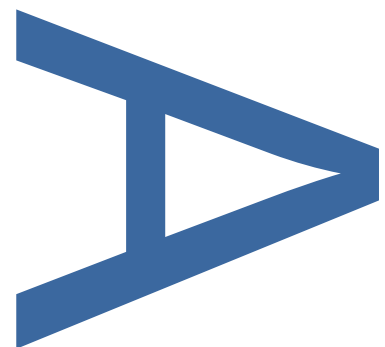
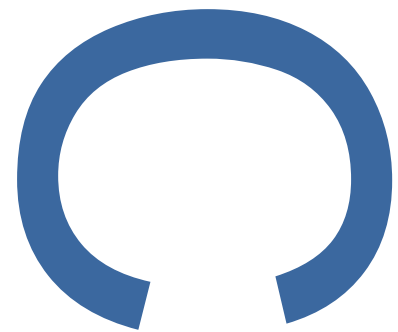


**AN ARCHAEOLOGICAL WATCHING
BRIEF AT THE
DREADNOUGHT BUILDING,
UNIVERSITY OF GREENWICH,
KING WILLIAM'S WALK,
LONDON BOROUGH OF GREENWICH,
SE10 9HX**



PCA REPORT NO: 12101

MAY 2015

PRE-CONSTRUCT ARCHAEOLOGY



DOCUMENT VERIFICATION

THE DREADNOUGHT BUILDING, UNIVERSITY OF
GREENWICH, KING WILLIAM'S WALK,

AN ARCHAEOLOGICAL WATCHING BRIEF

Quality Control

| Pre-Construct Archaeology Ltd | |
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An Archaeological Watching Brief at the Dreadnought Building, University of Greenwich, King William's Walk, London Borough of Greenwich, SE10 9HX

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May 2015

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CONTENTS

| | | |
|-----|--|----|
| 1 | Abstract | 3 |
| 2 | Introduction | 4 |
| 3 | Planning Background | 5 |
| 4 | Geology and Topography | 6 |
| 5 | Archaeological and Historical Background | 7 |
| 6 | Archaeological Methodology | 8 |
| 7 | Archaeological Sequence | 9 |
| 7.1 | <i>Phase 1: Natural</i> | 9 |
| 7.2 | <i>Phase 2: 1740s Construction of the Dreadnought Building</i> | 9 |
| 7.3 | <i>Phase 3: Late 20th Century Modifications</i> | 11 |
| 8 | Conclusions | 13 |
| 9 | Acknowledgements | 14 |
| 10 | Bibliography | 14 |

ILLUSTRATIONS

| | |
|---|----|
| Figure 1: Site location | 15 |
| Figure 2: Test Pit and Borehole Locations | 16 |
| Figure 3: Plans of Test Pits 1 – 8 | 17 |
| Figure 4: Sections 2b, 3 & 5 | 18 |

PLATES

| | |
|---|----|
| Plate 1: View of Old Royal Navel College from North of the Thames | 8 |
| Plate 2: View southwest of Test Pit 7 | 12 |
| Plate 3: View west of Test Pit 2 | 12 |

APPENDICES

| | |
|---------------------------------|----|
| Appendix 1: Context Index | 19 |
| Appendix 2: Site Matrix | 24 |
| Appendix 3: OASIS Form | 25 |

1 ABSTRACT

- 1.1 This report presents the results of an Archaeological Watching Brief conducted by Pre-Construct Archaeology Limited (PCA) in and around the basement of the Dreadnought Building, University of Greenwich, King William's Walk, London Borough of Greenwich, SE10 9HX. The site is centred at National Grid Reference TQ 3836 7773.
- 1.2 The work was carried out in April 2015 following an approved Written Scheme of Investigation prepared by PCA (Bradley 2015) for CgMs Consulting.
- 1.3 Natural sand and gravel was recorded at heights varying between 2.65-2.30m OD in the boreholes and between 0.35m below the basement floor level (bfl) in the trial pits. The top of the superficial geology appears to have been truncated during the construction of the basement in the 1740's. There were no archaeological features or deposits predating or unrelated to the building's construction identified.

2 INTRODUCTION

- 2.1 An Archaeological Watching Brief was undertaken by Pre-Construct Archaeology Ltd at The Dreadnought Building, University of Greenwich, King William's Walk, London Borough of Greenwich, SE10 9HX in April 2015. The site is at National Grid Reference TQ 3836 7773 (Figure 1).
- 2.2 The Dreadnought Building is bounded by Romney Road to the south, College Way to the north, the Royal Naval College to the east and the Stephen Lawrence building to the west. The River Thames runs approximately 300m to the north.
- 2.3 The Watching Brief involved monitoring 8 trial pits within the basement of the Dreadnought Building and two boreholes immediately outside the building to the north and south (Figure 2) in order to ascertain the depth and nature of any building foundations and their supporting sub-strata.
- 2.4 The site is located within an Archaeological Priority Zone, as defined in the Borough's Local Development Framework Proposals Map, and within the Maritime Greenwich World Heritage area. The site also lies within the grounds of the Tudor Greenwich Palace. As such the ground is classified as a Scheduled Ancient Monument (Scheduled Monument No: SM, HA 1410710).
- 2.5 The requirement for this work was a pre-condition to the Scheduled Monument Consent for the works by the Buildings and Monuments Commission for England (Historic England).
- 2.6 The work was commissioned by CgMs Consulting on behalf of their client, Willmott Dixon Construction Limited. The Archaeological Watching Brief was undertaken by Aidan Turner and project managed by Chris Mayo, both of PCA. The works were monitored by Jane Sidell, Inspector of Ancient Monuments for Historic England.

