a concrete slab (*6000*).





Plate 6: Test-pit 6, looking south (scale 1m)

3.8 Test-pit 7

3.8.1 Test-pit 7 (PI 7; Fig 2) was situated within the footpath on the eastern side of St Martin's Way, to the south of Test-pit 6 and in the vicinity of another test-pit excavated in October 2019 (OA North 2019a, test-pit 12). It was excavated to a maximum depth of 0.90m, at 21.08m aOD. Two north/south-aligned concrete retaining walls (7006, 7007; Fig 5) were present on the western and eastern edges of this trench respectively, these presumably being associated with a former underpass in the vicinity (*ibid*). The space between these walls was infilled with hardcore (7004), cut by services, which was overlain by a layer of bedding sand (7001) for a paved surface of concrete slabs (7000).



Plate 7: Western half of Test-pit 7, looking south (scale 1m)



3.9 Finds and palaeoenvironmental summary

- 3.9.1 A small assemblage of 12 artefacts was assessed (*Appendix C*). The artefacts were recovered from only two contexts, dark soils **1003** and **4003**, in Test-pits 1 and 4. These artefacts comprised four sherds of pottery, one Roman, from dark soil **4003**, whilst the remaining three sherds were medieval in date, from dark soil **1003**. Five fragments of a very sandy white plaster were recovered from dark soil **4003**, two of which had evidence of paint on their surfaces. Two fragments of slate also came from dark soil **4003**, as well as a copper-alloy hoop or loop.
- 3.9.2 The faunal assemblage (*Appendix D*) comprised a small collection of eight mammal bones and one tooth (44g). Again, as with the artefact assemblage, the remains were all recovered from dark soils **1003** and **4003**, the majority coming from **4003**.



4 **DISCUSSION**

4.1 Reliability of field investigation

4.1.1 In general, the reliability of the watching brief was good, with the differing deposits being clearly visible. The weather was variable throughout, with low sunlight sometimes affecting visibility.

4.2 Watching brief objectives and results

- 4.2.1 The archaeological watching brief undertaken on Hunter Street and St Martin's Way achieved the principal objectives by providing important new information on the extent of modern disturbance below the roads and pavements, and by determining the state of preservation and the level, below the modern surface, of archaeologically significant deposits. These were identified in three of the seven test-pits (Test-pits 2, 3 and 4). The remainder of the test-pits excavated only contained modern services.
- 4.2.2 The fragment of a possible wall (**2005**) uncovered in Test-pit 2, at 24.46m aOD, may be significant, as it could potentially relate to the barracks of the Roman legionary fortress. Deposits which are likely to have formed shortly after the demolition of the barracks were uncovered in Test-pits 2 (**2004**), 3 (**3004**) and 4 (**4003**), at 25.11m aOD, 25.27m aOD and 26.65m aOD respectively.
- 4.2.3 Except where removed by modern intrusions, the significant archaeological remains were sealed by layers of dark soil, probably dating to the medieval and earlier post-medieval periods. These were in turn overlain by modern deposits.
- 4.2.4 A thick layer of sandstone rubble and brick levelling immediately below the tarmac and hardcore was identified in all but one of the Hunter Street test-pits. This levelling layer is likely to have been laid as a foundation for Hunter Street and also suggests that the putative sandstone walls identified in previous test-pits along Hunter Street (OA North 2019a; 2019b) may have been similar material.
- 4.2.5 In the two test-pits on St Martin's Way (Test-pits 6 and 7), no remains of archaeological significance were found. There, all recorded deposits were clearly modern, relating to the construction of St Martin's Way itself, and the associated footpath, or, in the case of Trench 7, to a former underpass that had once extended beneath the road, but which had later been infilled.



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APPENDIX A WRITTEN SCHEME OF INVESTIGATION



Northgate Redevelopment Phase 1, Hunter Street, Chester Written Scheme of Investigation Archaeological Watching Brief

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Northgate Redevelopment Phase 1, Hunter Street, Chester

Written Scheme of Investigation for an Archaeological Watching Brief

Centred on SJ 40312 66457

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1 INTRODUCTION

1.1 Project details

- 1.1.1 Oxford Archaeology (OA) North has been commissioned by Vinci Construction UK Limited to undertake an archaeological watching brief during the excavation of up to five test pits on Hunter Street, as part of the site of a proposed multi-use development, Chester Northgate Redevelopment Phase 1 (NGR: SJ 40312 66457; Fig 1).
- 1.1.2 The city of Chester is renowned as a place of immense historical significance, in recognition of which the buried archaeological remains across much of the historic city centre are afforded statutory protection as an Area of Archaeological Importance (AAI) under the terms of the Ancient Monuments and Archaeological Areas Act (1979). Within the AAI, where all archaeological remains are considered in the same way as scheduled monuments, a planning application has been submitted for the redevelopment of the Northgate area, which lies in the heart of the historic city centre, west of Northgate Street and north of Watergate Street (SJ 4039 6638). The Chester Northgate Project comprises a mix of retail, residential and leisure development extending over an area in excess of 5ha. It is proposed that construction will be undertaken in three phases (Phases 0, 1, 2), with work commencing on the northern part of the site (Phases 0 and 1), between Hunter Street and Princess Street. A detailed planning application in respect of Phases 0 and 1 was submitted to CWaC in June 2016.
- 1.1.3 In addition to being located within Chester's AAI (*Section 1.1.2*), the Northgate site encompasses all or part of seven of the city's primary Archaeological Character Areas, as defined in the Chester Archaeological Plan (Beckley and Campbell 2014). The Plan, funded by English Heritage (now Historic England) as part of the Chester Urban Archaeological Database (UAD) Project, was endorsed by the Cheshire West and Chester Local Development Framework Panel as a key Evidence Base Document supporting the preparation of the Chester District Local Plan (M Leah *pers comm*).
- 1.1.4 Within the Northgate site, the character, significance and preservation of buried archaeological remains is generally well understood, since the area has, over the past 25 years, been subject to a range of archaeological investigations, including evaluation trenching, borehole observations and archaeological audits, in respect of earlier proposals (not subsequently progressed) for the redevelopment of the area. At the request of the Development Management Archaeologist for the Cheshire Archaeological Planning Advisory Service (CAPAS), two phases of evaluation trenching were also carried out by Oxford Archaeology North (OA North) in respect of the present scheme (OA North 2015; 2016a), and OA North has also prepared three deskbased assessments (DBAs) for differing aspects of the project. The first of these (OA North 2016b), which collated the results of earlier archaeological interventions in the area, assessed the potential of the surviving archaeology within the site, and presented estimates for the predicted impact of the Northgate scheme on significant archaeological remains, was presented as a technical appendix to the planning application for Phases 0 and 1 (Section 1.1.1). The other two DBAs were prepared to inform proposals for the construction of a new surface-water drain linking the

development site with the River Dee (OA North 2016c) and for the construction of an electricity substation to serve the new development (OA North 2016d).

