WYAS Archaeological Services

Wrawby Road
Brigg
North Lincolnshire

Archaeological Evaluation Trenching

Report no. 3261
March 2019

Client: Harron Homes

West Yorkshire Joint Services

Wrawby Road, Brigg
North Lincolnshire

Archaeological EvaluationTrenching

Summary

A total of eight 50m by 2m evaluation trenches were excavated on part of a proposed development site to investigate the inconclusive results of a previous geophysical survey. No significant archaeological remains were revealed with two linear features being of probable 19th-century origin and relating to drainage.

WYAS
Archaeological
Services

Report Information

Client:	Harron Homes
Address:	Colton House, Temple Point, Bullerthorpe Lane, Leeds, LS15 9JL
Report Type:	Archaeological Evaluation Trenching
Location:	Wrawby Road, Brigg.
County:	North Lincolnshire
Grid Reference:	TA 0082 0803
Period(s) of activity represented:	Post-medieval
Report Number:	3261
Project Number:	8682
Site Code:	WBR 19
Planning Application No.:	Pre-determination
Date of fieldwork:	March 2019
Date of report:	March 2019
Project Management:	David Williams
Fieldwork supervisor:	Marina Rose BSc
Report:	Marina Rose

Authorisation for distribution: ----------

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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by Lanpro Services on behalf of Harron Homes to undertake the excavation of eight trenches at Wrawby Road, Brigg, North Lincolnshire (Fig. 1). The work was undertaken in accordance with the National Planning Policy Framework (NPPF) and a Written Scheme of Investigation (WSI) produced by Lanpro Services (Appendix 1).

The programme of archaeological evaluation was managed in line with the standards laid down in the Historic England guideline publication Management of Research Projects in the Historic Environment (2008). All excavations were undertaken using ASWYAS' recording manual (2011) and following CIfA guidelines (CIfA 2014a-c).

Site location and topography and land use

The proposed development site comprises 11.3ha situated on the eastern side of Brigg, North Lincolnshire (centred at TA 0082 0803; Fig. 1). The site is bounded to the south by Wrawby Road (A18), to the south-west by 20th-century houses, to the west by playing fields and to the north-west by a modern housing estate. To the east and north-east of the site are arable fields.

The site is divided across three fields, all of which are under arable cultivation, and are divided by drainage channels and hedgerows interspersed with mature trees. The ground across the site is generally level and situated at a height of approximately 5m above Ordnance Datum (aOD).

Soils and geology

The recorded bedrock geology across the study site comprises mudstone of the Oxford Clay Formation, covered by superficial deposits of sand and gravel on the site's north-western side and clays and silts across the remaining areas of the site (BGS 2018).

2 Archaeological and Historical Background

An archaeological desk-based assessment of the site was undertaken in November 2018 (Lanpro 2018) which concluded that the site had limited archaeological potential. A summary from this report is provided below.

Evidence for early prehistoric activity within the search area is limited. The closest recorded evidence for this period was found over 480m to the study site's north-west, as part of a programme of fieldwalking in advance of the construction of the M180, and comprised flint scrapers, flakes and a core (MLS 2237; ELS 193). A retouched flint blade was also discovered during an excavation at 59 Wrawby Street, situated in the historic core of Brigg (MLS 1797; ELS 3217). The only other dating evidence for the early prehistoric period comes from a peat deposit recovered from a borehole on the north-western edge of Brigg.

This was radiocarbon dated to the Early Bronze Age (MLS 21652; ELS 3154) but contained no associated cultural material.

The evidence for Late Iron Age and Romano-British settlement within the search area is largely concentrated within fields associated with Tong's Farm, approximately 700m to the south-east of the study site. Cropmark evidence, geophysical survey, fieldwalking surveys and targeted excavation have identified a settlement comprising at least one building with a hypocaust (MLS 2226; ELS 2388; 2389; 2390; 2394; 2720; 3019; 3330). This work has also yielded concentrations of late Roman coins dating from the 3rd to early 5th century (ELS 2392; 3332).

Evidence for Romano-British activity was identified during evaluation trenching at Wrawby, over 950m to the north-west of the site, where substantial quantities of pottery were recovered from ditches and pits (ELS 4326). Roman pottery was also recovered during house building around Yarborough Road, about 650m to the south of the site (MLS 25929). A number of Roman coins have also been discovered in the centre of Brigg (MLS 1785), to the north of the town centre (MLS 1787) and along the route of the M180 prior to construction (MLS 1786), dating from the 2nd to the 4th centuries.

The only evidence for Anglo-Saxon activity from the search area is a single Anglo-Saxon coin, of an unknown type, found close to St Helen's Well, over 500m to the south-east of the study site (MLS 21535).

The earliest documentary evidence for settlement at Brigg dates to 1183, with the early form of the name being 'Glandford Brigg' which may derive from the Old English meaning 'the ford where sports are held' (Cameron and Insley 1998, 21; MLS 9552).

Archaeological evidence for the later medieval period within the search area is limited to probable ridge and furrow recorded on aerial photographs located almost 1km to the south of the site (MLS 21280) and a small circular earthwork, which could be a mill mound or a stock pond, within the same field (MLS 22804). Medieval pottery was also recovered during field walking along the line of the M180, but this is likely to have been deposited as part of the manuring of fields rather than being representative of settlement or other activity (ELS 193).

The historic core of Brigg is situated over 750m to the south-west of the site, and it is likely that the site lay beyond any area of medieval settlement. It is probable that the site remained in agricultural use throughout this period, although the low lying nature of the ground and the later post-medieval drainage channels required to allow for arable cultivation suggest that this may have been marginal land.

The 2 inch scale Ordnance Survey map of the area, published in 1819, shows the site occupying land across four enclosed fields, although the accuracy of the depiction of field boundaries on these maps, partly due to their small scale, is not precise and these boundaries do not reflect the alignments shown in later 19th-century mapping.

The Ordnance Survey 25 inch map of 1887 provides the earliest large-scale depiction of the site and surrounding area. By this time the present boundaries of the site had been laid out, with two triangular fields divided by a drainage channel forming the eastern part of the site, while to the west the current rectangular field was subdivided to form two smaller plots. The surrounding area remained predominantly farmland.

There was no significant change within the site or its immediate vicinity through the early 20th century, although by the late 1930s Brigg was expanding eastwards and new residential development had started to be constructed to the west of the site and along Wrawby Road to its immediate south-west. There was little further change to the area through the 1950s, although by the late 1960s further residential development had been constructed to the site's north-west, and the fields to the west of the site landscaped for playing fields. Around this time the boundary that sub-divided the western field of the site was also removed to create the present landscape layout.

The desk-based assessment was informed by a geophysical survey (Freeman 2018) which did not identify any archaeological features, but the results of the geophysical survey on the site's westernmost field appeared to show spreads of ferrous material, possibly the result of green-waste deposited over this area, which could have potentially obscured any underlying archaeological features.

3 Aims and Objectives

The overall aim of the programme of archaeological evaluation trenching was to obtain sufficient information as to the archaeological significance and potential of the site to allow reasoned and informed recommendations to be made on the application for development of the site, and any requirements for further archaeological works. Specific aims were to:

- determine the location, extent, date, character, condition and significance of any archaeological remains within the development site;
- excavate and record identified archaeological features and deposits to a level appropriate to their extent and significance;
- assess the potential for survival of environmental evidence;
- inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains;
- undertake sufficient post-excavation assessment to confidently interpret identified archaeological features;
- report the results of the evaluation and place them in their local and regional context;
- compile and deposit a site archive at a suitable repository.

