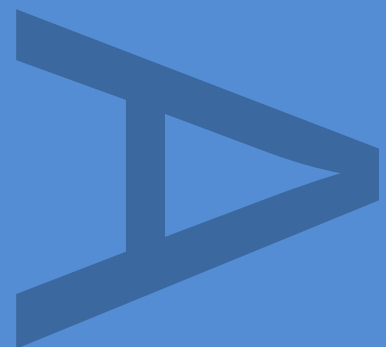


**AN ARCHAEOLOGICAL EVALUATION AT
YARM MEDICAL CENTRE,
1 WORSALL ROAD, YARM,
STOCKTON-ON-TEES**

MARCH 2011



PRE-CONSTRUCT ARCHAEOLOGY

**AN ARCHAEOLOGICAL EVALUATION AT
YARM MEDICAL CENTRE, 1 WORSALL ROAD, YARM,
STOCKTON-ON-TEES**

**An Archaeological Evaluation at Yarm Medical Centre, 1 Worsall Road, Yarm,
Stockton-on-Tees**

Central National Grid Reference: NZ 418 123

Site Code: YAR 11

Commissioning Client (on behalf of Yarm Medical Practice):

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March 2011**

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APPENDICES

Appendix A	Stratigraphic Matrices
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1. NON-TECHNICAL SUMMARY

- 1.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Limited at Yarm Medical Centre on Worsall Road, Yarm, Stockton-on-Tees. The site is located towards the north-eastern end of Worsall Road, towards its junction with The Spital, in the southern part of the town of Yarm at central National Grid Reference NZ 418 123.
- 1.2 The evaluation, undertaken 14-18 February 2011, was commissioned by PRP Architects on behalf of Yarm Medical Practice and was required as a planning condition for the re-development of the site as a larger medical facility. The archaeological interest of the site stems from its location within the precinct of the former medieval castle; in addition, the south-western portion of the site is known from historic maps evidence to have been occupied in the 19th century by a brick and tile works.
- 1.3 The evaluation comprised three machine-excavated trenches (Trenches 1-3). Trench 1 measured 20m x 1.70m, aligned SE-NW, and was located on a sloping tarmac car park in the western part of the site to test for remains of the brick and tile manufactory, as well as any earlier remains. Trenches 2 and 3 both measured 2m x 2m and were located on tarmac parking areas in the southern central and easternmost portions of the site, respectively, to test for archaeological remains of the medieval period in particular. In broad terms, the evaluation aimed to establish the archaeological potential of the site.
- 1.4 The natural clay sub-stratum was exposed along the base of Trench 1, at a depth of c. 0.20m below existing ground level, sloping down to the north-west towards the road frontage. Towards the south-eastern end of the trench and against the eastern limit of excavation, the western end of a brick-lined structure was exposed, cut into the natural clay. To the west, the natural clay had been turned bright pink, having been exposed to very high temperatures, and the structure – likely a kiln or flue - was almost certainly an element of the brick and tile works. A deposit directly overlying the structure represents its demolition. A stone make-up layer and the existing tarmac surface formed the uppermost strata in Trench 1.
- 1.5 The natural clay sub-stratum was not encountered in either of Trenches 2 or 3, both of which were excavated to a maximum depth of c. 1.60m below existing ground level. In both trenches substantial thicknesses of dumped material were recorded, this probably late 19th century infill of clay extraction pits associated with the nearby manufactory. East-west aligned field drains were recorded in both Trenches 2 and 3, where the uppermost strata were stone sub-base layers for the tarmac forming the existing car park surface.
- 1.6 In summary, no archaeological features, deposits or structures pre-dating the later post-medieval period were encountered. Limited structural remains associated with the 19th century brick and tile manufactory were recorded at shallow depth in Trench 1, while dump deposits, probably derived from infilling extraction pits associated with the same manufactory were recorded in Trenches 2 and 3.

2. INTRODUCTION

2.1 General Background

- 2.1.1 This report details the methodology and results of an archaeological evaluation undertaken by Pre-Construct Archaeology Limited (PCA) 14-18 February 2011 at Yarm Medical Centre, Worsall Road, Yarm (Figure 1). The work was commissioned by commissioned by PRP Architects on behalf of Yarm Medical Practice.
- 2.1.2 Yarm Medical Centre is to be re-developed as a larger medical facility with greater car parking capability. The existing medical centre building is to be demolished. The archeological evaluation was required as a condition of planning permission on the recommendation of Tees Archaeology. No desk-based heritage assessment has been undertaken for the site and no previous archaeological work has taken place within its boundaries. The archaeological interest of the site stems from its location within the precinct of the former medieval castle; in addition, the site was occupied in the 19th century by a brick and tile manufactory.
- 2.1.3 Tees Archaeology produced a Brief¹ to outline the requirements for the evaluation of the site in order to fulfil the planning condition. In response, a Project Design was prepared by PCA to comprise the 'written scheme of investigation' specified in the planning condition.² The Project Design followed the format set out in *Management of Research Projects in the Historic Environment* (MoRPHE).³
- 2.1.4 The evaluation comprised three machine-excavated archaeological trial trenches positioned in accessible areas of the site in order to target potential archaeological remains.
- 2.1.5 The Site Archive (site code: YAR 11) is currently held at the Northern Office of PCA and the retained element, comprising the written, drawn and photographic records, will be deposited with Tees Archaeology, Sir William Gray House, Clarence Road, Hartlepool.
- 2.1.6 The Online Access to the Index of Archaeological Investigations (OASIS) reference number for the project is: preconst1-97776.