- 1.1.5 In 1997, a Brief and Specification for archaeological mitigation works within the Northgate site was prepared by the former Chester City Archaeologist in respect of an earlier development proposal (Morris 1997). A substantially revised version of this document, presented as an annex to the development brief for the present Northgate project, identified four zones of differing archaeological potential (Zones 1-4), in terms of the likelihood (or otherwise) for the survival of significant below-ground archaeological remains. Within the zones of greatest archaeological significance (Zones 1 and 2), the brief stipulates that there should be a presumption in favour of *in* situ preservation of archaeological deposits, with an intrusive impact of no more than 3% where damage or destruction of archaeological remains is unavoidable. No such constraints apply to Zone 3 (archaeological potential uncertain) or Zone 4 (archaeological remains believed to be wholly or largely destroyed), but an appropriate level of archaeological mitigation is required where archaeological deposits requiring 'preservation by record', but not of sufficient significance to be preserved in situ, are found to exist.
- 1.1.6 Consequently, the Development Management Archaeologist at CAPAS requested that Written Schemes of Investigation (WSIs) should be prepared, detailing the proposed methodologies for each of the archaeological mitigation strategies (namely *in situ* preservation, excavation, strip-and-record and watching brief) that are to be adopted in respect of Phases 0 and 1 of the Chester Northgate scheme. The present document represents the WSI for archaeological watching brief to be undertaken during the excavation of up to five test pits.
- 1.1.7 This scheme of test pits has been requested by the client due to a requirement to identify a clear route for the proposed service diversions. Fieldwork undertaken in August 2019 (OA North 2019), had identified a route along the northern side of Hunter Street, however, upon further scrutiny by the client, although clear of archaeology, this route did not appear to allow sufficient room around existing services to install the new ones. As such, a new route was designed (Fig 2), and the purpose of this scheme of test pits is to identify whether the new service route would impact upon the archaeological plane; this document outlines how OA will implement those requirements.
- 1.1.8 All work will be undertaken in accordance with local and national planning policies referenced within this document.

1.2 Oxford Archaeology

1.2.1 OA North, based in Lancaster, is the northern office of Oxford Archaeology (Chartered Institute for Archaeologist's (CIfA) registered organisation no 17), the leading archaeological and heritage practice in the country, employing in excess of 250 professionals across three regional offices. OA North is itself the largest archaeological contractor in north-west England. As a registered educational charity, OA is dedicated to maintaining and promoting the highest professional, academic, commercial and ethical standards and to the provision of access to archaeology for all. It has both an

established reputation and a philosophical imperative in the pursuit of efficient and cost-effective fieldwork, post-excavation excellence, and high-quality publication and outreach. We pride ourselves on our delivery of accessible outreach, including open days, lectures, information panels, leaflets, *etc*.

1.2.2 With over 40 years of experience in commercial archaeology, OA has undertaken tens of thousands of archaeological investigations of all types, scales and periods, from desk-based assessments to major open-area excavations. OA has particular experience of working closely with principal contractors, consultants, and curators to undertake high-quality archaeological works within the tight timetables and high-pressure environments of major projects.



2 AIMS AND OBJECTIVES

2.1 Academic Aims

- 2.1.1 The main aim of this archaeological watching brief of Phase 1 of the Northgate scheme, is to provide a permanent archaeological presence during the hand excavation of up to five test pits along Hunter Street (Fig 2). For the most part, these areas correspond with Zones 1 (*Section 1.1.4*). The main objective of the watching brief should be to identify, expose, and record, any archaeological remains which are encountered during the test pitting, furthering understanding of the level of preservation of archaeological remains in these locations and assisting with providing further information so that a subsequent mitigation strategy can be developed.
- 2.1.2 All archaeological work will be carried out in accordance with best practice guidelines, including the following:
 - Historic England's Management of research projects in the historic environment, or MORPHE (2015), with specific reference to the tenets of MORPHE's Project Planning Note 3: archaeological excavation;
 - the second edition of English Heritage's (now Historic England's) Management of archaeological projects, or MAP 2 (English Heritage 1991);
 - the European Association of Archaeologist's (EAA's) Principles of conduct for archaeologists involved in contract archaeological works (EAA 1998);
 - the ClfA's Code of conduct (2014a); Code of approved practice for the regulation of contractual arrangements in field archaeology (2014b); and Standard and guidance for an archaeological watching brief (2014c);
 - the National Planning Policy Framework (NPPF; DCLG 2012).

2.2 Specific aims and objectives

- 2.2.1 The specific aims and objectives of the watching brief are:
 - i. to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;
 - ii. to determine or confirm the general nature of any remains present;
 - iii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
 - iv. to quantify the amount of disturbance which has been caused by modern intrusions, *i.e.* services;
 - v. provide sufficient information that a fully and accurately costed subsequent mitigation scheme can be developed, should such remains be identified;
 - vi. to compile a professional archival record of any archaeological remains within the site.



3 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

3.1 Scope of works

3.1.1 The works will involve the hand excavation, by the Principal Contractor, of up to five test pits of varying size, on Hunter Street (Fig 2). The test pits will be excavated to the top of the archaeological horizon or to the proposed formation level of the service trenches, whichever occurs first. The main aim of the watching brief being to monitor the works being undertaken by the Principal Contractor and to identify and record any archaeological remains encountered. Once the test pits have been excavated, they will be hand cleaned and recorded by the archaeologist. Once they have been fully recorded, they will be backfilled by the Principal Contractor.

3.2 Programme

- 3.2.1 It is anticipated that the fieldwork will take up to 7 days to complete, by a project supervisor, Bryan Antoni, under the management of Paul Dunn, Senior Project Manager.
- 3.2.2 All fieldwork undertaken by OA North is overseen by the Operations Manager, Alan Lupton MCIfA.

3.3 Site specific methodology

- 3.3.1 **Watching Brief**: the five test pits will be hand dug by operatives provided by Principal Contractor, under constant monitoring of the OA North archaeologist. The hand excavation will proceed to the first significant archaeological horizon or to the formation level of the services trenches, whichever occurs first.
- 3.3.2 Once the test pits have been fully excavated, they will be cleaned by hand sufficiently to enhance any features or stratigraphy. All information identified in the course of the site works will be recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage. Results of the watching brief will be recorded on *pro-forma* context sheets and will be accompanied with sufficient pictorial records (plans, sections and digital photographs) to identify and illustrate individual features. The site archive will include plans and sections at appropriate scales (plans 1:20 and sections 1:10).
- 3.3.3 A full and detailed photographic record of individual contexts will be maintained and similarly general views from standard viewpoints of the overall site at all stages of the evaluation will be generated. Photography will be undertaken using 16 or 18 megapixel digital SLR or hybrid compact digital cameras, and all frames will include a graduated metric scale (Historic England 2015b). The images will be taken in JPEG and RAW formats. Photograph records will be maintained on special photographic *pro-forma* sheets.
- 3.3.4 *Human remains*: are not expected to be present, but if they are found relevant Home Office permission will be sought, and the removal of such remains will be carried out with due care and sensitivity as required by the Burials Act 1857 and industry best practice.



- 3.3.5 **Treasure**: any gold and silver artefacts recovered during the course of the works will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act 1996.
- 3.3.6 *Finds Policy*: finds recovery and sampling programmes will be in accordance with best practice (following current Chartered Institute for Archaeologists guidelines) and subject to expert advice in order to minimise deterioration. Finds will be recorded and reported on by appropriately qualified staff.
- 3.3.7 **Environmental Policy**: the strategy for palaeo-environmental and other specialist sampling will be developed on site, in consultation with appropriate specialists, as necessary. The environmental sampling strategy will therefore evolve from discussion between those specialists and the field team and will be in accordance with current best practice. In broad terms, however, the sampling strategy will be aimed at recovering palaeobotanical, palaeo-zoological and pedological evidence, from appropriately stratified contexts, should any such features be identified during the course of the excavation.
- 3.3.8 **Backfilling**: the test pits will be backfilled once they have been fully recorded by the OA North archaeologist.



4 **PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY**

4.1 Programme

4.1.1 A copy of the report in Adobe Acrobat (.pdf) format will be provided to the client and the CAPAS archaeologist for review and approval. A digital copy of the report will also be made available through OASIS.