The objective of the works was to monitor the removal of top and subsoil horizons and assess the excavated areas for their archaeological potential. Any remains were then subject to archaeological excavation.

4 Methodology

The archaeological evaluation comprised the excavation of eight trenches, all of which measured 2m by 50m (Fig. 2). The trenches were positioned to provide a suitable sample across the western field of the proposed development site, to test the results of the archaeological geophysical survey.

Topsoil across the trenches was stripped using a mechanical excavator fitted with a toothless, flat bladed, grading bucket, down to the first significant archaeological horizon or natural. Spoil from mechanical excavation was scanned by eye and by metal detector to aid the recovery of artefacts, and topsoil and subsoil was stored separately.

All excavation by mechanical excavator was undertaken under direct archaeological supervision, by a suitably experienced and qualified archaeologist.

All archaeological features and deposits revealed were cleaned and excavated in an archaeologically controlled and stratigraphic manner, in order to establish their extent, form, date, function and relationship to other features. All features were investigated to understand the full stratigraphic sequence down to naturally occurring deposits. A 1m wide section of each linear feature was excavated by hand.

A full written, drawn and photographic record was made of all features revealed during the archaeological excavation. Plans were completed at a scale of 1:20 (as appropriate), with section drawings at a scale of 1:10. All plans were tied in with the Ordnance Survey National Grid with levels given to above OD.

The photographic record, utilised black and white negative film, supplemented by high resolution digital photography of a minimum of 10 megapixels and in RAW format.

A full written, drawn and photographic record was made of all archaeological work undertaken. An inventory of the primary archive is presented in Appendix 2 and a concordance of contexts is provided in Appendix 3. ASWYAS currently hold the site archive in a stable and secure location.

5 Results

The results of the evaluation trenching were largely negative with all trenches containing a sandy topsoil (100) straight on to natural sands and silts (102) (Plates 1-10). A thin subsoil (101) was intermittently present in some of the trenches and constituted an interface rather than a defined layer. Only Trenches 2 and 6 contained features of possible archaeological

origin. The results of each trench are tabulated below (Appendix 4) with only Trenches 2 and 6 subject to further discussion.

A linear feature (106), exposed at the eastern end of Trench 2, was a small V-shaped feature containing a sterile silty sand fill (105) that was similar to the natural (Fig. 3; Plate 3). This suggests that it was short lived and filled in by natural silting. No finds were present.

The fill (103) of the linear feature (104) encountered in Trench 6 (Fig. 3; Plate 8) was very similar to the surrounding natural making it difficult to determine in plan. It had a steep sided, slightly asymmetric, profile with a sterile fill.

Ditch 106 runs parallel to the alignment of the existing eastern boundary of the field and may be contemporary. This boundary has, according to the map regression conducted for the desk-based assessment (Lanpro 2018), been on its current alignment since at least the late 1800s. Ditch 104 runs on the same alignment as a ditch dividing the fields to the east but it is not seen on historic mapping.

6 Discussion and Conclusions

The evaluation trenches within the western field of the proposed development site were excavated to investigate the potential for archaeological remains surviving in this area that could have been masked by spreads of ferrous material recorded in the geophysical survey (Freeman 2018).

No possible archaeological geophysical anomalies were recorded in the two fields forming the eastern side of the proposed development site, and the geophysical survey results did not contain and ferrous masking, perhaps as these fields are ploughed annually. The western field, however, contains much lighter soil and is not regularly ploughed, and this might account for the disparity in the geophysical survey results between the fields.

The natural strata exposed within the evaluation trenches reflected the low-lying position of the site, which is likely to have been marshy until the introduction of post-medieval drainage. This was borne out by high levels of iron staining resulting from leaching of minerals in wet conditions.

The two excavated features did not yield any dating evidence although their comparable alignment to the current field boundary suggests that they are post-medieval or later, and probably drainage features of no significance.