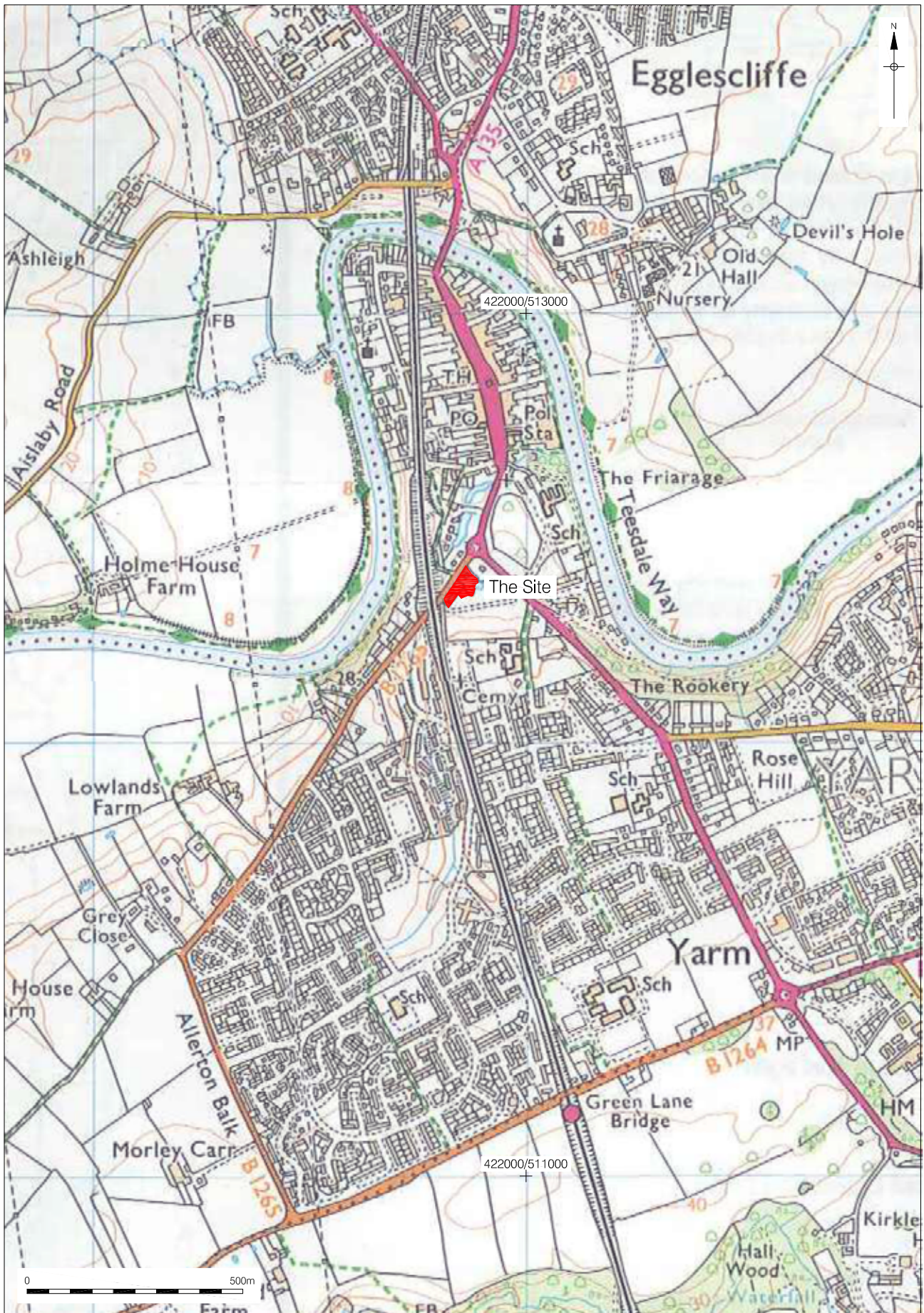
2.2 Site Location and Description

- 2.2.1 Yarm is situated in the south of unitary authority area and borough of Stockton-on-Tees. The site is located in the southern part of the town, towards the north-eastern end of Worsall Road, close to its junction with The Spital. Lying on the eastern side of the road, the central National Grid Reference of the site is SE 418 123 (Figures 1 and 2).
- 2.2.2 The site comprises an irregularly shaped plot of land covering 3,325 square metres, which is currently occupied by the buildings and car parking areas of Yarm Medical Practice. It is bounded to the north-west by Worsall Road, to the north-east by the wooded grounds of 'The Hermitage', to the south-east by allotment gardens and to the south-west by an access road (Figure 2).

¹ Tees Archaeology 2010.

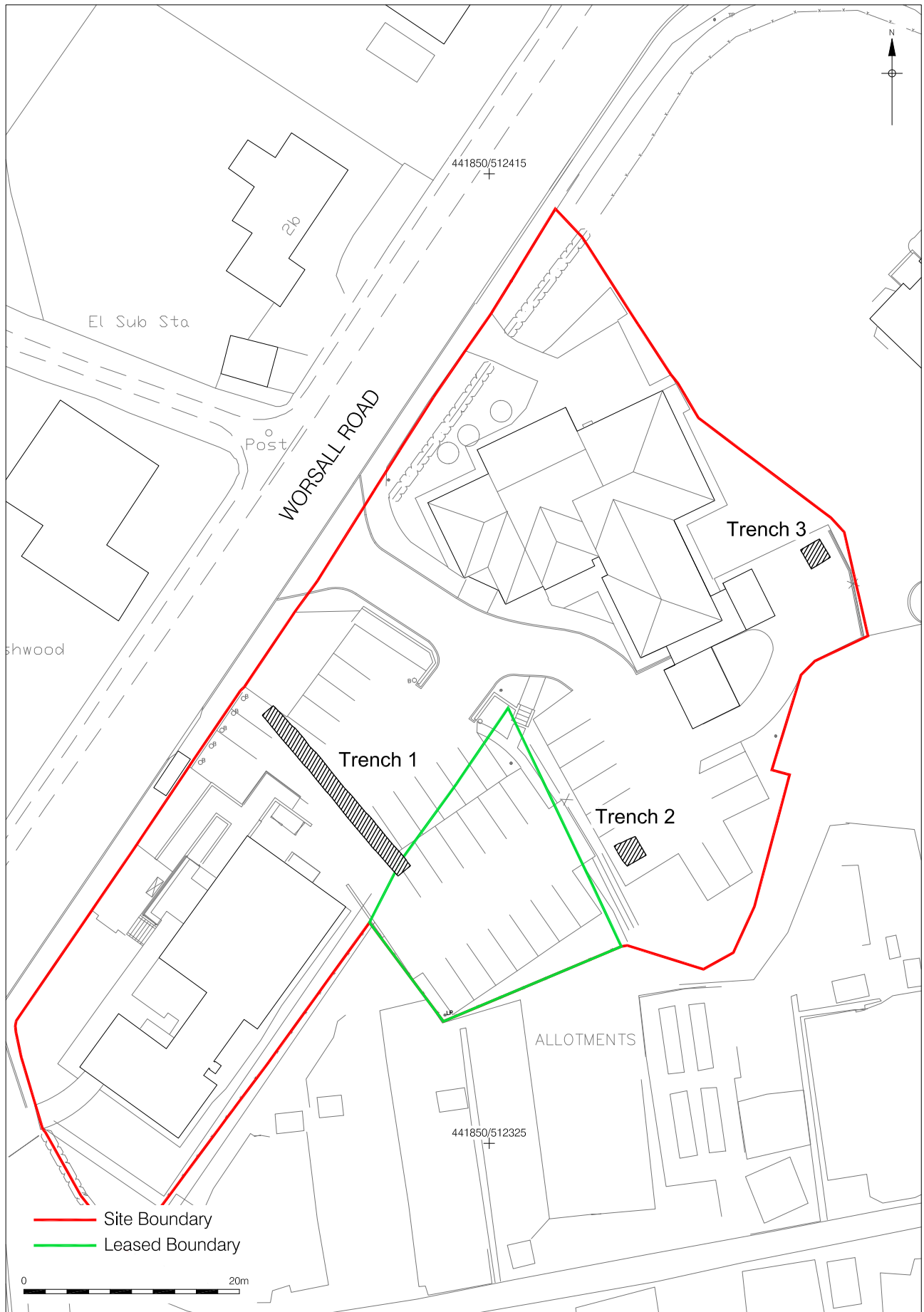
² PCA 2011.