3 PLANNING BACKGROUND

- 3.1 The site of the building is located within the Maritime Greenwich World Heritage area, and the site is also within the grounds of the Tudor Greenwich Palace. As such the ground is classified as a Scheduled Ancient Monument (Scheduled Monument No: SM, HA 1410710).
- 3.2 In accordance with Condition (b) of the Scheduled Monument Consent (see Appendix 1) PCA was appointed to undertake an Archaeological Watching Brief during geotechnical site investigations, which comprised of trial pits and boreholes located at both ground floor and basement level (Figure 2).
- 3.3 A Written Scheme of Investigation (Bradley 2015) detailed the methodology by which the Watching Brief would be undertaken. The primary objectives were to establish the presence or absence of any archaeological remains, and to ensure that, should significant archaeological deposits be encountered, excavation ceased and a site visit was convened to establish whether the remains should be left in situ, or whether they should be carefully recorded and removed.
- 3.4 The Watching Brief aimed to address the following research design objectives, set out in the Written Scheme of Investigation (Bradley 2015):

“2.1 This archaeological watching brief is designed to determine the presence or absence of surviving archaeological remains/deposits at the site and to ensure that, should significant archaeological deposits be encountered, excavation is ceased and a site visit convened to establish whether the remains should be left in situ, or whether they may be carefully recorded and removed. The fieldwork will aim to address the following objectives:-

- *To determine the natural topography of the site, and the height at which it survives.*
- *To determine the presence or absence of prehistoric deposits / activity.*
- *To determine the presence or absence of Roman deposits / activity.*
- *To establish the presence or absence of medieval deposits / activity.*
- *To establish the presence or absence of post-medieval deposits / activity.*
- *To establish the extent of past post depositional impacts on the archaeological resource”*

- 3.5 The works by PCA were to be monitored by the Inspector of Ancient Monuments, Jane Sidell of Historic England.

4 GEOLOGY AND TOPOGRAPHY

4.1.1 The British Geological Survey (BGS) defines the superficial deposits as Kempton Park Gravel Formation. These sand and gravel deposits formed up to 2 million years ago during the Quaternary Period from rivers depositing detrital material in channels to form river terrace deposits (BGS 2015).

4.1.2 The available geological maps, and the site investigation records from the previous work undertaken by the University, show ground conditions in the area generally comprise, from the ground level down:-

- Made ground – variable disturbed material (Approx. 1m-2m deep)
- River terrace deposits – Dense gravel (Approx. 12m thick)
- Lambeth group – stiff clay and gravel (Approx. 3m thick).
- Thanet sands – dense sands and clay
- Chalk

4.1.3 Historically the site was situated at the base of the river terrace in a steeply sloping area. Developments from the Roman time onwards are likely to have affected the topography, including extensive terracing of the site during the 17th and 18th centuries when the Old Royal Naval Hospital came into existence. Today the site is largely level with ground level at approximately 5.65m to 5.30m OD.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 The site was formerly the site of the Tudor Greenwich Palace, which was built in 1433. The Palace fell into disrepair during the English Civil War and in 1660 was rebuilt by Charles II and demolished sometime after. The site then remained empty until construction of the Royal Naval College began in 1694.
- 5.2 The Dreadnought building was constructed as an addition to the Royal Naval College in 1763 and it housed the College's hospital. In 1986 the Dreadnought building ceased to be used as a hospital and remained unused until it was handed over to the University of Greenwich in 1995. It was the University's first acquisition on the Royal Naval College site. The Dreadnought building was converted into a library for the University in 1999.
- 5.2.1 The building is a scheduled ancient monument and is described by English Heritage as:-

"Dreadnought Seamen's Hospital

Over Greenwich Palace Scheduled Monument

County / National Monument No. 1410710

Listed grade II

English Heritage list entry number: 1211438

Description:-

1764-68, by James Stuart. Main South front of 3 storeys and basement, 13 windows. Stuccoed at a later date. 1-bay centre and end sections project slightly. Low pitched, hipped slate roof with separate roofs over end sections. Entablature and blocking course, 2nd floor string, rusticated quoins and rusticated centre bay to 2nd floor level. Over this a pseudo-pediment with maritime arms. 2-storey entrance arch through axis. Sash windows with glazing bars in moulded architraves with bracketed calls. Similar side elevations. The building lies within the Maritime Greenwich World Heritage Site. Scheduled Monument Consent is required where works are proposed more than 300mm below the existing built ground level."