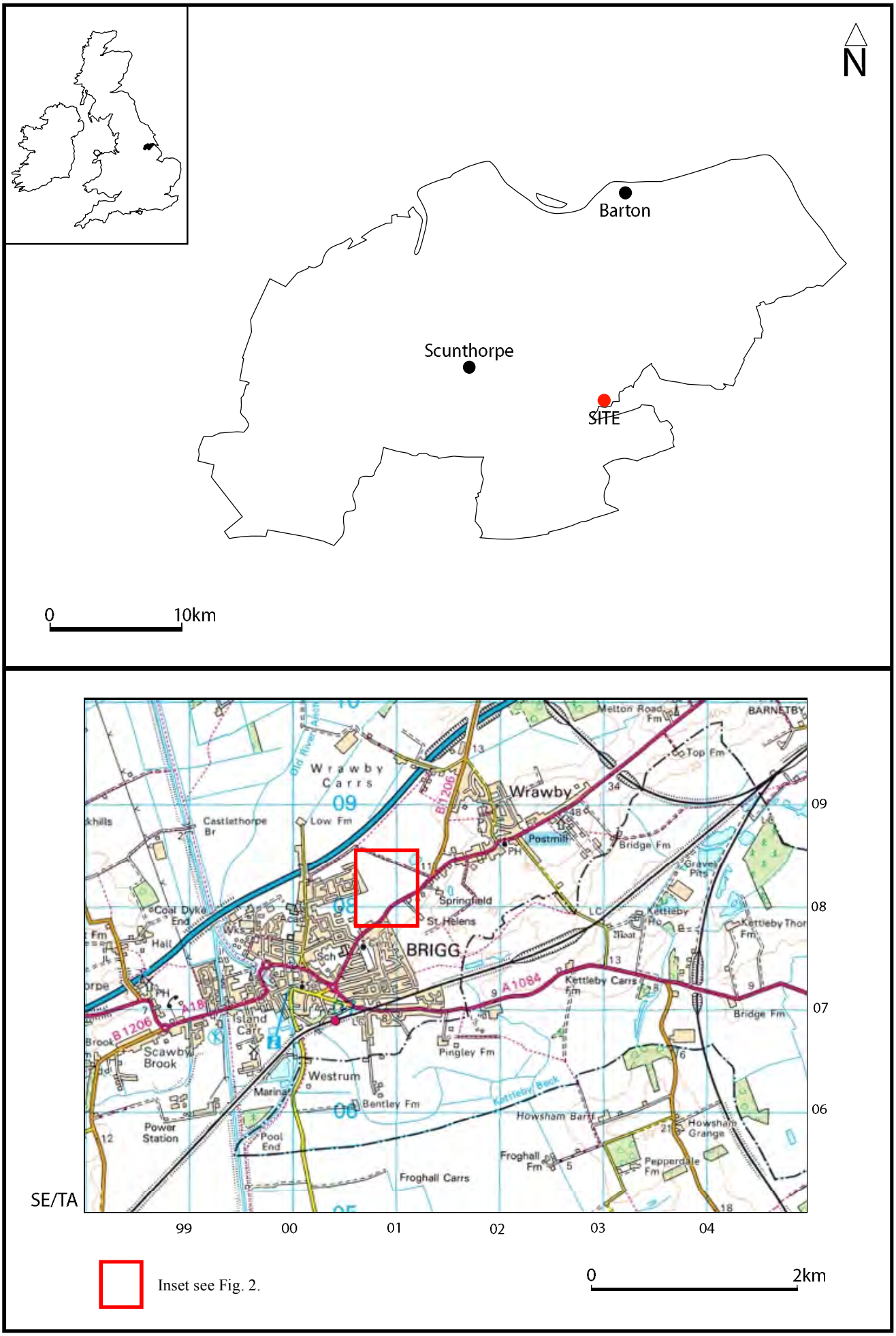


Fig. 1. Site location

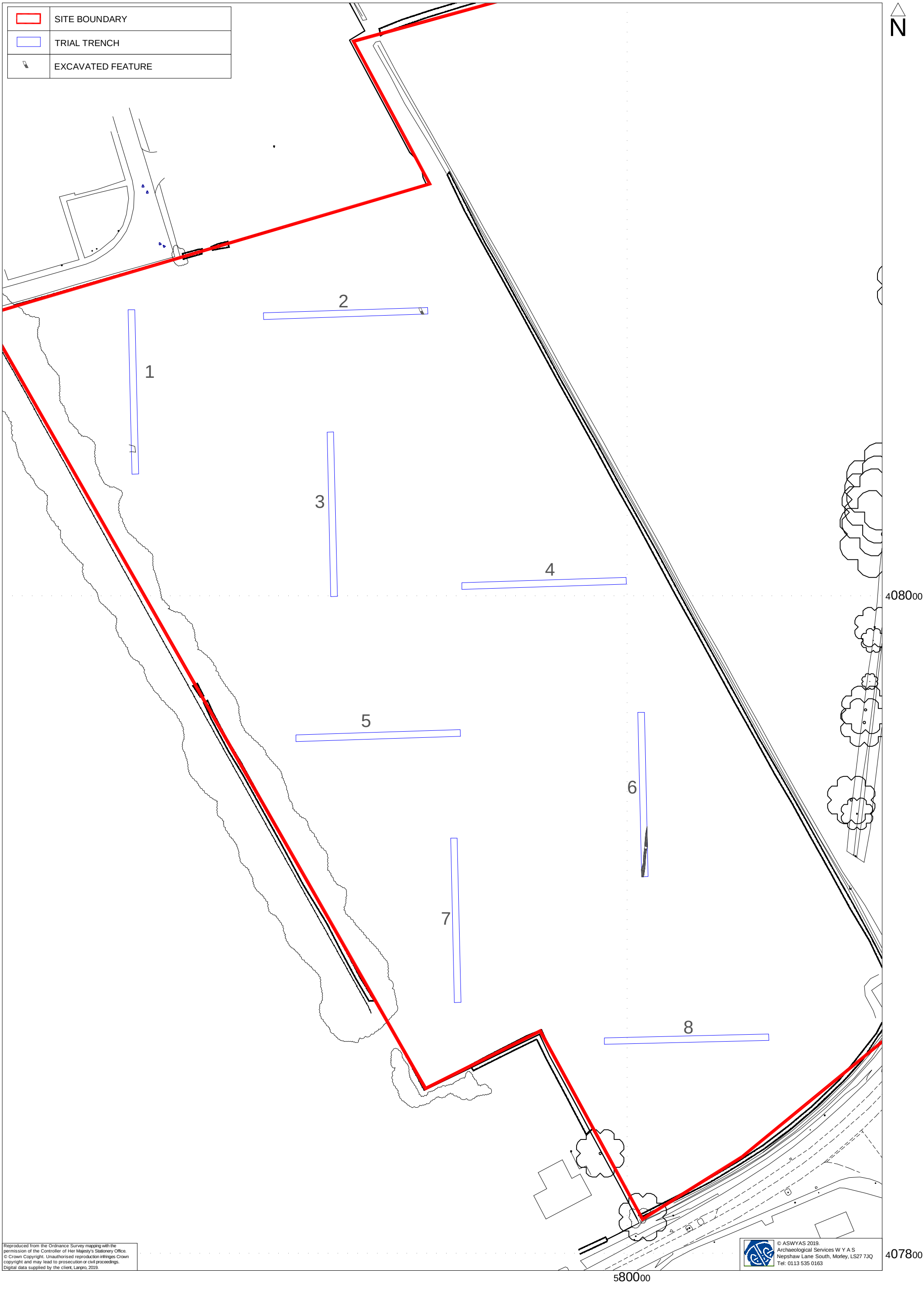
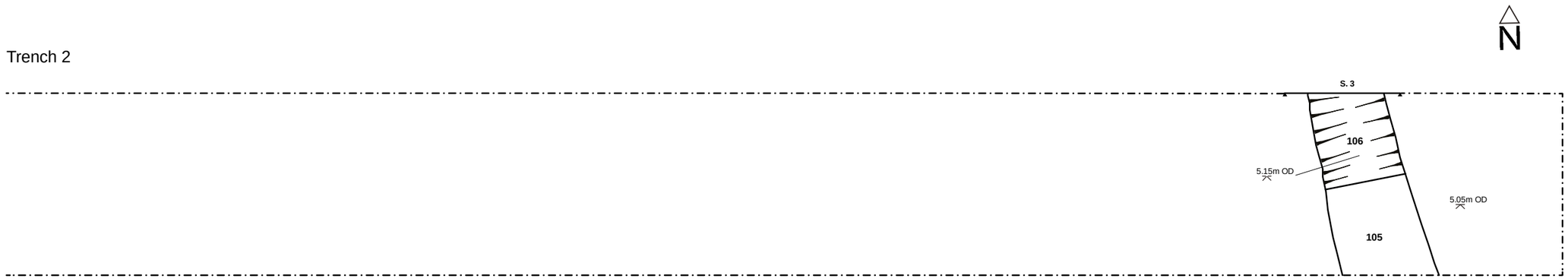
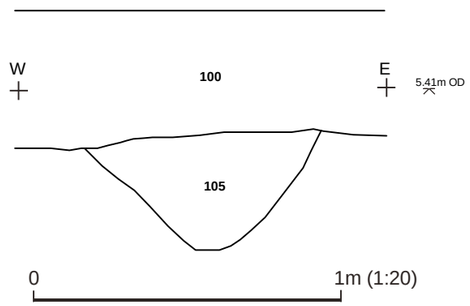


Fig. 2. Location of trenches (1:1000 @ A3)