³ English Heritage 2006.



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Figure 1
 Site Location
 1:12,500 at A4



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Figure 2
 Detailed Site and Trench Location
 1:500 at A4

2.3 Geology and Topography

- 2.3.1 The town of Yarm occupies a low lying peninsula formed by a loop in the River Tees, with higher ground to the south and a small spur ending at the neck of the peninsula. The site is located in the southern part of the town close to the neck of the peninsula.
- 2.3.2 The solid geology of Yarm is formed by the Sherwood Sandstone Group of the Late Permian. The low-lying northern portion of the peninsula which the town occupies has alluvial material as its superficial geology, while the higher ground to the south, on which the site lies, has Devensian Till, known commonly as glacial 'boulder clay', as its superficial geology.⁴
- 2.3.3 Existing ground levels at the site generally reflect the downward slope to the north, towards the lower-lying portion of the Yarm peninsula. The highest part of the site was to the south of Trench 1, at the south-western corner of the car park, where ground level was c. 18.0m OD. From that location there was a general fall away to the north-west and north-east. At the site entrance on Worsall Road ground level was c. 15.65m OD, while the car park surface in the vicinity of Trenches 2 and 3 stood at c. 16.30m OD and c. 15.40m OD, respectively.

2.4 Planning Background

- 2.4.1 Planning permission for the re-development scheme has been granted (reference no. 10/2429/FUL) to Yarm Medical Practice by the Local Planning Authority (LPA), Stockton-on-Tees Borough Council. The scheme involves construction of a new medical centre in the western part of the site, where a disused clinic building currently stands, so that once the new structure is complete, the existing centre will be demolished to provide a two-storey car park.
- 2.4.2 The archaeological evaluation was undertaken as a condition of planning permission, on the recommendation of Tees Archaeology, the body which provides archaeological development control in the four unitary local authorities of Hartlepool, Middlesbrough, Redcar & Cleveland and Stockton-on-Tees. The site has potential for medieval remains, as well as for evidence of a known 19th century brick and tile manufactory. The reason given for the planning condition was to advise on the impact of the scheme on the archaeological resource and thus allow for flexibility in design to allow preservation of important deposits *in situ*, while informing appropriate mitigation, such as full excavation, for less sensitive areas of the site.
- 2.4.3 Tees Archaeology produced a Brief to outline the requirements for work at the site in order to fulfil the planning condition. Section 4.1 of the Brief stipulated that a Written Scheme of Investigation (WSI) was required in response to the Brief, this echoing the planning condition which specifically mentioned that a WSI must be submitted to and approved by the LPA prior to the commencement of development. The Project Design prepared by PCA comprised the required WSI.

⁴ The *British Geological Survey* website.

- 2.4.4 The requirement to undertake the archaeological work is in line with planning policy at a national level as set out in *Planning Policy Statement 5 'Planning for the Historic Environment'* (PPS5).⁵ PPS5 is a material planning consideration in the determination of planning applications and advises local planning authorities to require applicants to provide a description of the significance of the 'heritage assets' (those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest).
- 2.4.5 At a local level, the Core Strategy Development Plan Document (adopted 2010) of Stockton-on-Tees emerging Local Development Framework contains 'Objective 9. To protect and enhance the built environment and the area's archaeological, industrial and cultural heritage'. Former Local Plan Policies EN29 and EN30, 'Sites of Archaeological Interest', remain in place with regard to the determination of planning applications.
- 2.4.6 In sum, therefore, the archaeological evaluation was required, as part of the planning process, to inform the LPA, Stockton-on-Tees Council, regarding the character, date, extent and degree of survival of archaeological remains. The results should inform a decision by the LPA, advised by Tees Archaeology, regarding further archaeological mitigation measures.

2.5 Archaeological and Historical Background

The Tees Archaeology Brief, the resultant PCA Project Design and the British History Online website, provided much of the following information. The research and writing of those responsible is gratefully acknowledged.