4.2 Report Content

- 4.2.1 A draft copy of a written synthetic post-excavation assessment report will be submitted to the client for comment within six weeks of completion of the fieldwork, although the time frame for production of the report can be tailored to the client's requirements upon prior agreement. The report will include a copy of this WSI, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and present an assessment of the history of the site. The report will include the following:
 - A title page detailing site address, NGR, author/originating body, client's name and address;
 - Full content's listing;
 - A non-technical summary of the findings of the fieldwork;
 - A description of the archaeological background;
 - A detailed account of the historical development of the site, as appropriate;
 - A description of the topography and geology of the site;
 - A description of the methodologies used during the fieldwork;
 - A description of the findings of the fieldwork;
 - Detailed plans of the watching brief and evaluation trenches, showing the archaeological features exposed. The site location will be plotted with at least 4 12-figure national grid references on the site plan at a scale of 1:2500;
 - Interpretation of the archaeological features exposed and their context within the surrounding landscape;
 - Specialist analysis reports on the artefactual/ecofactual/industrial remains from the site;
 - Appropriate photographs of specific archaeological features. Appropriate photographs of specific finds of interest will also be included, if needed;
 - A consideration of the importance of the archaeological remains present on the site in local, regional and national terms;
 - A complete bibliography of sources consulted;
 - Illustrative material will include a location map, site map, site plans and pertinent photographs.



4.3 Specialist input

4.3.1 OA has a large pool of internal specialists, as well as a network of external specialists with whom OA have well established working relationships. A general list of these specialists is presented in *Section 8*; in the event that additional input should be required, an updated list of specialists can be supplied.

4.4 Archive

- 4.4.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current Historic England guidelines (2015a), and in accordance with the Guidelines for the Preparation of Excavation Archives for Long-Term Storage (UKIC 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format
- 4.4.2 The site archive will be deposited with the Grosvenor Museum, Chester following the completion of the project. This will follow appropriate industry guidelines (CIFA 2014c). The Arts and Humanities Data Service (AHDS) online database project Online Access to index of Archaeological Investigations (OASIS) will be completed as part of the archiving phase of the project.



5 HEALTH AND SAFETY

5.1 General

- 5.1.1 The Project Manager, Paul Dunn, has responsibility for ensuring that safe systems of work are adhered to on site. Elements of this responsibility will be delegated to the Project Officer, Ian Smith, who implements these on a day to day basis. Paul Dunn and Bryan Antoni are supported by OA North's Health and Safety Advisor, Fraser Brown.
- 5.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore Tech IOSH (Chief Business Officer).

5.2 Method statement and risk assessment

- 5.2.1 All work will be undertaken in accordance with the current OA Health and Safety Policy, the OA Site Safety Procedures Manual, a site-specific Risk Assessment and, if required, Safety Plan or Method Statement. Copies of the site-specific documents will be submitted to the client or their representative for approvals prior to mobilisation, and all relevant H and S documentation will be available on site at all times. The Health and Safety documentation will be read in conjunction with the project WSI.
- 5.2.2 Where a project falls under the Construction (Design and Management) Regulations (2015), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan (CPP).
- 5.2.3 The archaeological contractor should be fully familiar and will comply with all current and relevant legislation, including, but not limited to:
 - The Health and Safety at Work Act (1974);
 - Management of Health and Safety at Work Regulations (1999);
 - Manual Handling Operations Regulations 1992 (as amended in 2002);
 - The Construction (Design and Management) Regulations (2015);
 - The Control of Asbestos Regulations (Revised 2012);
 - Confined Spaces Regulations (1997);
 - The Workplace (Health, Safety and Welfare) Regulations (1992);
 - Construction (Health, Safety and Welfare) Regulations (1996);
 - The Work at Height Regulations (2005);
 - The Control of Substances Hazardous to Health Regulations (2002);
 - The Health and Safety (First Aid) Regulations (1981);
 - The Regulatory Reform (Fire Safety) Order (2005);
 - The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995);
 - The Provision and Use of Work Equipment Regulations (1998);
 - Lifting Operations and Lifting Equipment Regulations (1998).



5.3 Services and Other Constraints

5.3.1 Service plans will be provided by the Principal Contractor and will be available on site. However, the identification and marking of any services will be the responsibility of the principal contractor. The OA North archaeologist will be made aware of any services encountered.

5.4 Contamination

5.4.1 Any known contamination issues or specific health and safety requirements on site will be made known by the Principal Contractor to ensure all procedures can be met, and that the risk is dealt with appropriately. Should any presently unknown contamination be discovered during the works, it may be necessary to halt the works and reassess the risk assessment.

5.5 Ground Conditions

- 5.5.1 Areas of unstable and infilled ground may be encountered during the fieldwork, for example within, or in the vicinity of, infilled cellars/basements or large, deep service runs. The stability of the ground should be constantly monitored during the works and should it be deemed that work be halted for health and safety reasons, the Client, CAPAS and Historic England should be informed immediately.
- 5.5.2 Archaeological personnel should not enter individual features that are more than 1.2m deep (or shallower features that are narrow and/or potentially unstable), but if access to such a feature proves necessary, the sides should first be appropriately shored, and a safe means of access and egress (*eg* a properly secured ladder) should be provided.

5.6 Staff Issues

- 5.6.1 All staff will be provided with appropriate Personal Protective Equipment (PPE), including steel toe and mid-soled boots, high-visibility vest, and a hard hat. All staff will be CSCS qualified, proof of which will be provided in the form of their CSCS card.
- 5.6.2 Welfare facilities, including a toilet and hand-washing facilities, will be provided by the Principal Contractor.
- 5.6.3 The Northgate area is located in the centre of Chester, and it is assumed that the site will be appropriately secured by the Principal Contractor.

5.7 Monitoring of works

- 5.7.1 At least 10 days' notice of the commencement of the archaeological watching brief will be given to Mark Leah and Kirsty Lloyd, Planning Archaeologists for Cheshire Archaeology Planning Advisory Service (CAPAS).
- 5.7.2 CAPAS will have free access to the site (subject to Health and Safety considerations) and all records to ensure the works are being carried out in accordance with this WSI and all other relevant standards.