6 ARCHAEOLOGICAL METHODOLOGY

6.1 All works were undertaken in accordance with the following documents:-

- The Written Scheme of Investigation (Bradley 2015);
- The letter of Scheduled Monument Consent (27th February 2015 – Appendix 1);
- The Specification for Site Investigation, UoG, Greenwich Campus, Dreadnought building (Alan Baxter, Jan 2015; Ref 1536/314);
- Historic England, 2015, Guidelines for Archaeological Projects in Greater London;

6.2 The test pits were located according to Drawing 1536/314/S01 and S02 in the specification for site investigation.

6.3 The trial pits were required to extend to the undersides of the footings at the basement level. Therefore they varied in size as appropriate to individual conditions.

6.4 Care was taken to lift existing sandstone paving slabs in order to minimise damage to the scheduled structure. These were marked and replaced as appropriate.

6.5 Excavation proceeded by hand tools carried out by the geotechnical sub-contractors, under archaeological supervision.

6.6 All deposits during the ground reduction were recorded on *pro-forma* context sheets. The areas of archaeological monitoring were recorded on site engineering drawings provided by the client. A digital photographic record was taken of the works.



Plate 1: View of Old Royal Naval College from North of the Thames

7 ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1: Natural

River Terrace Gravels

- 7.1.1 The earliest deposit encountered during the Watching Brief was a layer of naturally deposited sandy gravel, [4]. This comprised moderately well sorted small sub-angular and well-rounded flint gravel in a moderately coarse yellow sand matrix.
- 7.1.2 This deposit is interpreted as representing the top of the drift geology recorded by the British Geological Survey as forming part of the Kempton Park Gravel Formation. It was recorded in the basement, at the base of Test Pits TP1, TP3, TP5, TP6 and TP 7 at between 0.35 and 1.3m below basement floor level (bfl) (contexts [4], [9], [21], [26], [30], [33] and [37]).
- 7.1.3 The variance in depth of the deposit below basement floor level only represents the variation in depth of the foundations of the building, as it was always found a level 'flush' with the basements foundations. As such it can only be interpreted as representing a truncated part of the natural geological sequence.
- 7.1.4 In the boreholes outside the building, this deposit was logged at approximately 2.95m OD to the north of the building (BH1) and at approximately 2.35m OD to the south of the building (BH2).

Possible Head Deposit or Subsoil

- 7.1.5 In the southerly most borehole, BH2, the Kempton Park Gravel deposit was overlain by a 1.9m thick deposit of uniform, homogenous, very slightly clayey medium coarse sand, which contained only occasional flint gravels [36].
- 7.1.6 This deposit [36] was recorded in three other locations, at the base of test pits TP 2, TP 4 and TP 8. These were all in areas of shallow foundations 0.35m bfl, 0.45m bfl and 0.28m bfl respectively (ontexts [13], [17] and [40]).
- 7.1.7 It is notable that all of these locations represent the most southerly areas investigated on site. They clearly show some variation in the superficial deposits observed on the site. No archaeological materials were recovered from this deposit. The slightly clayey sand deposit may have under gone some weathering. Along with the homogenous nature of the deposit, this weathering could indicate it is of natural, rather than man-made origin. It is possible that this deposit represents a weathered sand bar within the Kempton Park Gravels or, given the location of the site, at the base of a steep terrace forming Greenwich Park, it could represent an isolated outlying head deposit of re-deposited sand eroded from the Thanet sand beds located immediately up slope of the site. Head deposits are recorded immediately to the south of the site, beneath the Greenwich Maritime Museum.

7.2 Phase 2: 1740s Construction of the Dreadnought Building

Barrel Vault and Wall Foundations

- 7.2.1 The foundations of the existing Dreadnought Building were directly constructed upon the natural gravel and sands (Phase 1); this was evidenced in all 7 test pits. These foundations consisted of red brick barrel vaulted arches, walls and buttressing. The walls had narrow stepped out foundations in places (contexts [3], [7], [8], [12], [16], [20], [25], [29] and [39]).
- 7.2.2 These foundations appeared to have been built in one phase, using the same brick and mortar type. The bricks were a uniform red frog-less stock measuring approximately 220mm x 100mm x 65mm. The mortar was formed of a hard white lime mortar with little or no inclusions evident. The pattern of brick laying used largely followed the English Garden Wall Bond type.
- 7.2.3 In one location, TP7, part of the foundation [7] was found to have been lain on a single course of pan tiles. This seemed to form part of a stepped out foundation pad located beneath a supporting sub-arch buttress built into the barrel vault wall. These have a superficial 'fire – place' like appearance, but are purely structural in function. It is likely that the pan tile course was simply a practical expedient to slightly raise the level of the overlying course of bricks, so that the foundation pad could be seamlessly tied into the construction of the barrel vault walls.
- 7.2.4 These foundations were relatively shallow in depth in most locations at around 0.35m to 0.45m in depth. In two locations, TP 5 and TP3, they were much deeper at 1.3m and 1.2m in depth respectively. This most likely was influenced by their locations: TP3 was located against the external wall of the buildings' historic ablutions block, while TP5 was located within the western corner of the building which, along with the other corners, is shown as having thicker walls than the rest of the building.
- 7.2.5 It should be noted that the deepest area of foundations (TP5) was also most likely the location of bomb damage during WWII. The barrel vaulted ceiling here has been replaced with a substantial timber rafted floor. The floor in this area has also been partially replaced with concrete slabs, mimicking the original sandstone slabs found nearby. Examination of the wall foundations in this test pit, however, showed no obvious sign of alteration which would be expected if underpinning or other remedial works had taken place.