- 2.5.1 There are no scheduled monuments or other designated heritage assets on the development site or in its immediate vicinity. However, the site lies immediately to the south of the Yarm Conservation Area, which incorporates the north-eastern end of Worsall Road and its junction with The Spital.
- 2.5.2 The earliest known evidence for human occupation of the Yarm area is the discovery of four polished stone axes of Neolithic date, one of which was found residually in medieval layers during excavations at 13 West Street. The only other prehistoric find from the Yarm peninsula was the antiquarian discovery of a dugout canoe near Bridge Street; this is thought to have been of Bronze Age or Iron Age date.
- 2.5.3 There is no evidence of Roman activity in Yarm. Evidence of early Anglian activity in the town comes from stratified finds: a funerary urn, a bronze brooch and a helmet. Tile recovered in a later deposit on the High Street was dated by scientific techniques to AD 610 ± 275.
- 2.5.4 The place name itself is of Anglo-Saxon origin (*larun* in Domesday Book of 1086, from the Old English *gearum*, 'fish pools'). By the 12th century Yarm was already an established port and may have had borough rights by this time. Although the present church was rebuilt in the 18th century it is of 12th century origin and may have had an earlier, Anglo-Saxon, predecessor, suggested by the discovery of the grave-slab of Trumberhct, Bishop of Hexham in the late 7th century.

⁵ Department of Communities and Local Government 2010.

- 2.5.5 There was certainly a settlement of some description in place by 1086 as Yarm is recorded as a *vill* in Domesday Book. The Norman foundation of the town was initially based on the western side of the peninsula, probably centred around a church on West Street, which ran from a triangular market place at the southern end of the town to a ford over the Tees. The earliest domestic structures so far discovered were the remains of timber buildings found at the corner of West Street and Low Church Wynd, these dating to the mid-12th century, while an archaeological investigation undertaken in 2009 at Yarm School,⁶ at the southern end of the town, also recorded 12th century settlement evidence, as described further below.
- 2.5.6 The advantageous position of Yarm as the lowest crossing-point on the Tees enabled its expansion under the patronage of the de Brus family in the 13th century, to become the principal port on the Tees, until Stockton superseded it in the post-medieval period. Stretches of walling, thought to represent possible medieval port facilities, were encountered north of Bridge Street and west of the church, during an archaeological watching brief associated with flood defence works in 1991.
- 2.5.7 The site itself is located to the south of the medieval core of Yarm. The aforementioned archaeological work undertaken at Yarm School, c. 200m to the north-east of the medical centre, was conducted within the precinct of the 13th century Dominican Friary that developed at the southern end of the town. The work recorded evidence of intensive settlement related occupation in the 12th century, thus from a very early period in the establishment of the medieval settlement in the town, and pre-dating the establishment of the Friary.
- 2.5.8 A summary of documentary records between the 13th and 18th centuries is set out in a forthcoming paper on the 2009 investigations and these persistently imply the presence of medieval defences in the southern part of the town. Specifically, the documentary material indicates an earthwork defence or defences - a 'castledyke' - at the northern end of the spur which overlooks the peninsula. The line of this 'castledyke' is uncertain, but it is postulated as being an outer defensive element of a Norman earthwork castle. It probably took the form of a ditch and bank with rampart and likely ran with a curving course across the narrowest part of the neck of the peninsula, which places it in the immediate vicinity of the medical centre site, probably just to the south.
- 2.5.9 During the 19th century, the south-western portion of the site was occupied by a substantial range of buildings aligned NE-SW and fronting onto Worsall Road. This range is shown on the Ordnance Survey 1st edition map of c. 1856 and annotated 'Brick & Tile Works'. South of the buildings parallel rows of rectangular features are depicted, these possibly representing ponds associated with the processing of clay for the manufactory. A large oval shape feature depicted to the east of the manufactory likely represents a clay extraction quarry – this feature survives in the property to the immediate east of the site as a pond. The brick works had evidently gone out of use by the late 19th century and the buildings are no longer shown on the Ordnance Survey 2nd edition map of 1895.

⁶ Daniels forthcoming.

3. PROJECT AIMS AND RESEARCH OBJECTIVES

3.1 Project Aims

- 3.1.1 The project is threat-led, as the re-development scheme will potentially destroy sub-surface archaeological remains at the site, which are most likely to be of medieval and post-medieval industrial date in particular. The broad aim of the project is to assess the level of survival and importance of archaeological remains that may be disturbed and thus to advise on the impact of the scheme on the archaeological resource.
- 3.1.2 Archaeological trial trenching was chosen as the investigative tool to test the archaeological potential of available areas of the site. Three trenches (Trenches 1-3) were investigated in areas currently utilised for car parking.
- 3.1.3 Additional aims of the project were:
- to compile a Site Archive consisting of all site and project documentary and photographic records, as well as all artefactual and palaeoenvironmental material recovered;
 - to compile a report that contains an assessment of the nature and significance of all data categories, stratigraphic, artefactual, *etc.*

3.2 Research Objectives

- 3.2.1 The project was considered to have potential to make a significant contribution to the existing archaeological knowledge of Yarm, in particular for the medieval period and post-medieval industrial era.
- 3.2.2 Specific research objectives to be addressed by the project were formulated with reference to an existing archaeological research framework, *Shared Visions: The North-East Regional Research Framework for the Historic Environment* (NERRF)⁷ which highlights the importance of research as a vital element of development-led archaeological work. It sets out key research priorities for all periods of the past allowing commercial contractors to demonstrate how their fieldwork relates to wider regional and national priorities for the study of archaeology and the historic environment.
- 3.2.3 The NERRF identifies the following key research priorities within the research agenda for the medieval period which are of direct relevance to this project:
- **MDi. Settlement.** *'... there is the potential to find out more about local building traditions through archaeology'.*
 - **MDiv. Castles and defensive structures.** *'... highlights the importance of addressing the landscape context of castles'.*
 - **MDvii. Ceramics and other artefacts.** *'Ceramic evidence is crucially important, it can be used as a chronological indicator and tells us about patterns of economic exchange and consumption'.*

⁷ Petts and Gerrard 2006.

- **MDviii. Other industries.** *'...metallurgical and other technical advice must be taken routinely when relevant discoveries are made'.*

3.2.4 The NERRF identifies the following key research priority within the research agenda for the post-medieval period which is of direct relevance to this project

- **PMii. Industrialisation.** *'More research is needed on ceramic production sites.....It is important to increase our knowledge of kilns and their associated buildings'.*

3.2.5 Therefore, as defined in the Tees Archaeology Brief, the specific research objectives of the project are:

- to define the extent and date of medieval activity at the site as evidenced by buildings, boundaries, industrial features, pits and ditches, etc.;
- to assess the level of survival of the former brick and tile works and any associated structures.