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7 FIGURES

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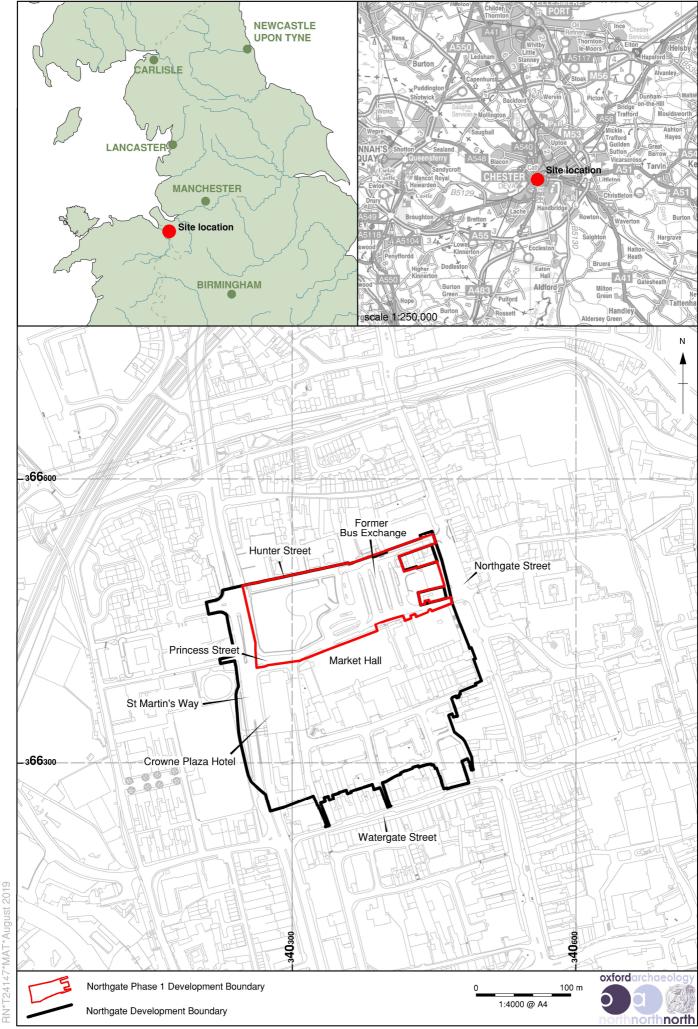
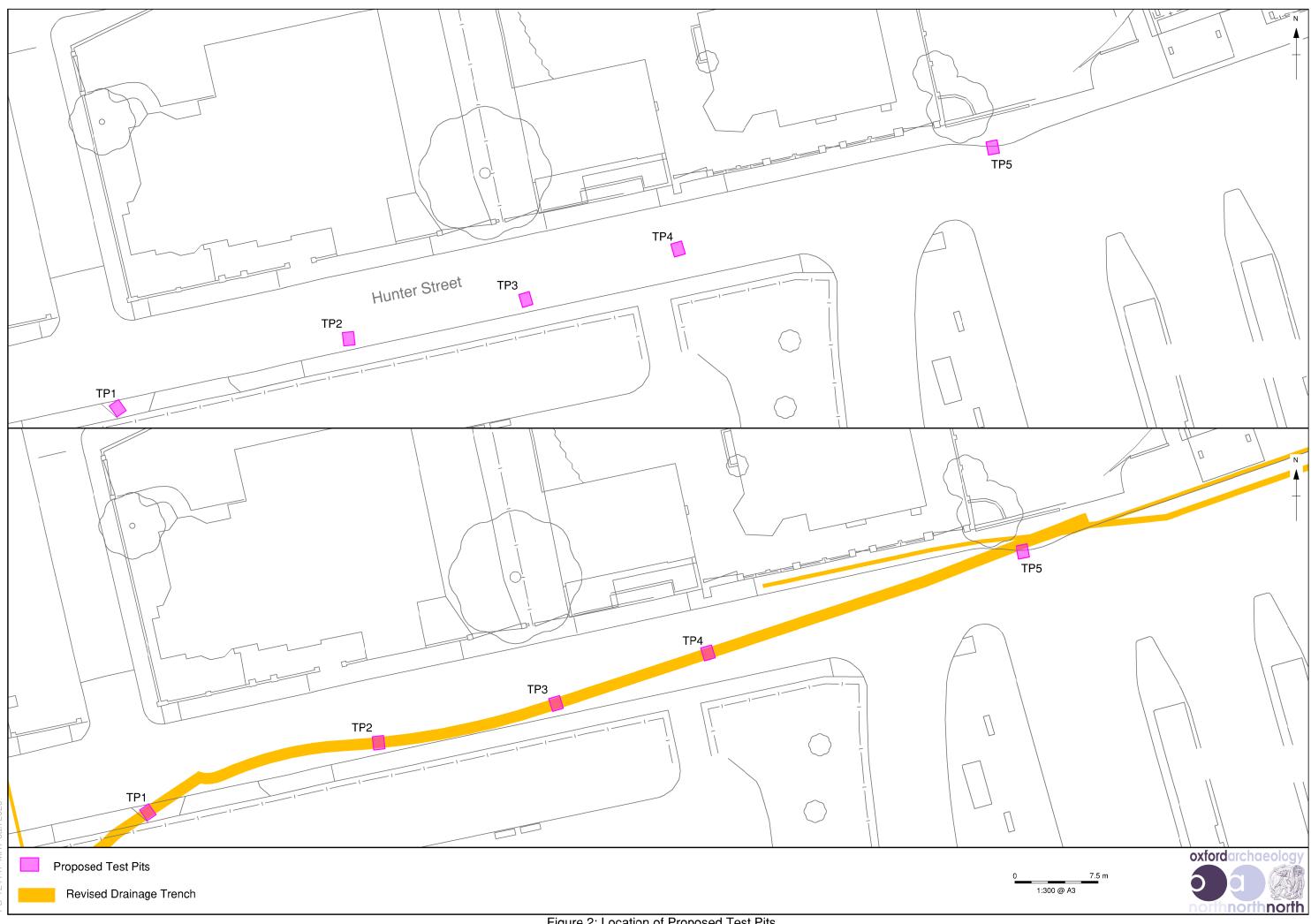


Figure 1: Chester Northgate development location

N*



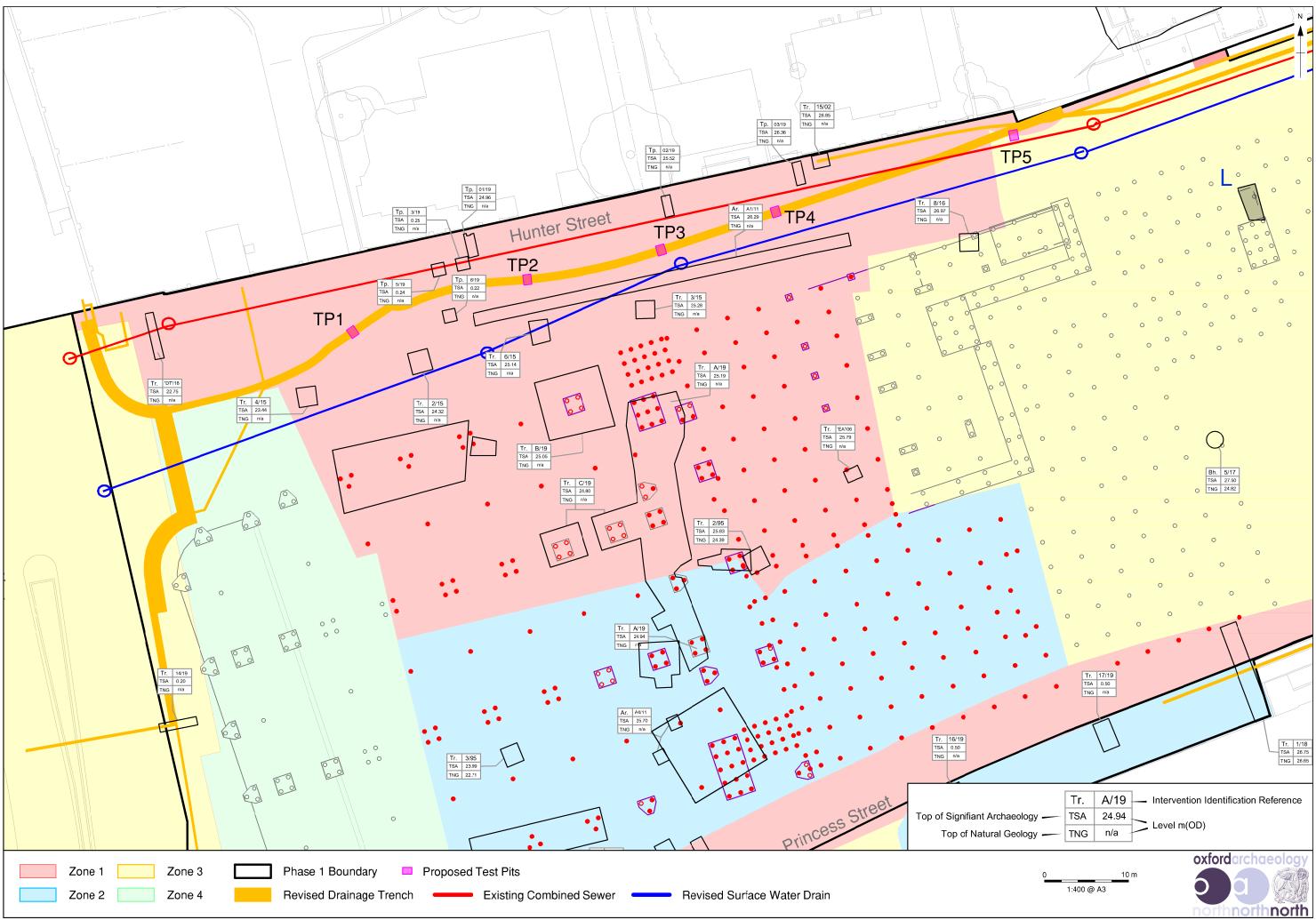


Figure 3: Proposed test pits, with revised drainage trench and surface water drain



8 LIST OF SPECIALISTS REGULARLY USED BY OA

8.1.1 Below are two tables, one containing 'in-house' OA specialists, and the other containing a list of external specialists who are regularly used by OA.