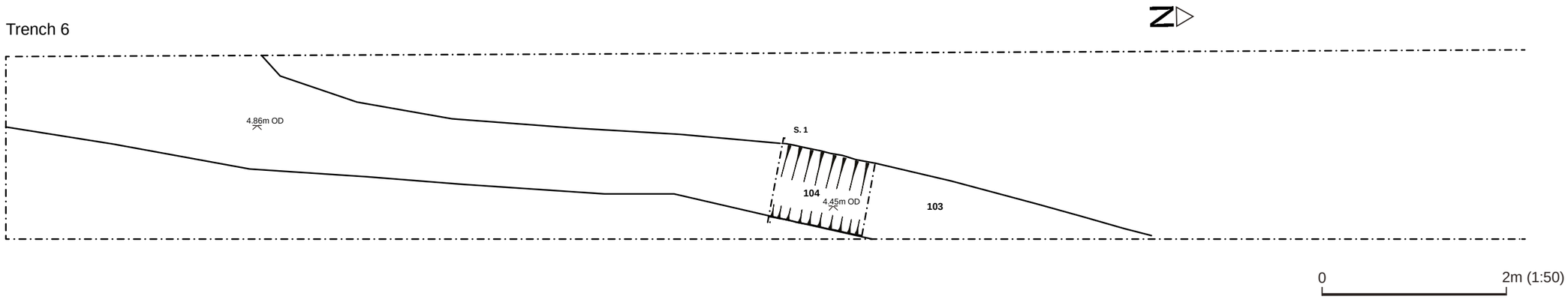
Trench 2



S. 3



Trench 6



S. 1

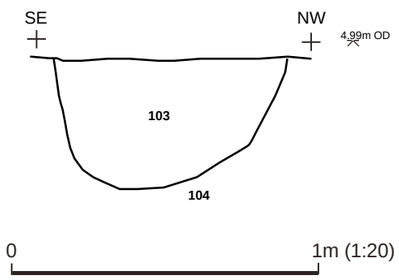


Fig. 3. Plans and sections

Plate 1. General view of Trench 1, looking south

Plate 2. General view of Trench 2, looking east

Plate 3. Feature 106 in Trench 2, looking north

Plate 4. General view of Trench 3, looking north

Plate 5. General view of Tench 4, looking west

Plate 6. General view of Trench 5, looking east

Plate 7. General view of Tench 6, looking south

Plate 8. Section of feature 104 in Trench 6, looking southwest

Plate 9. General view of Tench 7, looking south

Plate 10. General view of Trench 8, looking east

Appendix 1: Written Scheme of Investigation

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION TRENCHING

LAND AT WRAWBY ROAD
BRIGG, NORTH LINCOLNSHIRE

PREPARED BY LANPRO SERVICES
ON BEHALF OF
HARRON HOMES

March 2019

Lanpro

Planning + Development | Design Studio | Archaeology + Heritage

Project Reference: HAR003/1263/02

Document Prepared by: Mitchell Pollington MCIfA

Revision	Reason for Update	Document Updated

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1 INTRODUCTION

1.1 This Written Scheme of Investigation (WSI) has been prepared by Lanpro on behalf of Harron Homes and details the methodology for undertaking a scheme of archaeological evaluation trenching of land to the north of Wrawby Road, Brigg, North Lincolnshire, to inform a planning application for residential development on the site.

1.2 This document has been informed by data collated as part of an archaeological desk-based assessment of the site (Lanpro 2018), from which this WSI draws its archaeological background information, as well as an archaeological geophysical survey (ASWYAS 2018).

2 SITE DESCRIPTION

2.1 The proposed development site comprises 11.3ha situated on the eastern side of Brigg, North Lincolnshire (centred at TA 0082 0803; Figure 1). The site is bounded to the south by Wrawby Road (A18), to the south-west by 20th century houses, to the west by playing fields and to the north-west by a modern housing estate. To the east and north-east of the site are arable fields.

2.2 The site is divided across three fields, all of which are under arable cultivation, which are divided by drainage channels and hedgerows interspersed with mature trees. The ground across the site is generally level and situated at a height of approximately 5m above Ordnance Datum (aOD).

2.3 The recorded bedrock geology across the study site comprises mudstone of the Oxford Clay Formation, covered by superficial deposits of sand and gravel on the site's north-western side and clays and silts across the remaining areas of the site (BGS 2018).

3 PLANNING BACKGROUND

3.1 The development proposals comprise the construction of a residential development consisting of 211 detached and semi-detached houses, with associated access roads and infrastructure.

3.2 An archaeological desk-based assessment of the site was undertaken in November 2018 , which was informed by a geophysical survey (ASWYAS 2018; see Appendix 1). The desk-based assessment concluded that the site had limited archaeological potential, and no archaeological features were identified by the geophysical survey. However, the results of the geophysical survey on the site's westernmost field appear to show spreads of ferrous material, possibly the result of green-waste deposited over this area, which could have potentially obscured any underlying archaeological features. Therefore, the North Lincolnshire Historic Environment Officer requested that an archaeological evaluation through trenching was carried out to confirm the results of the geophysical survey. This WSI provides a detailed methodology for undertaking a programme of evaluation trenching across the western field of the proposed development site to meet the requirements of this recommendation.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 The archaeological and historical background below is drawn from sources collated for the production of an archaeological desk-based assessment of the site (Lanpro 2018).

Heritage Assets

4.2 The proposed development site contains no designated heritage assets, or records held on the HER.

Early Prehistoric Period (c. 9500 BC – c. 800 BC)

4.3 There is no recorded evidence for early prehistoric activity in the proposed development site.

4.4 Evidence for early prehistoric activity within 1km of the site is limited. The closest recorded evidence for this period was found over 480m to the site's north-west, as part of a programme of fieldwalking in advance of the construction of the M180 in 1975, and comprised flint scrapers, flakes and a core (MLS 2237; ELS 193). A retouched flint blade was also discovered during an excavation at 59 Wrawby Street, situated in the historic core of Brigg over 900m to the site's south-west in 1972-3 (MLS 1797; ELS 3217). Apart from these two sites, the only other dating evidence for the early prehistoric period comes from a peat deposit recovered from a borehole on the north-western edge of Brigg. This was radiocarbon dated to the Early Bronze Age (MLS 21652; ELS 3154) but contained no associated cultural material.

Iron Age and Roman Period (c. 800 BC – c. AD 410)

4.5 There is no evidence for Iron Age or Roman period activity in the proposed development site.

4.6 The evidence for Late Iron Age and Romano-British settlement within 1km of the site is largely concentrated within fields associated with Tong's Farm, approximately 700m to its south-east. Cropmark evidence, geophysical survey, fieldwalking surveys and targeted excavation have identified a settlement comprising at least one building with a hypocaust, as well as evidence of other activity (MLS 2226; ELS 2388; 2389; 2390; 2394; 2720; 3019; 3330). This work has also yielded concentrations of late Roman coins dating from the 3rd to early 5th century (ELS 2392; 3332).

4.7 Evidence for Romano-British activity was identified during evaluation trenching at Wrawby, over 950m to the north-west of the site, where substantial quantities of pottery were recovered from linear boundary ditches and pits (ELS 4326). Roman pottery was also recovered from builders trenches during house building around Yarborough Road, about 650m to the south of the site, in the late 1960s (MLS 25929).

4.8 A number of Roman coins have been discovered as chance finds in the centre of Brigg (MLS 1785), to the north of the town centre (MLS 1787) and along the route of the M180 prior to construction (MLS 1786), dating from the 2nd to the 4th centuries.

4.9 Although there is evidence for Late Iron Age and Roman period activity within 1km of the site, this has all been recorded over 600m from its boundary and there is no evidence to suggest that there is potential for archaeological remains of these periods to survive within the site. Indeed, the results of the geophysical survey have identified no anomalies that could potentially represent Iron Age or Roman period features.

Medieval Period (c.AD 410 – c. AD 1540)

4.10 There is no evidence for medieval activity within the proposed development site.

4.11 The only evidence for Anglo-Saxon activity from the surrounding area is a single Anglo-Saxon coin, of an unknown type, found close to St Helen's Well, over 500m to the south-east of the study site (MLS 21535).

4.12 The earliest documentary evidence for settlement at Brigg dates to 1183, with the early form of the name being 'Glandford Brigg' which may derive from the Old English meaning 'the ford where sports are held' (Cameron and Insley 1998, 21; MLS 9552).

4.13 Archaeological evidence for the later medieval period within the surrounding area is limited to probable ridge and furrow recorded on aerial photographs located almost 1km to the south of the study site (MLS 21280) and a small circular earthwork, which could be a mill mound or a stock pond, within the same field (MLS 22804).

4.14 Medieval pottery was also recovered during field walking along the line of the M180 between 1973-75, but this is likely to have been deposited as part of the manuring of fields rather than being representative of settlement or other activity (ELS 193).

4.15 The historic core of Brigg is situated over 750m to the south-west of the proposed development site, and it is likely that the site lay beyond any area of medieval settlement. It is probable that the site remained in agricultural use throughout this period, although the low lying nature of the ground and the later post-medieval drainage channels required to allow for arable cultivation suggest that this may have been marginal land.