4. ARCHAEOLOGICAL METHODOLOGY

4.1 Fieldwork

- 4.1.1 The evaluation fieldwork was undertaken 14-18 February 2011. It was undertaken in accordance with the relevant standard and guidance document of the Institute for Archaeologists (IfA).⁸ PCA is an IfA-Registered Organisation. The evaluation was undertaken in accordance with the Tees Archaeology Brief and the Project Design compiled by PCA¹¹ which should be consulted for full details of methodologies employed regarding archaeological excavation, recording and sampling.
- 4.1.2 Three archaeological evaluation trenches were investigated in the grounds of the medical centre, all positioned within tarmaced areas currently in use for car parking. Trench 1 measured 20m x 1.70m, aligned SE-NW, and was located on a sloping tarmac car park in the western part of the site to test for remains of the brick and tile manufactory, as well as any earlier remains. Trenches 2 and 3 both measured 2m x 2m and were located on tarmac parking areas in the southern central and easternmost portions of the site, respectively, to test for archaeological remains of the medieval period in particular.
- 4.1.3 All trenches were mechanically-excavated by a JCB 3CX back-actor with toothless ditching bucket under archaeological supervision. The trenches were excavated to the clearly defined top of the natural sub-stratum (Trench 1), or as deep as Health and Safety considerations allowed (Trenches 2 and 3). All trenches were hand cleaned and then photographed and archaeologically recorded, with partial excavation undertaken as necessary.
- 4.1.4 Two Temporary Bench Marks were established on site using existing survey data: TBM 1 - used for Trench 1 - had a value of 17.24m OD; TBM 2 - used for Trenches 2 and 3 - had a value of 15.93m OD. The height of all principal strata and features were calculated relative to Ordnance Datum and indicated on the appropriate plans and sections.

4.2 Post-excavation

- 4.2.1 The stratigraphic data generated by the project is represented by the written, drawn and photographic records. A total of 30 archaeological contexts were defined in the three trenches (Appendix B). Post-excavation work involved checking and collating site records, grouping contexts and phasing the stratigraphic data (Appendix A). A written summary of the archaeological sequence was then compiled, as described below in Section 5.
- 4.2.2 The recovered artefactual material from the evaluation comprised a single item, part of a clay tobacco pipe stem. No other categories of organic or inorganic artefactual material were represented. None of the material recovered during the evaluation required specialist stabilisation or an assessment of its potential for conservation research.
- 4.2.3 The palaeoenvironmental sampling strategy of the project was to recover bulk samples where appropriate, from well-dated (where possible), stratified deposits covering the main periods or phases of occupation and the range of feature types represented, with specific reference to the objectives of the evaluation. To this end, no appropriate deposits were encountered and therefore no bulk samples were recovered. No other biological material was recovered.

⁸ IfA 2008a.

4.2.4 The complete Site Archive will be packaged for long term curation. In preparing the Site Archive for deposition, all relevant standards and guidelines documents referenced in the Archaeological Archives Forum guidelines document⁹ will be adhered to, in particular a well-established United Kingdom Institute for Conservation (UKIC) document¹⁰ and a recent IfA publication.¹¹ The depositional requirements of the body to which the Site Archive will be ultimately transferred will be met in full. At the time of writing this will be Tees Archaeology, Sir William Gray House, Clarence Road, Hartlepool.

⁹ Brown 2007.

¹⁰ Walker, UKIC 1990.

¹¹ IfA 2008.

5. RESULTS: THE ARCHAEOLOGICAL SEQUENCE

During the evaluation, separate stratigraphic entities were assigned unique and individual 'context' numbers, which are indicated in the following text as, for example [123]. The archaeological sequence is described by placing stratigraphic sequences within broad phases, assigned on a site-wide basis in this case. An attempt has been made to add interpretation to the data, and correlate these phases with recognised historical and geological periods.

5.1 Phase 1: Natural Sub-stratum

5.1.1 Phase 1 represents natural geological deposits. Such material was exposed only along the base of Trench 1. The deposit, [11], comprised stiff light to mid pinkish brown clay with few inclusions. This material is the locally known 'boulder clay' of glacial origin. It was recorded at a maximum height of 17.21m OD at the south-eastern end of the trench, sloping down to a minimum height, on its upper surface, of 15.95m OD at the north-western end of the trench. This fall reflects the natural topography of the site and wider area.

5.1.2 No natural deposits were encountered in Trenches 2 and 3, which were excavated to maximum depths of 1.65m (lowest recorded height 14.84m OD) and 1.58m (lowest recorded height 13.97m OD) below existing ground level, respectively. Either the natural topography of the site meant that the original ground level fell away markedly to the east of Trench 1 or alternatively, and probably more likely, the natural clay sub-stratum had been quarried away in this part of the site, presumably when the nearby brick and tile manufactory was operational, with infilling of much of the extraction area subsequently taking place.

5.2 Phase 2: Post-medieval

5.2.1 Phase 2 represents activity of 19th century date, some or all associated with the brick and tile manufactory known to have occupied the south-western portion of the site. Map evidence from the mid 19th century shows a substantial NE-SW aligned range of buildings, annotated 'Brick & Tile Works', occupying the south-western portion of the site and extending into the car parking area in which Trench 1 was sited.

5.2.2 Towards the south-eastern extent of Trench 1, the south-western end of a brick-lined structure, [7], was recorded, adjacent to and continuing beyond the eastern limit of excavation. It was housed within a square-ended construction cut, [8], which had been excavated into the natural clay sub-stratum.