Specialist	Specialism	Qualifications
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MClfA
Dr Alex Davies	Prehistoric Pottery	BA (Hons), MA, PhD, ACIfA
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Kate Brady	Roman Pottery	BA, ACIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
lan Scott	Metalwork and Glass	BA (Hons)
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD, MCIfA
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MCIfA, FSA Scot
Lee Broderick	Animal bone	BA (hons), MA, MSc, FZG, SAC Dip (ecology)
Dr Mairead Rutherford	Pollen	BSc, MSc
Ian Smith	Animal Bone	BSc, MSc
Dr Martyn Allen	Animal Bone	BA (Hons), MA, PhD
Dr Denise Druce	Charred plant remains, charcoal and pollen	BA (Hons), PhD, MCIfA
Sharon Cook	Charred plant remains	BSc, MSc, ACIfA
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc, ACIfA
Nicola Scott	Archaeological archive deposition	BA (Hons Dunelm)
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	D.Phil, BA, MCIfA
Helen Webb	Human Bone	MSc, BSc
Mark Gibson	Human Bone	MSc, BA
Dr Lauren McIntyre	Human Bone	D.Phil, MSc, BSc

Internal archaeological specialists used by OA



Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hons)
Quita Mould	Leather	BA, MA
Penelope Walton Rogers, The Anglo Saxon Laboratory	Identification of Medieval Textiles	FSA, Dip.Acc
Dana Goodburn-Brown	Conservation	BSc (Hons), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard Macphail	Soils, especially Micromorphology	BA (Hons), MSc, PhD
Dana Challinor	Charcoal	MA, MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hons), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), D.Phil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)
Dr John Whittaker	Ostracods and Foraminifera	BA (Hons), PhD
Dr John Crowther	Soil Chemistry	MA, PhD
Dr Martin Bates	Geoarchaeology	BSc, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MCIfA
Dr Hugo Anderson- Wymark	Flint	BSc, PhD, FSA Scot, MCIfA
Dr Damian Goodburn- Brown	Ancient Woodwork	BA, PhD

External archaeological specialists regularly used by OA









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APPENDIX B DESCRIPTIONS AND CONTEXT INVENTORY

Test-pit 1	Test-pit 1								
General o	lescriptio	n		Orientation	N/S				
This test-	-pit was	excavate	d to a n	naximum depth of 1.2m, at	Length (m)	1.20			
23.50m a	above Or	dinance	Datum	(aOD). The earliest deposit	Width (m)	1.00			
encounte	red was a	dark bro	wnish-gr	ey sandy silt (1004). This was	Max depth (m)	1.00			
overlain	by a 0.32	2m-thick	layer of	mid- to dark brownish-grey					
sandy silt	: (1003) c	ontainin	g frequer	nt sandstone rubble. This lay					
below a	0.36m-de	ep mode	ern sands	stone and brick rubble layer					
(1002), m	odern ha	rdcore (1	001) and	tarmac (1000).					
Context	Туре	Width	Depth	Description	Finds	Date			
No		(m)	(m)						
1000	Layer	-	0.08	Tarmac	-	Modern			
1001	Layer	-	0.10	Hardcore	-	Modern			
1002	Layer	-	0.36	Make-up, compacted	-	Modern			
				sandstone rubble, brick,					
				mortar					
1003	Layer	-	0.32	Mid- to dark brownish-grey	Medieval	Medieval			
				sandy silt containing	pottery; animal				
				frequent sandstone rubble	bone				
1004	Layer	-		Dark brownish-grey sandy	-	Medieval/			
				silt with occasional mortar		Roman			
				flecks					

Test-pit 2						
General d	lescription		Orientation	E/W		
A small fr	agment of a	Length (m)	2.50			
a depth o	f 24.46m aC	D, which	probably	y formed part of one of the	Width (m)	1.10
barrack b	locks of the	Roman le	egionary	fortress. It was overlain by	Max depth (m)	1.20
a 0.25m	-thick mid-	brown s	silty clay	/ deposit (2004), which		
contained	frequent i	red sands	stone an	d mortar fragments, with		
occasiona	al fragments	s of cera	mic buil	ding material. This would		
seem to	relate to t	he build	-up of s	oils over the demolished		
structures	s of the legi	onary for	tress sho	ortly after their demolition,		
and cons	titutes the	archaeolo	ogical pla	ane at this locale, 25.11m		
		-		n-brown clayey silt (2003),		
presumat	oly a dark	soil tha	t had a	iccumulated over sevaral		
	•	•		modern rubble make-up		
(2002), ha	ardcore (200		rmac (20	00).		
Context	Туре	Width	Depth	Description	Finds	Date
No		(m)	(m)			
2000	Layer	-	0.08	Tarmac	-	Modern
2001	Layer	-	0.13	Hardcore	-	Modern
2002	Layer	-	Make-up, compacted	-	Modern	
				sandstone rubble, brick,		
				mortar		

V. 1



Context No	Туре	Width (m)	Depth (m)	Description	Finds	Date
2003	Layer	-	0.36	Dark greyish-brown clayey silt with occasional sandstone inclusions	-	Medieval
2004	Layer	-	0.25	Mid-brown silty clay with sandstone fragments and and sandy mortar	-	Roman
2005	Structure	-		Red sandstone wall	-	Roman

Test-pit 3						
-	descriptio	n	Orientation	N/S		
Potential	iy significa	ant archa	Length (m)	1.20		
25.27m a	OD, in th	e form o	f a mid-k	prown silty-clayey sand with	Width (m)	1.00
frequent	mortar a	and sand	lstone fi	ragments (3004). This was	Max depth (m)	1.10
	•		•	dark grey-brown clayey-silty		
			-	nodern make-up layer (3002),		
hardcore	(3001) an	d tarmac	(3000).			
Context	Туре	Width	Depth	Description	Finds	Date
No		(m)	(m)			
3000	Layer	-	0.08	Tarmac	-	Modern
3001	Layer	-	0.13	Hardcore	-	Modern
3002	Layer	-	0.36	Make-up, compacted sandstone rubble, brick, mortar	-	Modern
3003	Layer	-	0.44	Dark grey-brown clayey- silty sand	-	Post- medieval/ Medieval
3004	Layer	-	- Mid-brown silty-clayey sand with frequent mortar fragments and sandstone rubble		-	Roman
3005	Service	-	0.75	Cast-iron pipe	-	Modern
3006	Fill	-	-	Fill of 3009	-	Modern
3007	Fill	-	Fill of 3009	-	Modern	
3008	Fill	-	-	Fill of 3009	-	Modern
3009	Cut	-	0.50	Cut for services	-	Modern