Post-Medieval and Modern Period (c.1540 – Present)

4.16 The 2 inch scale Ordnance Survey map of the area, published in 1819, shows the proposed development site occupying land across four enclosed fields, although the accuracy of the depiction of field boundaries on these maps, partly due to their small scale, is not precise and these boundaries do not reflect the alignments shown in later 19th century mapping.

4.17 The Ordnance Survey 25 inch map of 1887 provides the earliest large-scale depiction of the site and surrounding area. By this time the present boundaries of the site had been laid out, with two triangular fields divided by a drainage channel forming the eastern part of the site, while to the west the current rectangular field was subdivided to form two smaller plots. The surrounding area remained predominantly farmland.

4.18 There was no significant change within the proposed development site or its immediate vicinity through the early 20th century, although by the late 1930s Brigg was expanding eastwards and new residential development had started to be constructed to the west of the site and along Wrawby Road to its immediate south-west. There was little further change to the area through the 1950s, although by the late 1960s further residential development had been constructed to the site's north-west, and the fields to the west of the site landscaped for playing fields. Around this time the boundary that sub-divided the western field of the site was also removed to create the present landscape layout.

5 AIMS AND OBJECTIVES

5.1 The overall aim of the programme of archaeological evaluation trenching will be to obtain sufficient information as to the archaeological significance and potential of the site to allow reasoned and informed recommendations to be made on the application for development of the site, and any requirements for further archaeological works. This will be achieved through the following objectives:

- To determine the location, extent, date, character, condition and significance of any archaeological remains within the development site
- To excavate and record identified archaeological features and deposits to a level appropriate to their extent and significance
- To assess the potential for survival of environmental evidence
- To inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains
- To undertake sufficient post-excavation assessment to confidently interpret identified archaeological features
- To report the results of the evaluation and place them in their local and regional context
- To compile and deposit a site archive at a suitable repository

Research Framework

5.2 Although there is currently no archaeological research framework covering North Lincolnshire the programme of archaeological evaluation trenching will be carried out with the aim of addressing the general research parameters and objectives defined by the *Yorkshire Archaeological Research Framework: research agenda* (Roskams and Whyman 2007) and the research agenda for the East Midlands, *East Midlands Heritage* (Knight *et al.* 2012), which includes the majority of the historic county of Lincolnshire.

5.3 The investigation will also take account of the national research programmes outlined in English Heritage's *Strategic Framework for historic Environment Activities and Programmes in English Heritage* (SHAPE) first published in 2008.

6 STANDARDS

6.1 All work will be undertaken to fully meet the requirements of all nationally recognised guidance for such work, including standards laid down by the former English Heritage (now Historic England) and the Chartered Institute for Archaeologists (CIfA).

6.2 The programme of archaeological evaluation will be managed in line with the standards laid down in the Historic England guideline publication *Management of Research Projects in the Historic Environment (MoRPHE): Project Managers Guide* (2015a) and the MoRPHE *Project Planning Note 3: Archaeological Excavation (PPN3)* (2008), as well as to meet the requirements of the National Planning Policy Framework (NPPF; Chapter 12: 'Conserving and enhancing the historic environment'). All excavation will be undertaken using recording standards detailed in the *Archaeological Field Manual* (MOLAS 1994).

6.3 Of particular relevance to the programme of works are:

- *Standard and guidance for archaeological field evaluation* (CIfA 2014a)
- *Standard and guidance for archaeological excavation* (CIfA 2014b)
- *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (CIfA 2014c)
- *Code of Conduct* (CIfA 2014d)
- *Management of Research Projects in the Historic Environment: PPN3: Archaeological Excavation* (English Heritage 2008)

7 METHODOLOGY

7.1 Lanpro will inform the North Lincolnshire Historic Environment Officer at least one week in advance of the commencement of fieldwork. The archaeological contractor will also contact the North Lincolnshire Museum prior to the start of fieldwork to obtain accession numbers and complete the required archive deposition forms.

7.2 The archaeological evaluation will comprise the excavation of eight trenches, all of which will measure 2m by 50m. The trenches have been positioned to provide a suitable sample across the western field of the proposed development site, to test the results of the archaeological geophysical survey.

7.3 Topsoil across the trenches will be stripped using a mechanical excavator fitted with a toothless, flat bladed, grading bucket, down to the first significant archaeological horizon or natural sub-soil. Spoil from mechanical excavation will be scanned by eye and by metal detector to aid the recovery of topsoil artefact, and topsoil and subsoil will be stored separately.

7.4 All excavation by mechanical excavator will be undertaken under direct archaeological supervision, by a suitably experienced and qualified archaeologist, with one archaeologist responsible for monitoring each excavator.

7.5 All archaeological features and deposits revealed will be cleaned and excavated in an archaeologically controlled and stratigraphic manner, in order to establish their extent, form, date, function and relationship to other features. All features will be investigated to understand the full stratigraphic sequence down to naturally occurring deposits. Discrete features (e.g. infilled pits) will be half- or quarter-sectioned; as a minimum (where possible) a 1m wide section of each linear feature will be excavated by hand.

7.6 Any excavation, by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits which appear to be demonstrably worthy of preservation in situ.

7.7 Should the excavation of the trenches reach 1.2m in depth (or limit of safe working depth) without natural geology being encountered, a machine dug sondage will be excavated in order to establish the depth of natural geology. Where depth of excavation is required to be greater than 1m, suitable stepping will be employed.

7.8 All identified finds and artefacts will be collected and retained, and bagged and labelled according to their context. Finds of significant interest will be given a 'small finds' number, and information on their location in three dimensions will be entered on a separate pro-forma sheet. No finds will be discarded without assessment by an appropriate finds specialist, and/or the approval of the North Lincolnshire Historic Environment Officer.

7.9 A full written, drawn and photographic record will be made of all features revealed during the course of the archaeological excavation. Plans will be completed at a scale of 1:20 (as appropriate), with section drawings at a scale of 1:10. All plans will be tied in with the Ordnance Survey National Grid with levels given to above OD.

7.10 The photographic record, will utilise black and white negative film, supplemented by high resolution digital photography of a minimum of 10 megapixels and in RAW format. This will be maintained throughout the course of the fieldwork and will include as a minimum:

- the site prior to commencement of fieldwork
- the site during work, showing specific stages of fieldwork
- the layout of archaeological features within each trench
- individual features and, where appropriate, their sections
- groups of features where their relationship is assessed to be important

7.11 All photography will follow the Historic England guidance for digital image capture (HE 2015b). All images will have accompanying metadata specifying; photo ID, capture device, converting software, colour space, bit depth, resolution, date of capture, photographer, caption, and any alterations made to the image.

7.12 Following excavation and recording of any archaeological remains, and with the agreement of the North Lincolnshire Historic Environment Officer, the evaluation trenches will be back-filled with the previously excavated spoil.

7.13 Expansion of the excavation area outside of the trenches will not be undertaken. The exception to this will be where human remains are identified and cannot be preserved in situ, and where best practice is to maintain the integrity of an individual, or where Treasure artefacts would otherwise be at risk of theft.

Palaeoenvironmental sampling strategy

7.14 Soil samples will be taken from all suitable features or deposits for palaeoenvironmental sampling. This will comprise the removal of a bulk sample from every securely sealed and hand-excavated context, excepting those with excessive levels of residuality or those with minimal 'soil' content (such as building rubble).

7.15 Bulk samples will comprise representative 40 litre samples. Where a context does not yield 40 litres of material, smaller samples will be taken (generally the maximum amount of material that it is practicable to collect). Bulk samples will be used to recover a sub-sample of charred macroplant material, faunal remains and artefacts where necessary, as well as any significant industrial residues.