Made Ground

- 7.2.6 All the test pits, with the exception of TP 8, revealed a 'make-up' deposit supporting the various floor surfaces. This consisted of a poorly compacted, greyish brown, gravelly, rubbly silt sand deposit. It contained frequent inclusions of brick, and mortar fragments identical to those used to build the existing basement structure. This deposit, interpreted as a floor make-up layer, was composed of a mixture of construction debris and gravels extracted during the excavation works for the basement (contexts [2], [6], [11], [15], [19], [24] & [28]).
- 7.2.7 A very similar deposit of made ground [32] was observed immediately to the north of the building in BH1. This was recorded from approximately 5.25m OD to a depth of 2.95 m OD, where it immediately overlay natural gravels. As the borehole was relatively close to the building, this depth may represent part of the quarrying of the site to form the basement or

alternatively the natural slope of land towards the river, which was terraced sometime during 1670's.

Original Floor Surfacing

- 7.2.8 A mixture of floor surfacing was observed in the basement. Where it had not been replaced with modern materials during the late 20th century it mostly consisted of squared sandstone slabs, most notably in the basement corridors, but also in most of the barrel vaulted under crofts. This was found to be the case in Test Pits TP1, TP2, TP4 and TP7. In a few areas a mixture of red stock brick and sandstone slabs had been used, this was found to be the case in TP2.
- 7.2.9 The sandstone flooring (contexts [5], [10], [14] & [18]) was tightly laid, generally 50mm thick laid on a hard white lime mortar bed of between 10mm and 30mm thickness. The slabs were up to 600mm x 600mm square in size, with smaller rectangular pieces of around 240 -360mm in size also found. These were laid in an offset juxtaposed fashion.
- 7.2.10 In TP6 a fragment of brick flooring [23] was discovered immediately below a recent concrete floor. It was in poor condition and formed of the same brickwork as the rest of the existing structure.

7.3 Phase 3: Late 20th Century Modifications

- 7.3.1 In the first Test Pit to be excavated (TP5) it was discovered that the original sandstone flooring had been removed and replaced with cement slabs [1]. These were 40mm thick, tightly laid and cemented with a hard light grey cement mortar. The barrel vault roof of this area had also been replaced with a massive timber rafted floor. This may have been remedial works after WWII bomb damage to the building.
- 7.3.2 In one location, TP 8, the ground had been stripped to the base of the foundations which were shallow and the floor had been replaced with a concrete slab [38]. This slab was 180mm thick, surmounted by a further concrete screed approximately 100mm thick. This had been covered with a parquet floor which survived in places in the room. The parquet floor had been bonded to the cement with bitumen. The materials used suggest a mid-20th century date for this alteration.
- 7.3.3 In two of the locations, TP3 and TP6, the original flooring had been replaced with a concrete floor slab of approximately 200mm thick ([27] & [22]). This had been laid on a plastic damp proof course.
- 7.3.4 The two exterior boreholes, BH1 and BH2, were cut through tarmac road surfacing and a supporting concrete sub-base. Both tarmac and concrete were approximately 200mm thick. The road under BH2 was found to be supported on a 1.10m thick layer of pink stone chippings and sand [35]. This is likely associated with modern services in this area.



Plate 2: View southwest of Test Pit 7. The work confirmed that the basement had truncated the site beyond the original level of the natural river terrace gravels.



Plate 3: View west of Test Pit 2; a sandy deposit was found here. This was interpreted as an outlying head deposit. Note the barrel vaulting and supporting sub-arch visible in this photo.

8 CONCLUSIONS

- 8.1 The investigations showed that the natural topography has been much altered on the site. The construction of the basement has removed the upper strata of deposits and for the most part the basement was constructed directly upon the newly exposed surface of the Kempton Park Gravel. It is possible that part of the original ground surface might survive on the northern side of the building, as here the ground may have originally sloped towards the river putting it below the level needed for the basement construction.
- 8.2 It is notable that in the three most southerly of locations TP2, TP4 and BH2 a different natural deposit was observed, which was shown by BH2 to be substantial in nature and to overlie the Kempton Park Gravel. This slightly clayey sand deposit may have under gone some weathering. Along with the homogenous nature of the deposit, this weathering could indicate it is of natural, rather than man-made origin.
- 8.3 It is possible that this deposit represents a weathered aeolian sub-soil within the Kempton Park Gravels or possibly, given the location of the site, at the base of a steep terrace forming Greenwich park, it could represent an isolated outlying head deposit. This would have formed from re-deposited sand eroded from the Thanet sand beds located immediately up slope of the site. Head deposits are recorded immediately to the south of the site, below the Greenwich Maritime Museum.
- 8.4 No presence of either prehistoric, medieval or early post-medieval activity was identified during the works on site. However, given the high concentrations of archaeological discoveries immediately around the building, the possibilities of further work revealing deeper isolated features, especially pits or wells, from these periods, cannot be ruled out.
- 8.5 For the most part it can be assumed that most archaeological deposits of great interest will have been removed by the construction of the current building's basement in the 1760's.