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V. 1



Test-pit 4	Test-pit 4									
General o	descriptio	n	Orientation	N/S						
This test-	pit was e	xcavated	Length (m)	1.30						
26.04m (a	aOD). The	lowest c	leposit e	ncountered was a greyish-	Width (m)	1.10				
brown cla	ayey silt ((4003), w	hich cor	tained a sherd of Roman	Max depth (m)	1.20				
pottery,	fragments	s of wall	plaster	and slate, a copper-alloy						
object, po	ossibly a h	ook, and	animal b	one, the top of this deposit						
being see	n as the a	rchaeolo	gical plan	e, 26.65, aOD. This deposit						
was over	lain by m	odern m	ake-up la	ayer 4002 , hardcore 4001						
and tarm	ac 4000 .									
Context	Туре	Width	Depth	Description	Finds	Date				
No		(m)	(m)							
4000	Layer	-	0.09	Tarmac	-	Modern				
4001	Layer	-	0.15	Hardcore	-	Modern				
4002	Layer	-	0.35	Make-up, compacted	-	Modern				
				sandstone rubble, brick,						
				mortar						
4003	Layer	-	-	Greyish-brown clayey silt	Roman pottery;	Late				
				with occasional	wall plaster;	Roman/post-				
				sandstone	slate; copper-	Roman?				
					alloy object;					
					animal bone					

Test-pit 5	Test-pit 5									
General o	lescriptio	า		Orientation	N/S					
This test-	pit was e	xcavated	l to a ma	aximum depth of 1.15m, at	Length (m)	1.15				
27.28m (a	aOD). Its k	base was	found to	o contain a modern cast-iron	Width (m)	0.94				
water pip	e within a	a yellow-	brown sa	and (5002). This deposit was	Max depth (m)	1.15				
overlain b	y hardcor	e (5001)	and tarm	nac (5000).						
Context	Туре	Width	Depth	Description	Finds	Date				
No		(m)	(m)							
5000	Layer	-	0.13	Tarmac	-	Modern				
5001	Layer	-	0.45	Hardcore	-	Modern				
5002	Layer	-	-	Modern						
5003	Service	-	-	Cast-iron pipe	-	Modern				

Test-pit 6	Test-pit 6									
General o	description				Orientation	E/W				
This test-	-pit was ex	cavated	to a max	ximum depth of 0.90m, at	Length (m)	1.73				
21.03m (aOD). The	lowest de	eposit wa	as a mid-brownish-red silty	Width (m)	0.60				
sand with	n occasional	modern	brick frag	gments (6007). This deposit	Max depth (m)	0.90				
was cut b	y modern s	ervices a	nd was o	verlain by modern hardcore						
(6001) an	d concrete	paving sl	abs (6000	2).						
Context	Туре	Width	Depth	Description	Finds	Date				
No		(m)	(m)							
6000	Layer	-	-	Concrete slab	-	Modern				
6001	Layer	-	Modern							
6002	Fill	-	-	Fill of 6005	-	Modern				

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Context No	Туре	Width (m)	Depth (m)	Description	Finds	Date
6003	Masonry	-	-	Concrete kerb	-	Modern
6004	Masonry	-	-	Concrete benching	-	Modern
6005	Cut	0.80	-	Service trench	-	Modern
6006	Masonry	-	-	Concrete drain	-	Modern
6007	Layer	-	-	Mid-brownish-red silty sand with occasional modern brick fragments	-	Modern

Test-pit 7	Test-pit 7									
General o	escription	Orientation	E/W							
This test-	pit was ex	cavated	to a max	ximum depth of 0.90m, at	Length (m)	3.00				
21.08m (a	aOD). Two	north/so	uth-align	ed concrete retaining walls	Width (m)	0.60				
(7006 and	d 7007) wei	re presen	t on the	western and eastern edges	Max depth (m)	0.90				
of this tr	ench respe	ctively. T	he space	e between these walls was						
infilled w	ith hardco	re (7004)	, which	was overlain by a layer of						
bedding s	and (7001)	and cond	rete pav	ing slabs (7000).						
Context	Туре	Width	Depth	Description	Finds	Date				
No		(m)	(m)							
7000	Layer	-	-	Concrete slabs	-	Modern				
7001	Layer	-	0.14	Sand	-	Modern				
7002	Fill	0.45	0.90	Fill of 7003	-	Modern				
7003	Cut	0.45	0.90	Service trench	-	Modern				
7004	Layer	2.50	-	Hardcore	-	Modern				
7005	Layer	-	-	Brick rubble	-	Modern				
7006	Masonry	0.29	Concrete retaining wall	-	Modern					
7007	Masonry	-	-	Concrete retaining wall	-	Modern				

V. 1



APPENDIX C FINDS REPORTS

C.1 Pottery

By Chris Howard-Davis

- C.1.1 All of the pottery has been examined and recorded following the basic guidelines laid down in *A standard for pottery studies in archaeology* (Prehistoric Ceramics Research Group *et al* 2016) and the data recorded in an Excel Spreadsheet. Diagnostic sherds (rims and bases) were too infrequent to justify the calculation of EVEs.
- C.1.2 **Romano-British pottery**: there is a single fragment of Black-burnished ware 1, being from the rim of a handled beaker of Gillam (1970) form 64, dated to *c* AD 120-70, from dark soil **4003**, in Test-pit 4.
- C.1.3 Medieval pottery: three fragments of medieval pottery were recovered from dark soil 1003, in Test-pit 1. One is a gritty, but not particularly hard-fired, fabric, possibly of twelfth- or thirteenth-century date (McCarthy and Brooks 1988). The other two are joining fragments in a very hard, thin white fabric with glaze splashes, perhaps a product of the fourteenth/fifteenth-century Ewloe kilns (Harrison and Davey 1977). Both are too small for a confident attribution.

C.2 Building material

By Chris Howard-Davis

C.2.1 In total, five small fragments (98g) of a very sandy white plaster were recovered from dark soil **4003**. The surfaces of two of them have been coloured in red and yellow paint, suggesting them to be from painted wall-plaster of probable Roman date. Two fragments of purple slate (64g) also came from this deposit.

C.3 Metalwork

- By Chris Howard-Davis
- C.3.1 A copper-alloy hook or shafted loop, not closely datable, was recovered from dark soil **4003**.



APPENDIX D ENVIRONMENTAL REPORTS

D.1 Animal Bone

By Ian Smith

- D.1.1 A small quantity of mammal bones and one tooth (nine fragments, *c* 44g) were recovered from dark soils **1003** and **4003**, in Test-pits 1 and 4. Identification to species, anatomical element and side were attempted for each specimen. Diagnostic zones of mammal bones were recorded following Serjeantson (1996). Surface preservation was assessed following Harland *et al* (2003).
- D.1.2 Provenance and dating: neither of the deposits containing faunal remains (Table 1) were closely dated, though 1003 produce a small amount of medieval pottery, whilst 4003 yielded a single Roman potsherd and a small amount of plaster, possibly painted, which might also be Roman (Appendix C).