7.16 If buried soils or other deposits are encountered, column samples may be taken for micromorphological and pollen analysis. Environmental material will be stored in a controlled environment and specialists consulted during the course of the work if necessary.

7.17 The post-excavation processing of all palaeoenvironmental samples will be undertaken in line with the requirements of the former English Heritage's (now Historic England) publications *Archaeological Science at PPG16 Interventions: Best Practice Guidance for Curators and Commissioning Archaeologists* (2006) and *Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation* (2011).

Human remains

7.18 The client, the Ministry of Justice and the North Lincolnshire Historic Environment Officer will be informed if human remains are found. Disturbance of human skeletal remains will be kept to a minimum, and remains will be left in situ, covered and protected as necessary.

7.19 Human remains will only be removed if necessary to protect and secure them. Removal of human remains will only take place under appropriate government and environmental health regulations, in compliance with the Burial Act 1857 and after obtaining a Section 25 exhumation licence obtained from the Ministry of Justice.

7.20 If required a qualified and experienced osteoarchaeologist will undertake site visits to discuss the recording and assist in the removal of any human skeletal remains.

7.21 Human remains will be processed as part of the post-excavation assessment following national standards and guidance, including English Heritage (2004), Mitchell and Brickley (2017) and the Church of England/Historic England (2017).

Scientific dating

7.22 Provision will be made to recover material suitable for radiocarbon, archaeomagnetic, dendrochronological and other scientific dating. Where material suitable for dating is recovered, sufficient dating will be undertaken to meet the aims of the evaluation.

Other finds

7.23 All finds and samples will be treated in a proper manner during the excavation and post-excavation stage and to standards agreed in advance with the North Lincolnshire Museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and stored in accordance with the guidelines set out in United Kingdom Institute for Conservation's Conservation Guidelines No. 2 (1990) and the CIfA guidelines *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2014c).

7.24 If required, conservation will be undertaken by approved conservators in line with the *First Aid for Finds* guidelines (Watkinson and Neal 1998). In accordance with the procedures outlined in English Heritage's MoRPHE PPN3 (2008), significant iron objects, a selection of non-ferrous artefacts (including all coins), and a sample of any industrial debris relating to metallurgy should be X-radiographed before assessment.

7.25 All finds of gold and silver will be moved to a safe place. Where removal cannot be effected immediately, suitable security measures will be taken to protect the artefacts from theft or damage. All finds of gold and silver, and associated objects, will be reported to the coroner according to the procedures relating to the Treasure Act 1996 (and the act's amendment of 2003 to include prehistoric objects such as Bronze Age metalworking hoards and other non-precious metal items), after discussion with the client and the North Lincolnshire Historic Environment Officer.

7.26 Ownership of any finds recovered during archaeological works rests with the landowner except where other law overrides this (e.g. Treasure Act 1996, Burial Act 1857). However, Lanpro will seek to obtain 'in principle' agreement from the landowner to donate the recovered artefacts to the North Lincolnshire Museum (subject to statutory laws concerning human remains and treasure trove).

Unexpectedly significant or complex discoveries

7.27 Should unexpectedly extensive, complex or significant remains be uncovered that warrant, in the professional judgment of the archaeologist on site, more detailed recording than is appropriate within the terms of the WSI, the scope of the WSI will be reviewed.

7.28 In the event of a review of the WSI being required, Lanpro will contact the client and the North Lincolnshire Historic Environment Officer with the relevant information to enable them to resolve the matter. This is likely to require an on-site meeting between the relevant stakeholders to review the archaeological remains on-site and identify a way forward. Any variations to this WSI will be put in writing and agreed by the relevant stakeholders including the North Lincolnshire Historic Environment Officer and the client.

8 POST-EXCAVATION ASSESSMENT AND REPORTING

8.1 Unless otherwise agreed with the North Lincolnshire Historic Environment Officer, an assessment report detailing the findings of the archaeological evaluation trenching will be prepared within six weeks of the completion of site works (dependant on receiving specialist reports) and will consist of the following:

- Title page detailing site address, site code and accession number, NGR, author / originating body, client's name and address
- Non-technical summary of the findings of the evaluation
- Description of the topography and geology of the evaluation area
- Description of the archaeological background to the site
- Description of the methodologies used during the evaluation
- Description of the findings of the evaluation
- Factual assessment of stratigraphic evidence
- Factual assessment of the artefactual evidence, where applicable
- Factual assessment of the environmental evidence
- Interpretation of the archaeological features exposed and their context within the surrounding landscape
- An assessment of the archaeological potential of the stratigraphic, artefactual and environmental records
- Conclusions
- Site and trench location plans and plans of each of the trenches
- Section drawings of the excavated archaeological features
- Specialist reports on the artefactual / ecofactual remains from the site
- Appropriate photographs of specific archaeological features
- A full context list
- Details of archive location and destination (with North Lincolnshire Museum accession number), together with a catalogue of what is contained in that archive
- Copy of the OASIS entry form and any entry updates
- Appendices, illustrations and figures, as appropriate
- References and bibliography of all sources used

8.2 A draft copy of the report will be supplied to the North Lincolnshire Historic Environment Officer for comment. Following approval of the draft report, a hard copy and a digital copy in a PDF/a format will be supplied to the North Lincolnshire Historic Environment Officer.

9 ARCHIVING

9.1 The appointed archaeological contractor will contact the North Lincolnshire Museum in advance of commencing any fieldwork to determine the preparation, and deposition of the archive and finds, and obtain an accession number for all archaeological works. The landowner will be encouraged to transfer ownership of the finds to the North Lincolnshire Museum.

9.2 The archive will contain all the data collected during the archaeological works, including all digital and paper records, finds and environmental samples. The archive will be prepared in accordance with the *Guidelines for the preparation of Excavation Archives for long–term storage* (United Kingdom Institute for Conservation, 1990), *Standards in the museum care of archaeological collections* (Museums and Galleries Commission 1994), and in accordance with North Lincolnshire Museum deposition guidelines. Provision will be made for the stable storage of paper records and their long–term storage.

9.3 Adequate resources will be provided during fieldwork to ensure that all records are checked and internally consistent. Archive consolidation will be undertaken immediately following the conclusion of fieldwork and will include the following work:

- the site record will be checked, cross–referenced and indexed as necessary
- all retained finds will be cleaned, conserved, marked and packaged in accordance with the requirements of the North Lincolnshire Museum
- all retained finds will be assessed and recorded using pro forma recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated within the site matrix
- all retained environmental samples will be processed by suitably experienced and qualified staff

9.4 An OASIS form will be completed for the project and a digital copy of the final report deposited with the Archaeological Data Service (ADS).

10 TIMETABLE AND PERSONNEL

10.1 Details of the timetable and CVs of key personnel and specialists will be provided to the North Lincolnshire Historic Environment Officer on appointment of the fieldwork contractor. Work will be undertaken under the management of a suitably qualified archaeologist. Mitchell Pollington (Lanpro) will oversee management of the project and will monitor the work on behalf of the client.

10.2 The North Lincolnshire Historic Environment Officer will be given at least one week's notice of the commencement of the fieldwork and will be free to visit the site at any time by prior arrangement with Lanpro. The North Lincolnshire Historic Environment Officer will monitor implementation of the programme of works on behalf of the Local Planning Authority and evaluate the work being undertaken on site against the methodology detailed in this WSI.

10.3 The archaeological contractor on site will be responsible for the provision of all required welfare, plant, and health and safety equipment.