9 ACKNOWLEDGEMENTS

- 9.1 Pre-Construct Archaeology Limited would like to thank Duncan Hawkins of CgMs Consulting for commissioning the work and Jane Sidell, Inspector of Ancient Monuments, for monitoring the project. PCA also thanks the client, The University of Greenwich, for funding the project, the staff of Geotechnical Investigations and Ken McCracken of Wilmott Dixon for accommodating the archaeological works on site.
- 9.2 The author would like to thank Chris Mayo for project managing the Watching Brief and Jennifer Simonson for the illustrations.

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English Heritage Scheduled Ancient Monument list entry number: 1211438



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 15/05/15 JS

Figure 1
 Site Location
 1:20,000 at A4

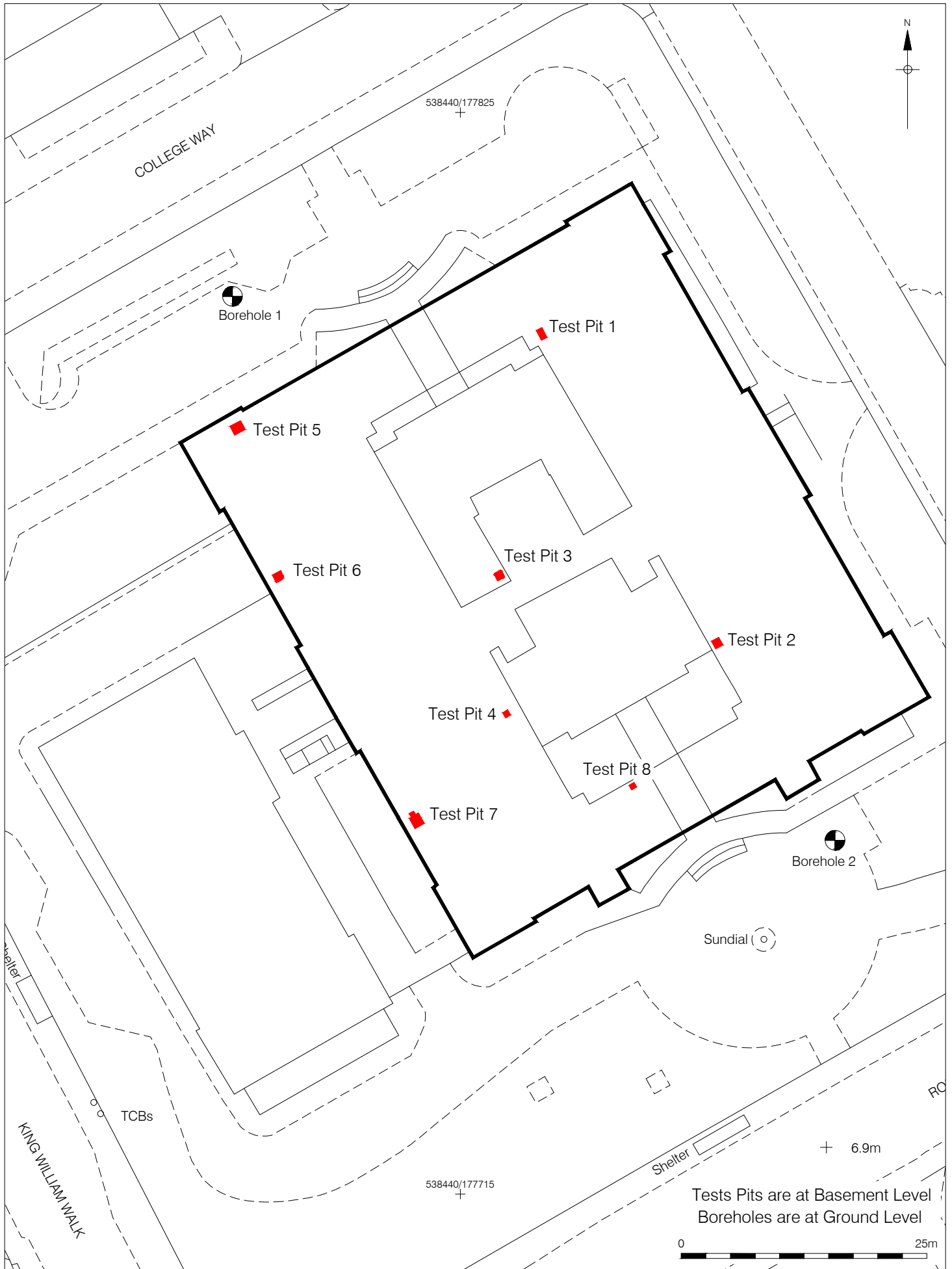
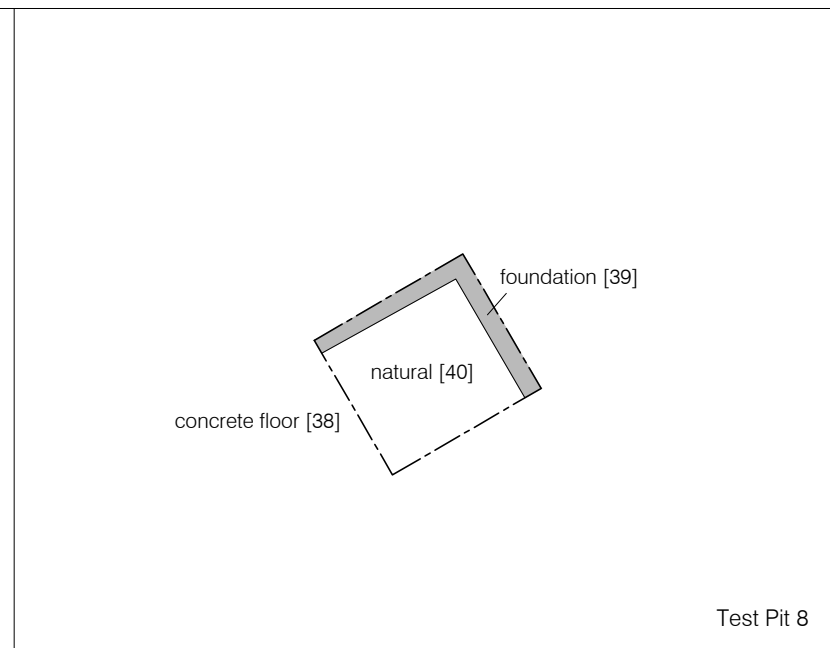
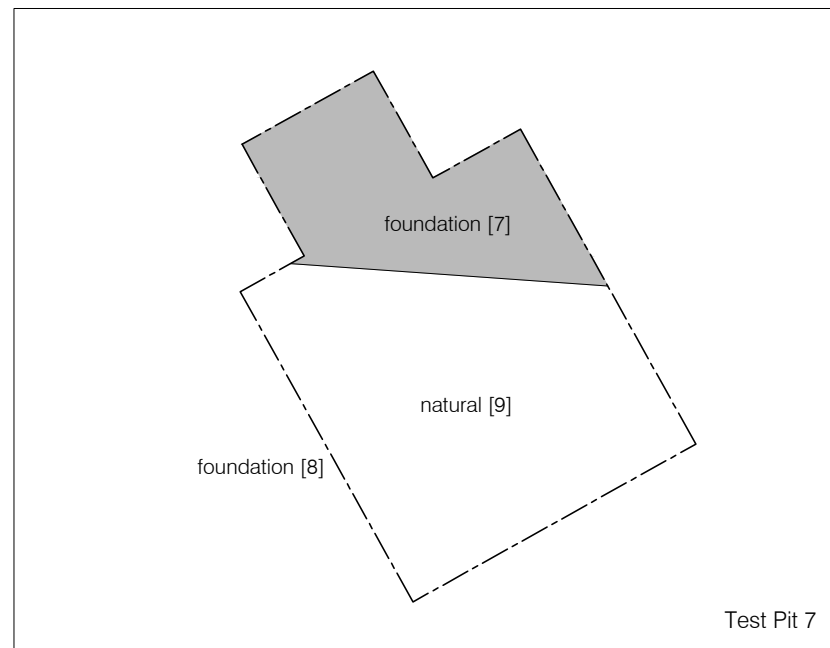
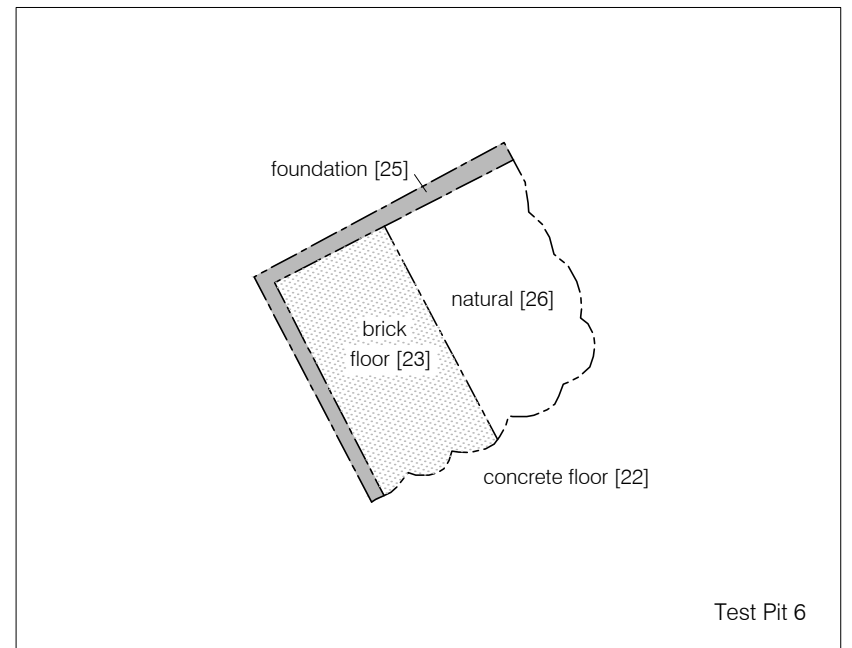
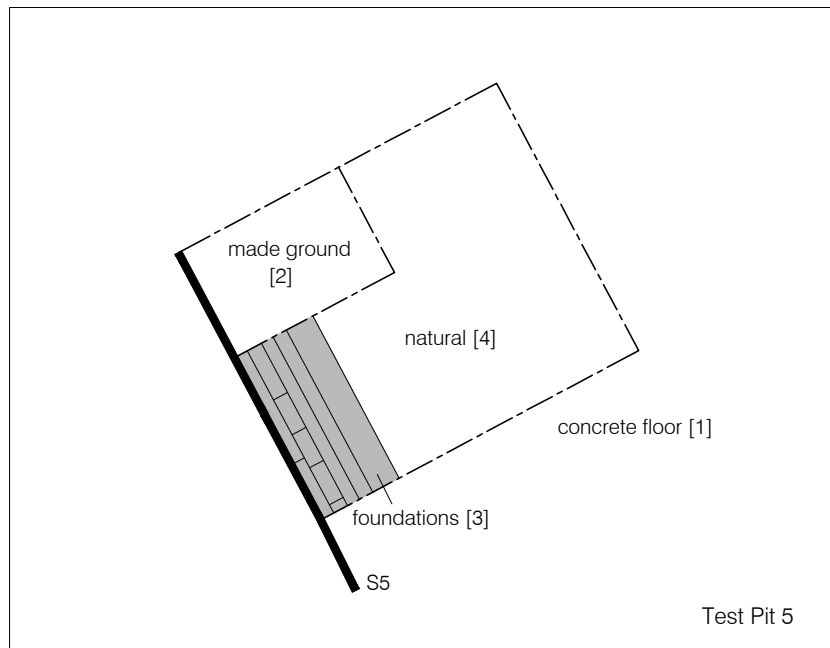