Context No	Test pit	Common name	Таха	Element	Side	NISP	Serjeantson 1996 zones (or note)	Fusion state
	1			mandibular				/
1003		Sheep/goat	Ovis/Capra	third molar	left	1	none	
	1	Medium- sized		.,				/
1003	-	mammal	Mammalia	rib	left	1	part zone 3	,
	4	Large mammal (cattle/horse						/
4003		size)	Mammalia	rib	left	1	<i>c</i> zone 4	
4003	4	Cattle	Bos taurus	pelvis	right	1	5	indeterminate
4003	4	Large mammal	Mammalia	pelvis	indeterminate	1	possibly associated with zone 5 cattle pelvis	indeterminate
	4	Large		possible cattle metapodial				/
4003		mammal	Mammalia	shaft	indeterminate	1	none	
	4	Medium- sized						/
4003		mammal	Mammalia	rib	indeterminate	3	<i>c</i> zone 5/6	

- D.1.3 **Preservation**: the bone surfaces range from 'good' to 'fair with regard to surface texture under the York system (Harland *et al* 2003). There is some fine surface splitting (and also recent damage) that affects the cattle pelvis from dark soil **4003**. The bones are judged to be in a reasonably robust and stable state. There is no burnt bone.
- D.1.4 **The species and anatomical elements recovered**: the species represented comprise cattle (*Bos taurus*), sheep/goat (*Ovis/Capra*) and other large mammal (cattle-sized) and medium mammal (sheep/pig-sized) bone fragments. Only two specimens, the cattle pelvis and a sheep/goat mandibular third molar, provide robust identifications beyond the level of large- or medium-sized mammal. Regarding the cattle pelvis, the ilio-pectineal eminence (*sensu* Sisson and Grossman 1938, 152) is quite pronounced

and although the medial border is not present, there is a ridge associated with this eminence which suggests that this pelvis might be from a female (following Grigson 1982, 8). The sheep/goat mandibular third molar appears to be at Grant (1982) wear stage 'b' (although with some damage to other cusps).

D.1.5 *Interpretation*: few conclusions can be drawn from this small hand-collected assemblage, although all of the remains are either of domesticates or probable domesticated mammals. No human bone was present. There is no further potential for this material in isolation, since the numbers of specimens are not sufficient for significant conclusions to be drawn.



APPENDIX E	SITE SUIVINIARY DETAILS
Site name:	Northgate Redevelopment Phase 1, Hunter Street, Chester
Site code:	P1CNG19
Grid Reference	SJ 40312 66457
Туре:	Watching Brief
Date and duration:	15 th to 28 th January 2020; 10 days
Location of archive:	The archive is currently held at OA North, Mill 3, Moor Lane Mills,
	Moor Lane, Lancaster, LA1 1QD, and will be deposited with The
	Grosvenor Museum, Chester, in due course.
Summary of Results	Seven test-pits were excavated on Hunter Street (Test-pits 1-5)
	and St Martin's Way (Test-pits 6-7). The test-pits were excavated
	to a variety of sizes.
	Services were found to have extensively truncated the archaeological remains, although potentially significant archaeology was identified in Test-pits 2, 3 and 4. The archaeological remains in Test-pit 2 was identified as a demolished wall at a depth of 24.46m aOD, potentially relating to barrack blocks within the Roman legionary fortress. The earliest
	deposit in Test-pit 3 was identified as a similar deposit to that overlying the possible Roman wall in Test-pit 2; as such, this
	deposit could be seen as sealing the significant archaeology. The remaining test-pits contained evidence that services had almost
	completely truncated all of the archaeological deposits to the
	formation level of the service diversion route.

APPENDIX E SITE SUMMARY DETAILS



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- Figure 2 Locations of test-pits
- Figure 3 Sections of Test-pit 1 and Test-pits 3-5
- Figure 4 Plan and section of Test-pit 2
- Figure 5 Sections of Test-pits 6 and 7

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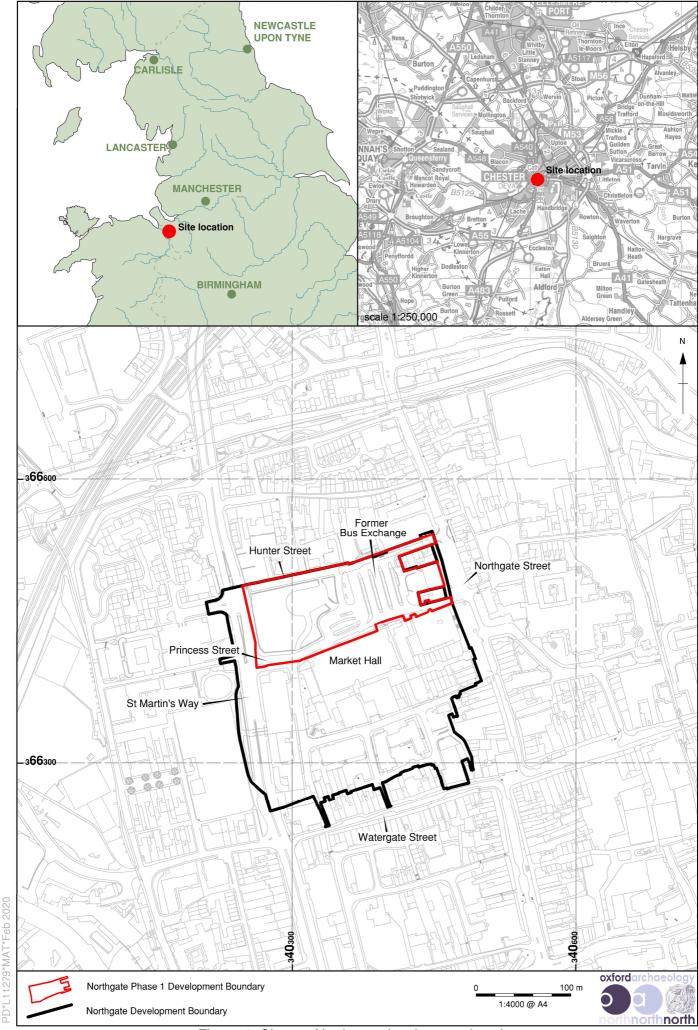


Figure 1: Chester Northgate development location

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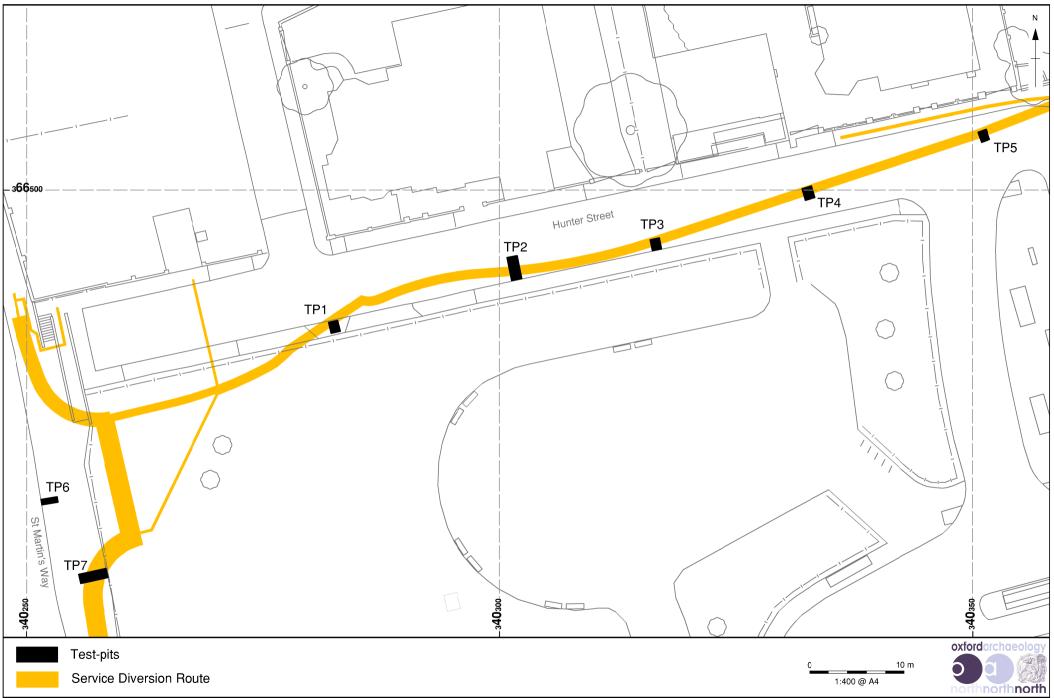