10.4 An assessment report will be produced within six weeks of completion of fieldwork, subject to the complexity of any archaeological features encountered.

11 INSURANCE

11.1 The archaeological contractor will produce evidence of Public Liability Insurance to the minimum value of £5m and Professional Indemnity Insurance to the minimum of £5m.

12 HEALTH AND SAFETY

12.1 All works will be undertaken in compliance with the Health and Safety at Work Act (1974) and all applicable regulations and Codes of Practice, and the Construction Design Management Regulations 2015.

12.2 All archaeological staff will undertake their operations in accordance with safe working practices and will be CSCS certified. At least one First Aider will be present on site at all times.

12.3 A site-specific risk assessment will be undertaken by the fieldwork contractor and provided to Lanpro prior to the commencement of work on site.

12.4 Regular audits of health and safety practices will be carried out during the course of the project by Lanpro and the archaeological contractor in consultation with the site workforce. Toolbox talks on health and safety issues will be conducted at minimum weekly intervals and/or after changes in working practices or identification of new threats/risks. The risk assessment will be reviewed and updated as necessary. Control measures will be implemented as required in response to specific hazards.

12.5 Safe working will take priority over the desire to record archaeological features or remains, and where it is considered that recording is dangerous, any such features will be recorded by photography at a safe distance.

12.6 Trench locations will be scanned with a Cable Avoidance Tool (CAT) prior to excavation.

12.7 Where archaeological work is carried out at the same time as the work of other contractors, regard will be taken of any reasonable additional constraints that these contractors may impose.

12.8 All staff will receive a health and safety induction prior to starting work on site to be provided by the archaeological contractor , and visitors to the site will receive an induction as required.

12.9 The archaeological contractor will provide all staff on site the with copies of all health and safety documentation. Plant operators will be required to produce evidence of qualification within an industry accepted registration scheme. Sub-Contractors health and safety performance will be kept under review and action taken if necessary.

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Figures

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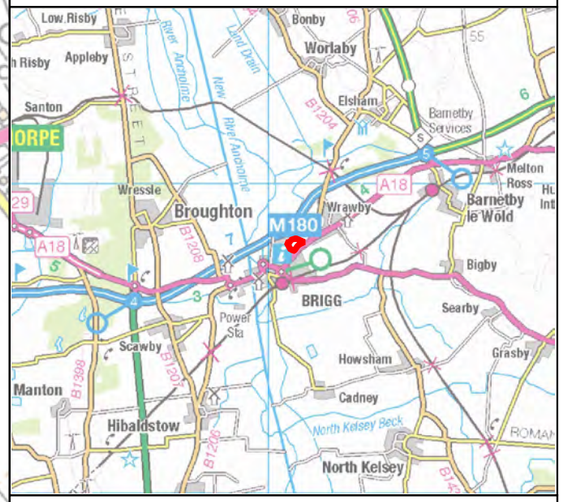

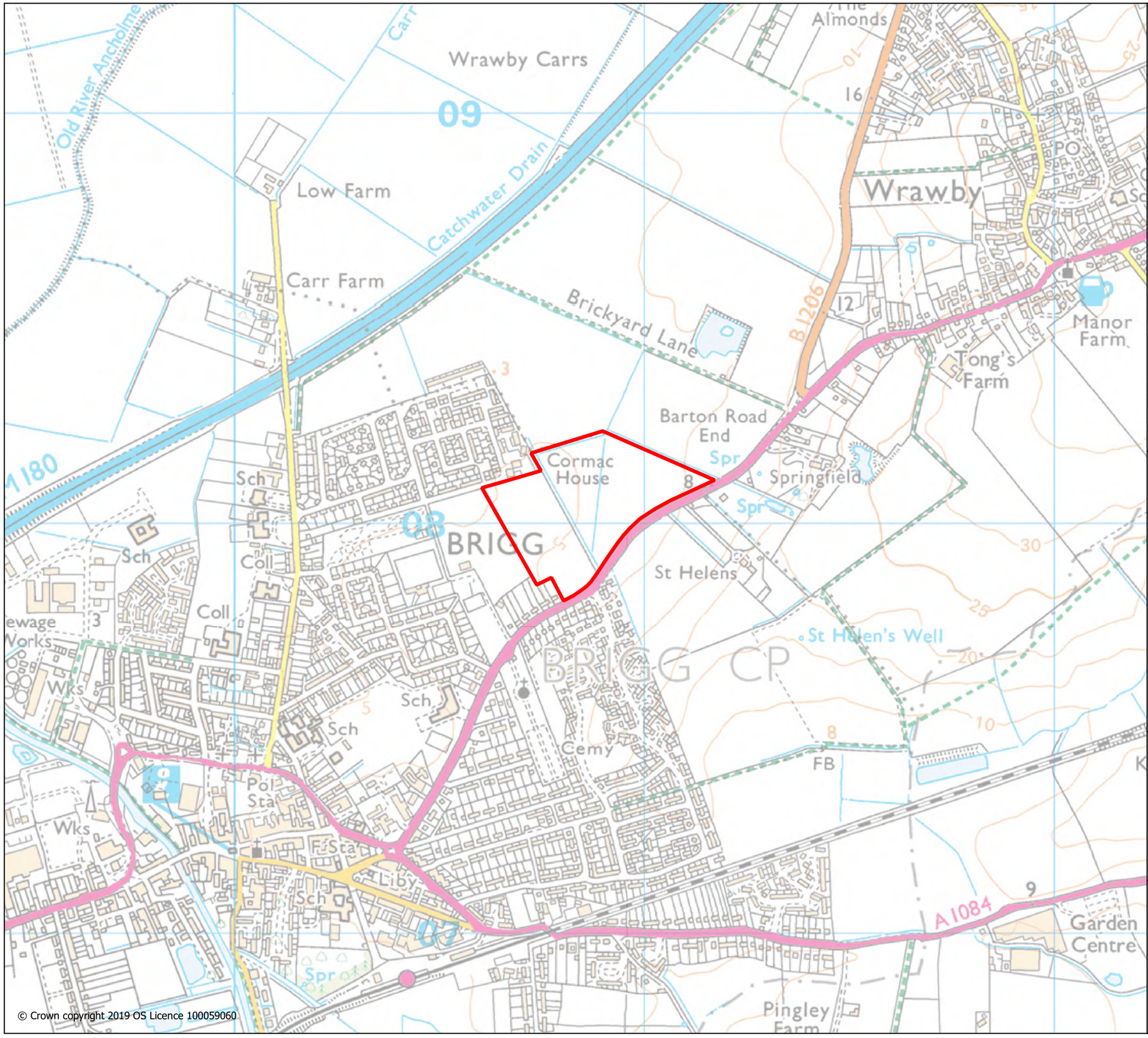

Site boundary

N

0 100 200 300 400 500 m

Figure 1. Site location

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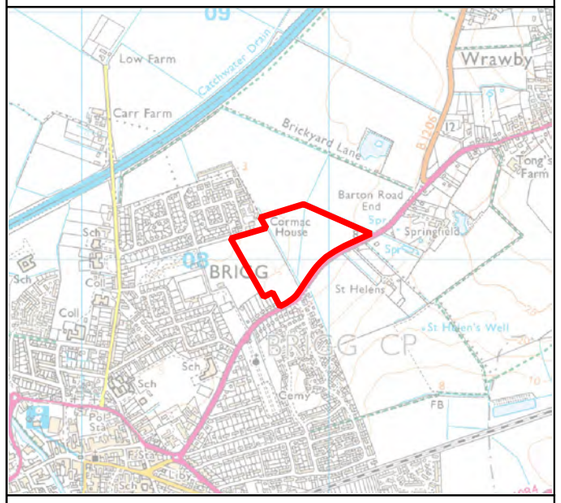