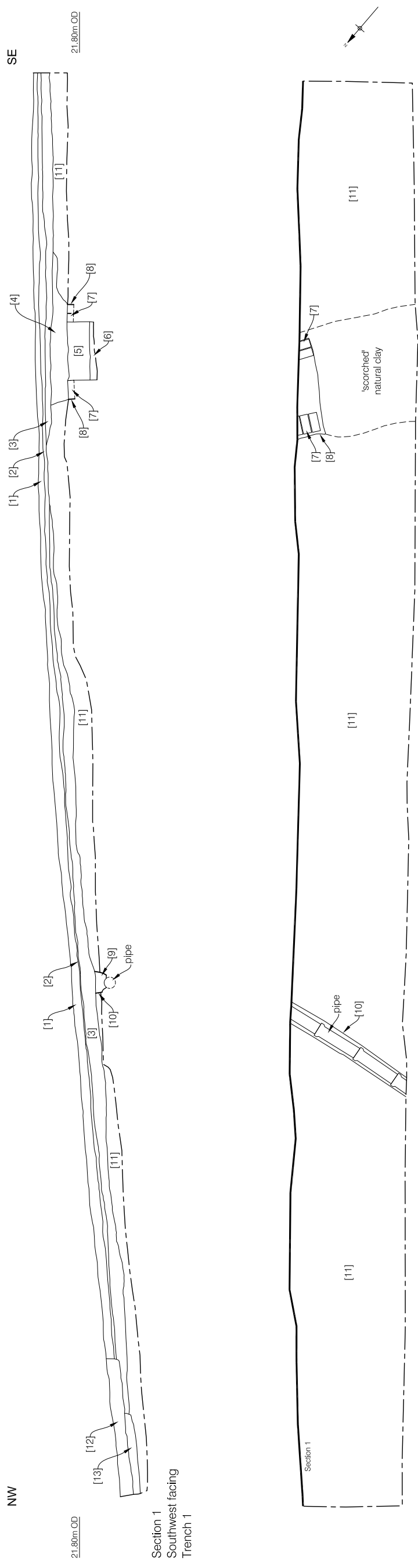
5.2.3 The remains of the structure comprised two parallel NE-SW aligned brick walls c. 0.80m apart and constructed using unfrogged red bricks (250mm x 120mm x 80mm) laid in alternate header and stretcher courses, bonded with soft clay (Figure 3). The structure was 1.30m wide (NW-SE) by at least 0.38m long (NE-SW), continuing beyond the eastern limit of excavation as described, and was c. 0.40m high (four courses of brick) within construction cut [8]; it was recorded at a maximum height of 16.96m OD. Its interior was filled by a weakly cemented fire debris deposit, [6], comprising cinders and slag, overlain by a dump of coarse sand, [5], with a combined thickness of 0.46m. The fire debris likely accumulated when the structure fell into disuse and was probably derived from an associated process in the manufactory.

- 5.2.4 Structure [7] is interpreted as representing the lowermost surviving remains of an element of the 19th century brick and tile works on Worsall Road. Given the limited degree to which it was possible to examine the structure, a definitive interpretation of its function is impossible, although it was most likely part of a kiln or flue within the manufactory. The area of natural clay to the south-west of the structure had been scorched bright pink indicating that it had been exposed to very high temperatures. It is clear that this portion of the structure survived only because of its subterranean setting and all that all associated remains at or above the contemporary ground level had suffered horizontal truncation, probably when the buildings were demolished during the second half of the 19th century or, possibly less likely, when the existing medical centre and its car parking area were constructed during the 20th century.
- 5.2.5 Directly overlying the upper backfill of structure [7] was a stiff clay deposit, [4], up to 0.25m thick and containing frequent fragments of brick. The extent of the deposit broadly corresponded with the construction cut, [8], for the structure, although with some disturbance of the feature to the south-east. This material is interpreted as a demolition deposit associated the abandonment of the brick and tile manufactory and subsequent levelling of the site.
- 5.2.6 The earliest strata recorded in Trench 2 comprised a series of deposits, [20], [19], [18], [17] and [16], which have been interpreted as dumped infill material of 19th century date (Figure 3). The deposits had varying compositions of clay, silt and sand and were between 0.10m and 0.38m thick, with a maximum combined thickness of at least 1.10m, recorded at a maximum height of 15.87m OD. A fragment of clay tobacco pipe stem, of probable 19th century date, was recovered from the lowermost deposit, [20].
- 5.2.7 The earliest strata recorded in Trench 3 were similar dump deposits, [28], [27] and [26], to those recorded in Trench 2, again with varying compositions of silty sand and silty clay (Figure 3). These deposits were between at least 0.20m and 0.66m thick, with a maximum combined thickness of at least c. 1.10m, recorded at a maximum height of 15.00m OD. Fragments of roof pantile and brick of probable 19th century date were noted throughout the uppermost deposit, [26].
- 5.2.8 The dump deposits recorded in Trenches 2 and 3 potentially represent infilling of clay extraction pits to the east of the brick and tile manufactory, following abandonment and demolition of the works. A large feature – likely a clay extraction pit - depicted on the Ordnance Survey 1st edition map of c. 1856 to the east of the works is represented today by a pond in the grounds of the property to the immediate east of the site. It is considered highly probable that extraction would have taken place across as wide an area as possible in the grounds of the works, including the eastern portion of the medical centre site. Disuse of the works in the later 19th century would likely have required infilling of extraction areas within the site for the purposes of ground levelling.
- 5.2.9 Two east-west aligned ceramic field drains, [22] and [30], were recorded truncating the upper strata of dump deposits, [16] and [26], in Trenches 2 and 3, respectively. These were likely to be of later post-medieval/early modern date, installed to facilitate drainage of the site following the abandonment of the brick and tile manufactory.