Figure 2: Location of test-pits

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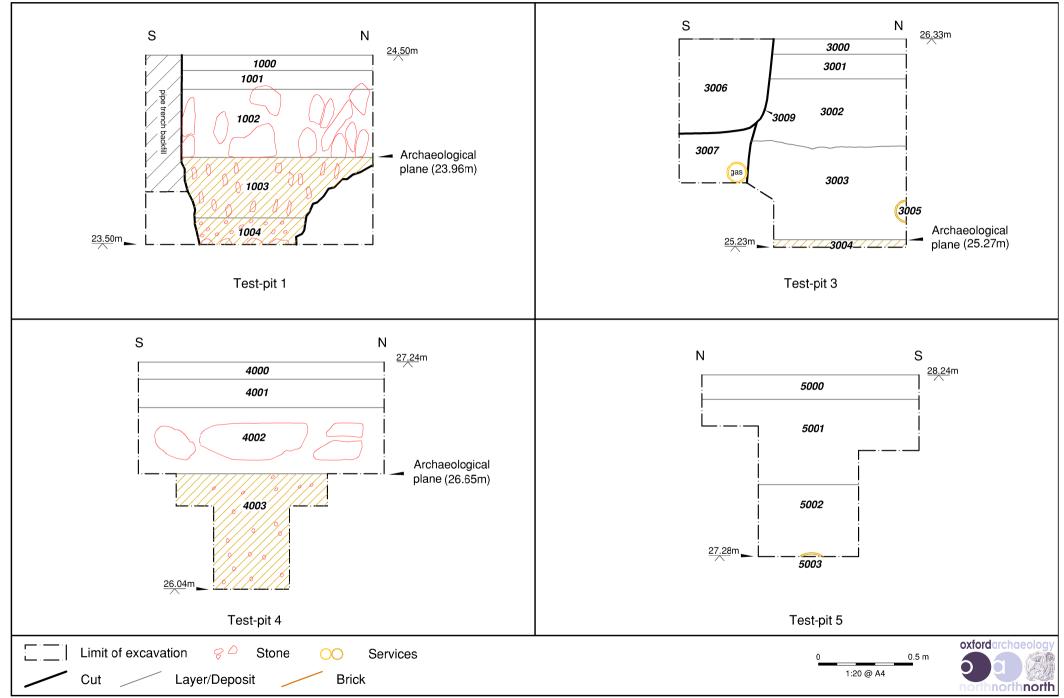


Figure 3: Sections of test-pit 1 and test-pits 3-5

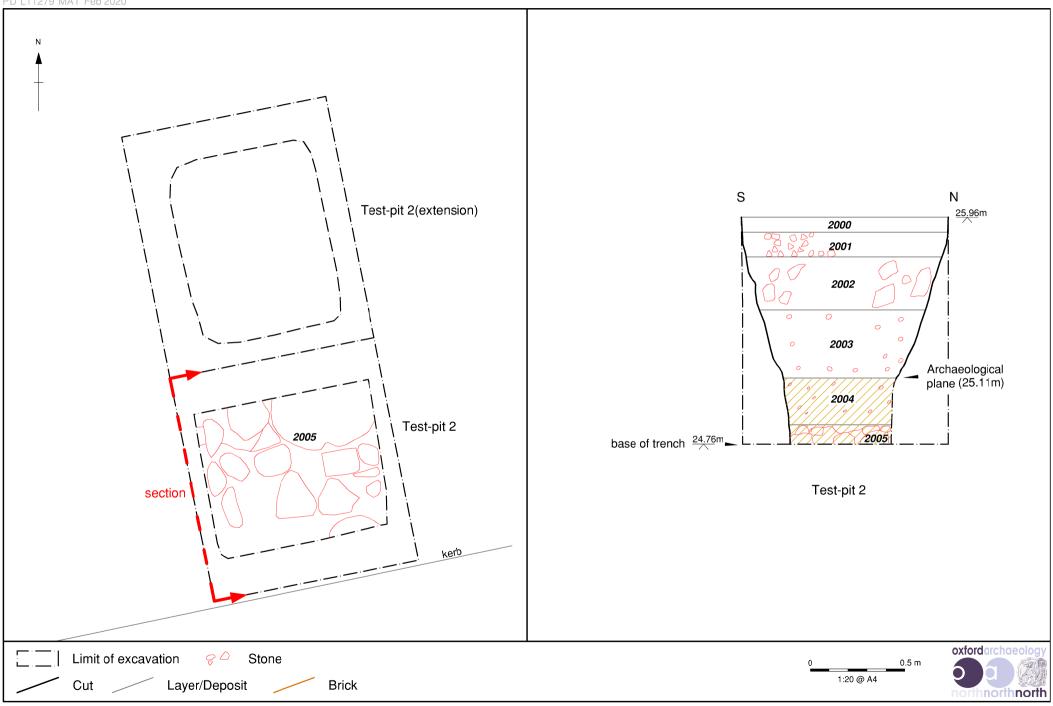


Figure 4: Plan and section of test-pit 2

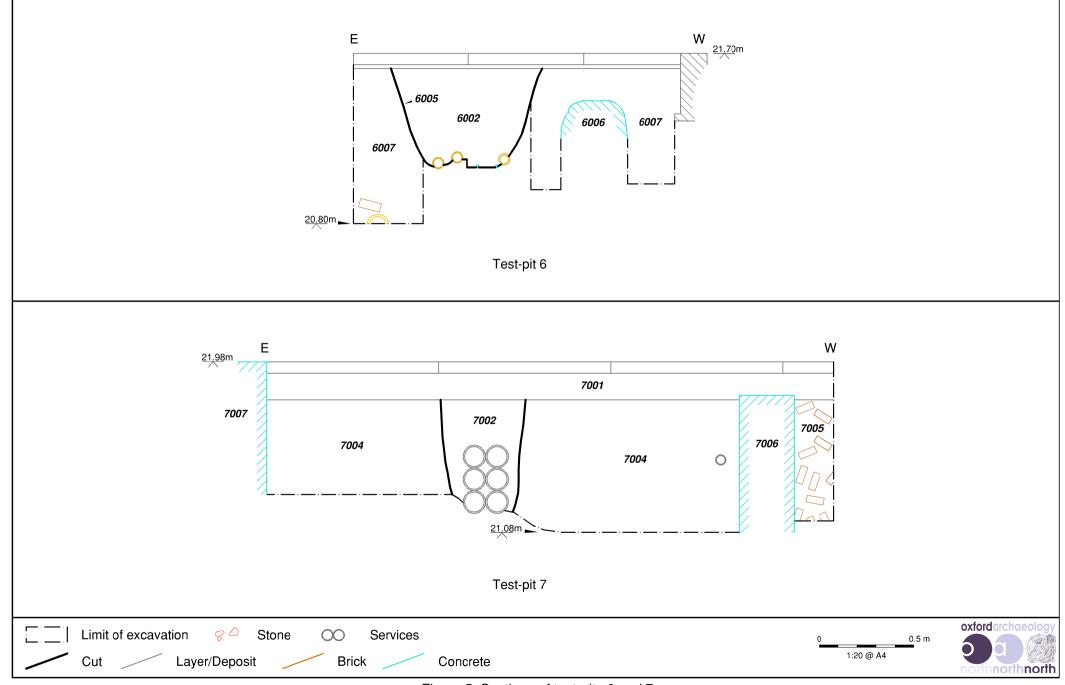


Figure 5: Sections of test-pits 6 and 7









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