T1
T2
T3
T4
T5
T6
T7
T8

Proposed development site

Proposed evaluation trench

N

0 10 20 30 40 50 m

1:1250 scale @ A4

Figure 2. Proposed archaeological evaluation trench plan

Appendix 1: Geophysical survey plans (ASWYAS 2018)

PROJECT ID: 8475_BGG18	
	SURVEY BOUNDARY
	SECTOR BOUNDARY
1	LOCATION AND DIRECTION OF PLATES

N

FIELD 2

SECTOR 2
SEE FIGS 7-9

FIELD 3

SECTOR 1
SEE FIGS 4-6

FIELD 1

1

2

3

4

2.0

-1.0

nT

4082$_{00}$

4080$_{00}$

4078$_{00}$

5006$_{00}$

5008$_{00}$

5010$_{00}$

5012$_{00}$

0 100m

Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

Fig. 2. Survey location showing greyscale magnetometer data (1:2000 @ A3)

PROJECT ID: 8475_BGG18

N

4080 00

2.0

-1.0

nT

Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

5800 00

4078 00

0 30m

Fig. 3. Processed greyscale magnetometer data; Sector 1 (1:1000 @ A3)

PROJECT ID: 8475_BGG18

N

4080 00

4078 00

5800 00

20.0 nT/cm

© ASWYAS 2018.
Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

0 30m

Fig. 4. XY trace plot of minimally processed magnetometer data; Sector 1 (1:1000 @ A3)

PROJECT ID: 8475_BGG18

N

4080 00

TYPE OF ANOMALY		INTERPRETATION
	DIPOLAR ISOLATED	FERROUS MATERIAL
	MAGNETIC DISTURBANCE	FERROUS MATERIAL
	LINEAR TREND	AGRICULTURAL
	LINEAR TREND	FIELD DRAIN
	LINEAR TREND	RIDGE AND FURROW

Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

4078 00

5800 00

0 30m

Fig. 5. Interpretation of processed magnetometer data; Sector 1 (1:1000 @ A3)

PROJECT ID: 8475_BGG18

N

4082 00

4080 00

2.0
-1.0
nT

5008 00

5010 00

0 30m

Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

Fig. 6. Processed greyscale magnetometer data; Sector 2 (1:1000 @ A3)

PROJECT ID: 8475_BGG18

N

4082 00

4080 00

20.0 nT/cm

© ASWYAS 2018.
Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

5008 00

5010 00

0 30m

Fig. 7. XY trace plot of minimally processed magnetometer data; Sector 2 (1:1000 @ A3)

PROJECT ID: 8475_BGG18

TYPE OF ANOMALY		INTERPRETATION
•	DIPOLAR ISOLATED	FERROUS MATERIAL
	MAGNETIC DISTURBANCE	FERROUS MATERIAL
	LINEAR TREND	AGRICULTURAL
	LINEAR TREND	FIELD DRAIN
	LINEAR TREND	RIDGE AND FURROW

N

4082**00**

4080**00**

5008**00**

5010**00**

Archaeological Services W Y A S
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163

0 30m

Fig. 8. Interpretation of processed magnetometer data; Sector 2 (1:1000 @ A3)

Appendix 2: Inventory of primary archive

File No	Description	Quantity
File no.1	Context register sheets	1
	Drawing register sheets	1
	Site Diary	3
	Trench record sheet	8
	Context cards	4
	Photo register sheet (Film no. 9673)	1
	Digital Photo register sheet (19D021)	1
	Drawing Sheet	1

Appendix 3: Concordance of contexts

Context	Trench	Description	Artefacts and environmental samples
100	-	Topsoil	
101	-	Subsoil	
102	-	Natural	
103	6	Fill of [104]	
104	6	Cut of NE-SW linear	
105	2	Fill of [106]	
106	2	Cut of NE-SW linear	

Appendix 4: Trench tables

Trench 1 (Plate 1)		
General Description	**Orientation**	N - S
Vestige furrows noted at the southern end of the trench on an E-W alignment. These were less than 0.1m in depth. No other archaeological remains present.	**Depth (m)**	0.40
	Width (m)	2.00
	Length (m)	50.00

Contexts

Context No	Type	Length (m)	Width (m)	Depth (m)	Description
100	Layer	-	-	0.30	Dark brown silty sand topsoil
101	Layer	-	-	0.10	Mid-brown sand subsoil
102	Layer	-	-	-	Mid-yellow/orange-brown silty sand natural with sub-rounded flint inclusions.

Trench 2 (Plates 2 and 3)		
General Description	**Orientation**	E-W
Land drains noted on NE – SW alignment. Linear feature (106) at the eastern end of the trench.	**Depth (m)**	0.44
	Width (m)	2.00
	Length (m)	50.00

Contexts

Context No	Type	Length (m)	Width (m)	Depth (m)	Description
100	Layer	-	-	0.40	Dark brown silty sand topsoil
101	Layer	-	-	0.10	Mid-brown sand subsoil
102	Layer	-	-	-	Mixed white, yellow and orange sands with abundant iron staining.
105	Fill	2.00	0.80	0.38	Light grey wet sterile sand single fill of 106
106	Cut	2.00	0.80	0.38	V-shaped linear feature

Trench 3 (Plate 4)					
General Description				**Orientation**	N - S
No archaeological remains present.				**Depth (m)**	0.40
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.44	Dark brown silty sand topsoil
102	Layer	-	-	-	Yellow and orange sands with iron staining

Trench 4 (Plate 5)					
General Description				**Orientation**	E - W
No archaeological remains present.				**Depth (m)**	0.44
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.44	Dark brown silty sand topsoil
101	Layer	-	-	<0.10	Mid-brown sand subsoil
102	Layer	-	-	-	Mid-yellow/orange sand natural with iron staining.

Trench 5 (Plate 6)					
General Description				**Orientation**	E - W
No archaeological remains present.				**Depth (m)**	0.44
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.44	Dark brown silty sand topsoil
102	Layer	-	-	-	Mid-yellow, grey and orange sand natural with iron staining.

Trench 6 (Plates 7 and 8)					
General Description				**Orientation**	N - S
NE-SW aligned linear feature. No other archaeological remains present.				**Depth (m)**	0.36
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.30	Dark brown silty sand topsoil
102	Layer	-	-	-	Mid-yellow/orange sand natural with iron staining.
103	Fill	5.00	0.75	0.42	Light yellow/grey soft wet silt fill of 104
104	Cut	5.00	0.75	0.42	Cut of steep sided, U-shaped, linear

Trench 7 (Plate 9)					
General Description				**Orientation**	N - S
No archaeological remains present.				**Depth (m)**	0.50
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.48	Dark brown silty sand topsoil
101	Layer	-	-	<0.10	Mid-brown sand subsoil
102	Layer	-	-	-	Mid-grey/brown and yellow/brown silt with iron staining

Trench 8 (Plate 10)					
General Description				**Orientation**	E - W
NW-SE aligned land drains, modern linear aligned NE-SW. No archaeological remains present.				**Depth (m)**	0.45
				Width (m)	2.00
				Length (m)	50.00
Contexts					
Context No	**Type**	**Length (m)**	**Width (m)**	**Depth (m)**	**Description**
100	Layer	-	-	0.35	Dark brown silty sand topsoil
101	Layer	-	-	0.10	Mid-yellow/brown sand subsoil
102	Layer	-	-	-	Mid-yellow/orange sand natural with iron staining.

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