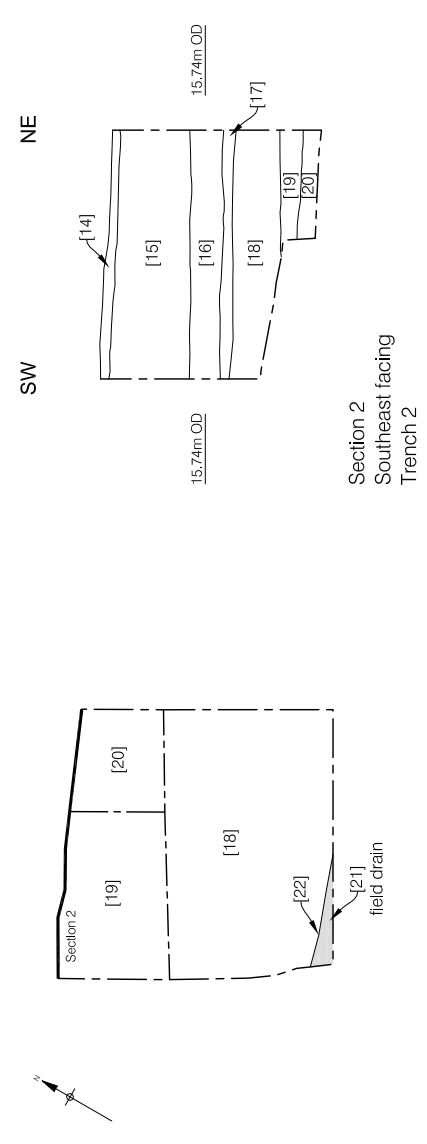
5.3 Phase 3: Modern

- 5.3.1 An east-west aligned ceramic drain in a 0.26m wide service trench, [10], was recorded in the northern portion of Trench 1. This was of modern origin and likely one of a series of services installed at the site during the 20th century.
- 5.3.2 A clayey silty sand layer, [25], up to 0.21m thick, was recorded extending across Trench 3. This directly overlay the uppermost Phase 2 layer, [26], and sealed field drain, [30], and is interpreted as a modern levelling deposit.
- 5.3.3 Within Trenches 1, 2 and 3 the existing ground surface, [1], [14] and [23], respectively, comprised tarmac up to 0.20m thick. Each tarmac surface had a compact dolomite foundation layer, deposits [3], [15] and [24], respectively, ranging in thickness from 0.15m in Trench 1 to 0.62m in Trench 2. In Trench 1, the dolomite was overlain by a coarse sand deposit, [2], up to 70mm thick. Other existing surface treatments were recorded at the north-western extent of Trench 1, including concrete edging slabs, [13], above which lay topsoil and turf, [12], forming part of a grassed strip of land between the car park and the adjacent footpath.

Trench 1: Plan and southwest facing section



Trench 2: Plan and southeast facing section



Trench 3: Plan and northeast facing section

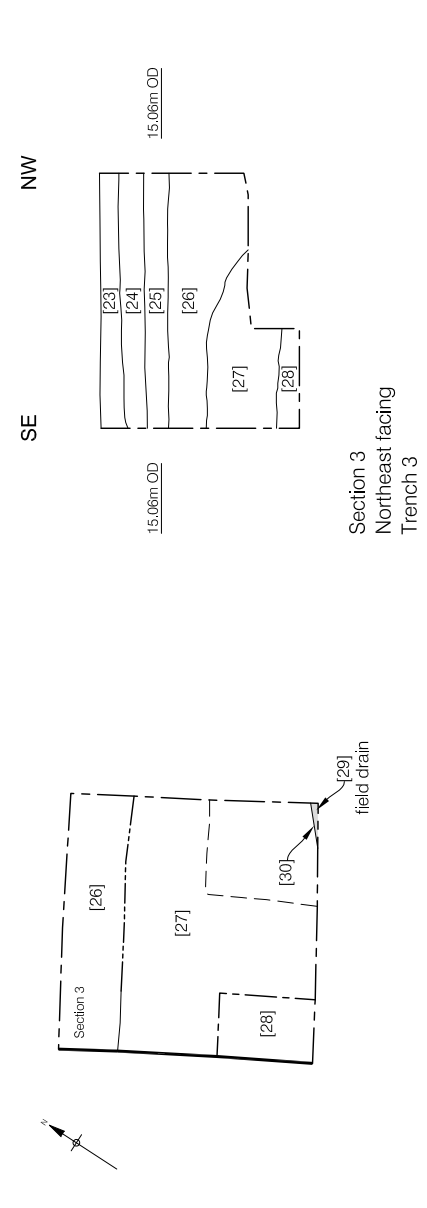




Figure 4 Trench 1 overview, looking north-west (scale 2m)



Figure 5 Trench 1, structure [7] in Section 1, looking north-east (scale 1m)



Figure 6 Trench 2, Section 2, looking NNW (scale 2m)



Figure 7 Trench 3, Section 3, looking WSW (scale 2m)

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

6.1.1 Geological deposits and archaeological deposits and features encountered during the evaluation have been assigned to three phases of activity:

- Phase 1. Naturally derived geological material, the local 'boulder clay', which formed the basal deposit in Trench 1. There was difference in height of c. 1.25m on the upper interface of the boulder clay between the south-eastern and north-western ends of Trench 1, reflecting the natural topography in the western portion of the site. The natural sub-stratum could not be reached in Trenches 2 and 3 due to Health and Safety considerations.
- Phase 2. Activity associated with the brick and tile manufactory known to have occupied the south-western portion of the site in the mid 19th century. In Trench 1 the remains of a linear brick-lined structure were recorded c. 0.40m below existing ground level, this probably part of the subterranean element of a kiln or flue within the works. The natural clay to the west of the structure was considerably heat affected. Demolition material overlying the structure was probably derived from disuse and demolition of the works, then ground levelling, in the later 19th century. In Trenches 2 and 3, dump deposits with a combined maximum thickness of more than 1.0m potentially represent later 19th century infilling of clay extraction pits to the east of the works, again for the purposes of ground levelling. In Trenches 2 and 3, east-west aligned field drains were recorded.
- Phase 3. Features and deposits of modern date. These included the existing surface treatments, associated with development of the site as the medical centre in the 20th century.

6.1.2 In sum, therefore, the work recorded no evidence for medieval or earlier activity on the site. Probable evidence for the 19th century brick and tile works was encountered in all three trenches, including the subterranean element of a brick-lined structure in Trench 1, this possibly part of a kiln or flue within the footprint of the manufactory, and possible clay extraction pit infill material in Trenches 2 and 3.

6.2 Recommendations

6.2.1 The results of the evaluation indicate that construction groundworks for the development of the site could impact on archaeological remains of importance at a local level, namely structural remains of the 19th century brick and tile works on Worsall Road, as recorded in Trench 1. These remains lie at relatively shallow depth - c. 0.40m - below existing ground level. Deposits likely derived from the infilling of clay extraction pits associated with the works, as recorded in Trenches 2 and 3, are of little or no archaeological importance.

6.2.2 It is recommended that an appropriate mitigation strategy should be formulated to allow the development to proceed on the condition that the remains of importance likely to be affected are investigated further and recorded in detail.

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8. ACKNOWLEDGEMENTS AND CREDITS

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PCA Credits

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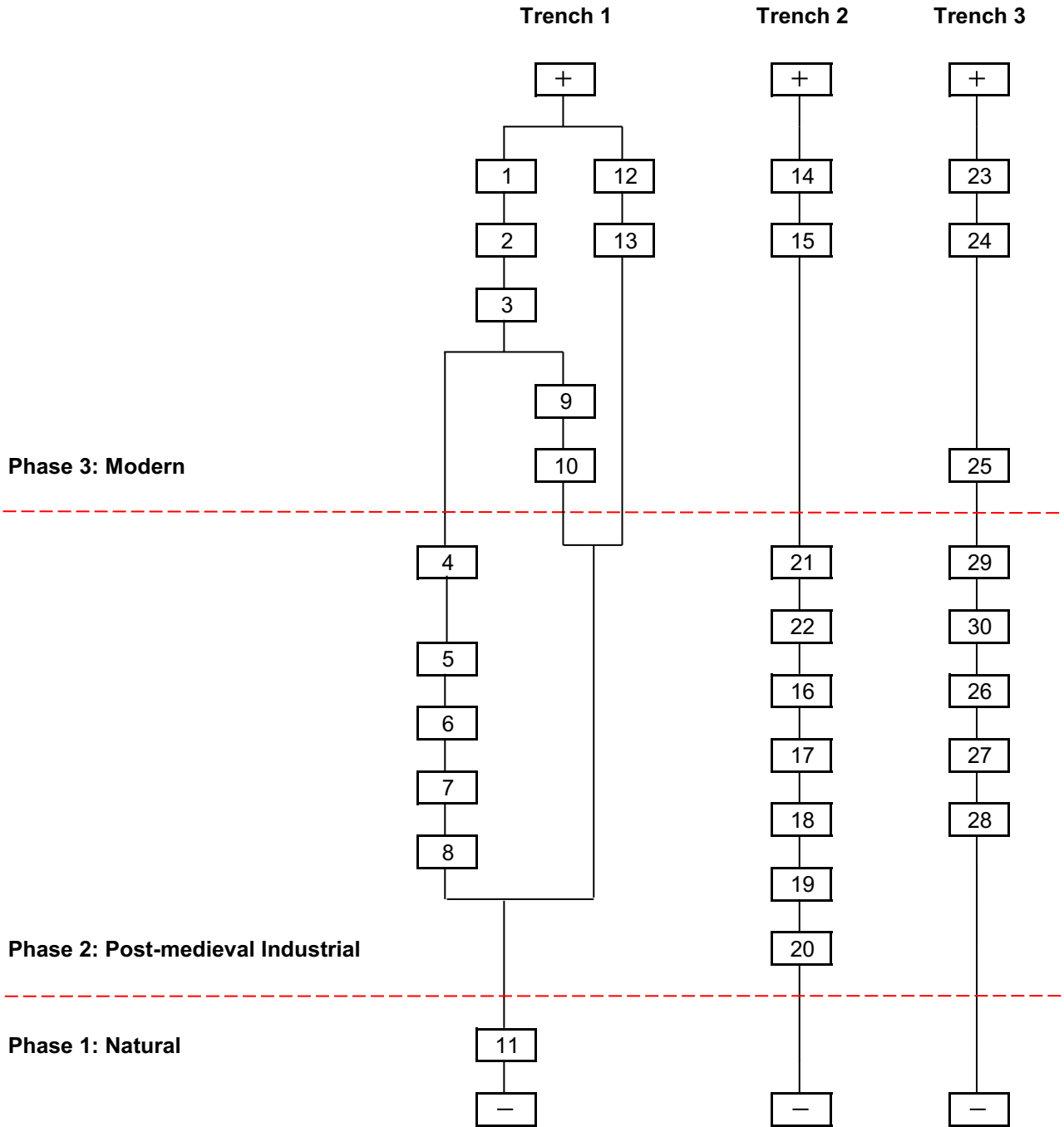
Fieldwork: Aaron Goode (Site Supervisor), Scott Vance

Report: Aaron Goode

Illustrations: Mark Roughley

APPENDIX A
STRATIGRAPHIC MATRICES

YAR 11: STRATIGRAPHIC MATRICES



APPENDIX B
CONTEXT INDEX

YAR 11: CONTEXT INDEX

Context	Trench	Phase	Type 1	Type 2	Interpretation
1	1	3	deposit	surface	tarmac surface
2	1	3	deposit	layer	sand levelling layer
3	1	3	deposit	layer	stone sub-base
4	1	2	deposit	layer	demolition fill
5	1	2	deposit	fill	sand fill of structure [7]
6	1	2	deposit	fill	cinder and ash fill of structure [7]
7	1	2	masonry	structure	brick-lined structure; kiln/flue?
8	1	2	cut	linear	construction cut for structure [7]
9	1	3	deposit	fill	fill of drain [10]
10	1	3	cut	linear	drain; filled by [9]
11	1	1	deposit	layer	natural boulder clay
12	1	3	deposit	layer	topsoil
13	1	3	deposit	surface	concrete slab
14	2	3	deposit	surface	tarmac surface
15	2	3	deposit	layer	stone sub-base
16	2	2	deposit	layer	clayey sandy silt dump
17	2	2	deposit	layer	clay dump
18	2	2	deposit	layer	clayey sandy silt dump
19	2	2	deposit	layer	sandy silt dump
20	2	2	deposit	layer	sandy silt dump
21	2	2	deposit	fill	fill of field drain [22]
22	2	2	cut	linear	field drain; filled by [21]
23	3	3	deposit	surface	tarmac surface
24	3	3	deposit	layer	stone sub-base
25	3	3	deposit	layer	clayey silty sand dump
26	3	2	deposit	layer	silty clay dump
27	3	2	deposit	layer	silty sand dump
28	3	2	deposit	layer	silty sand dump
29	3	2	deposit	fill	fill of field drain [30]
30	3	2	cut	linear	field drain; filled by [29]

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