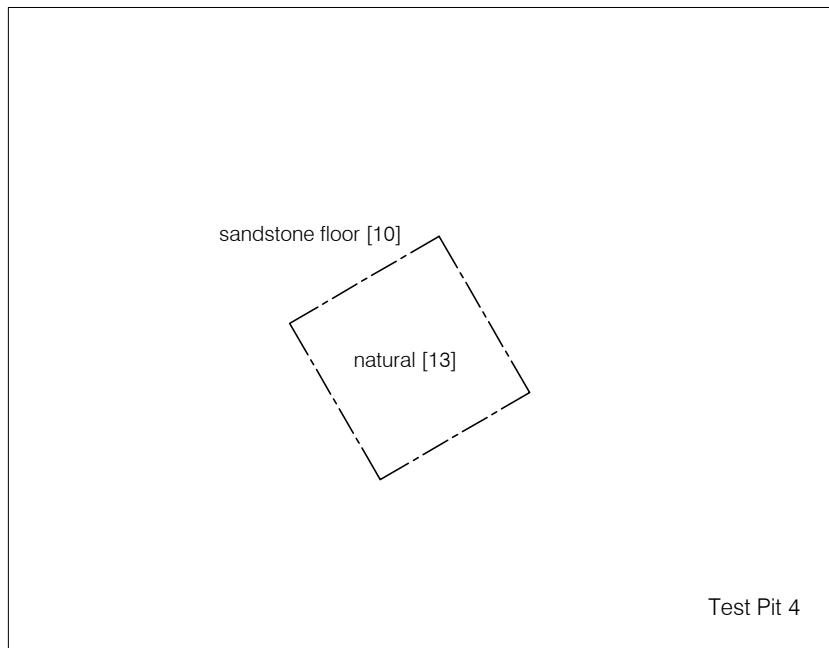
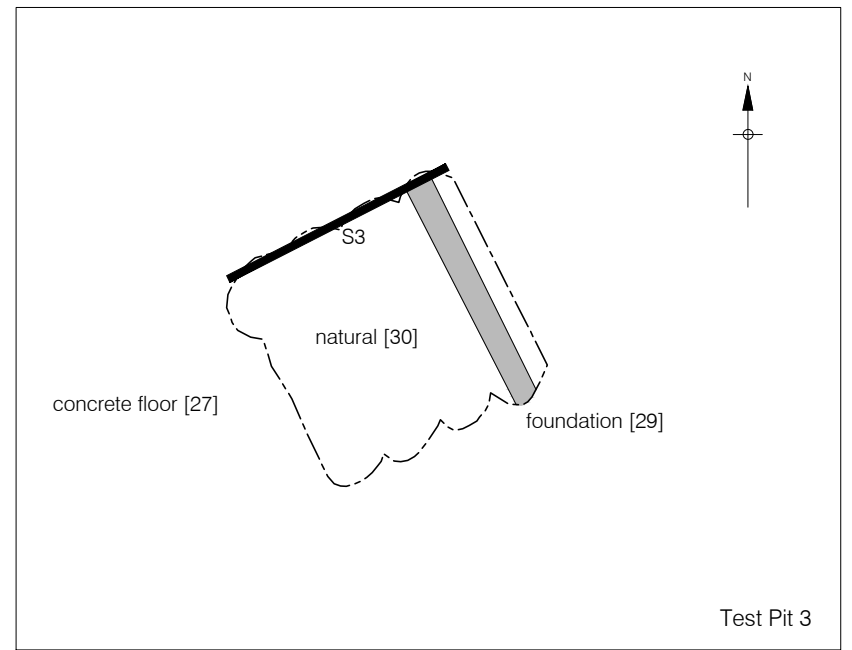
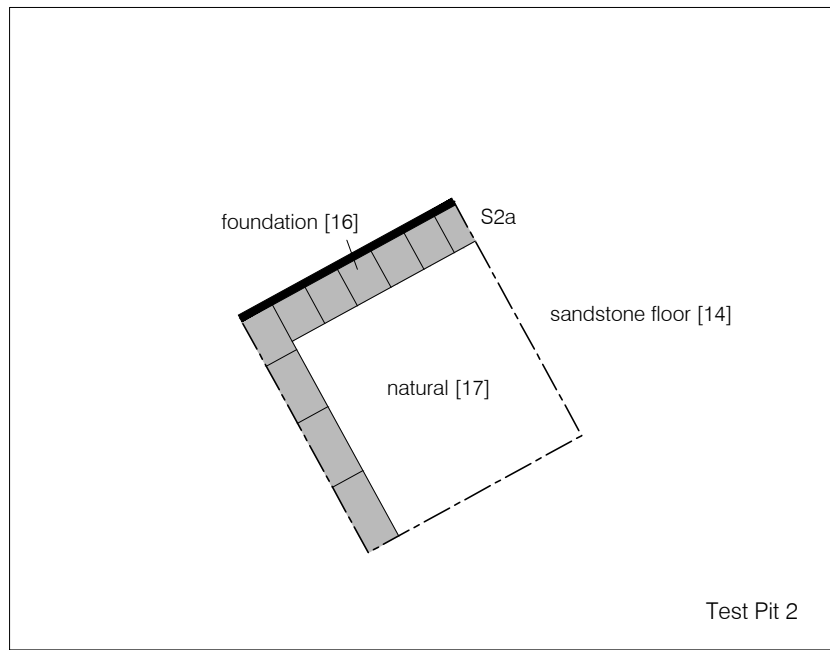
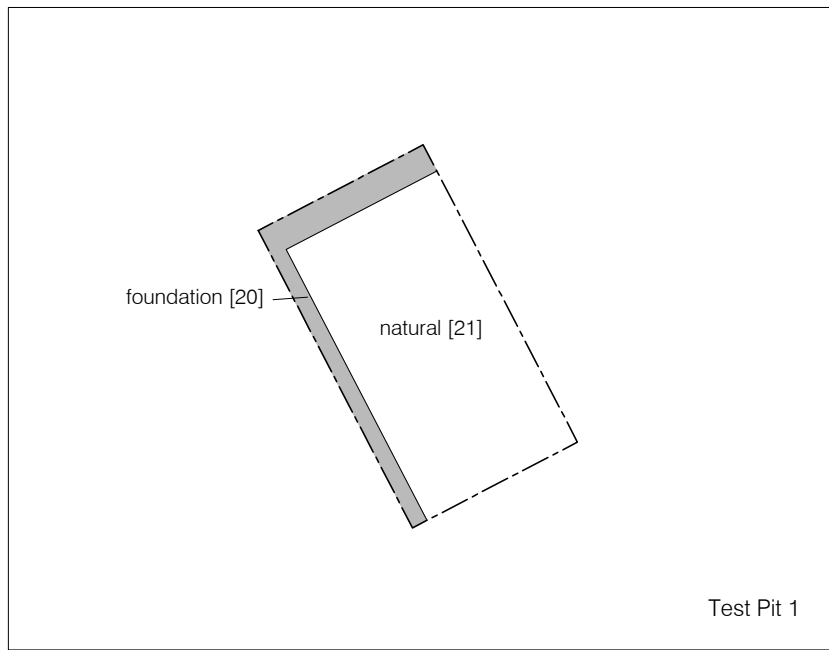


Figure 2
 Test Pit and Borehole Location
 1:500 at A4



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Figure 3
Plans of Test Pits 1 - 8
1:25 at A3

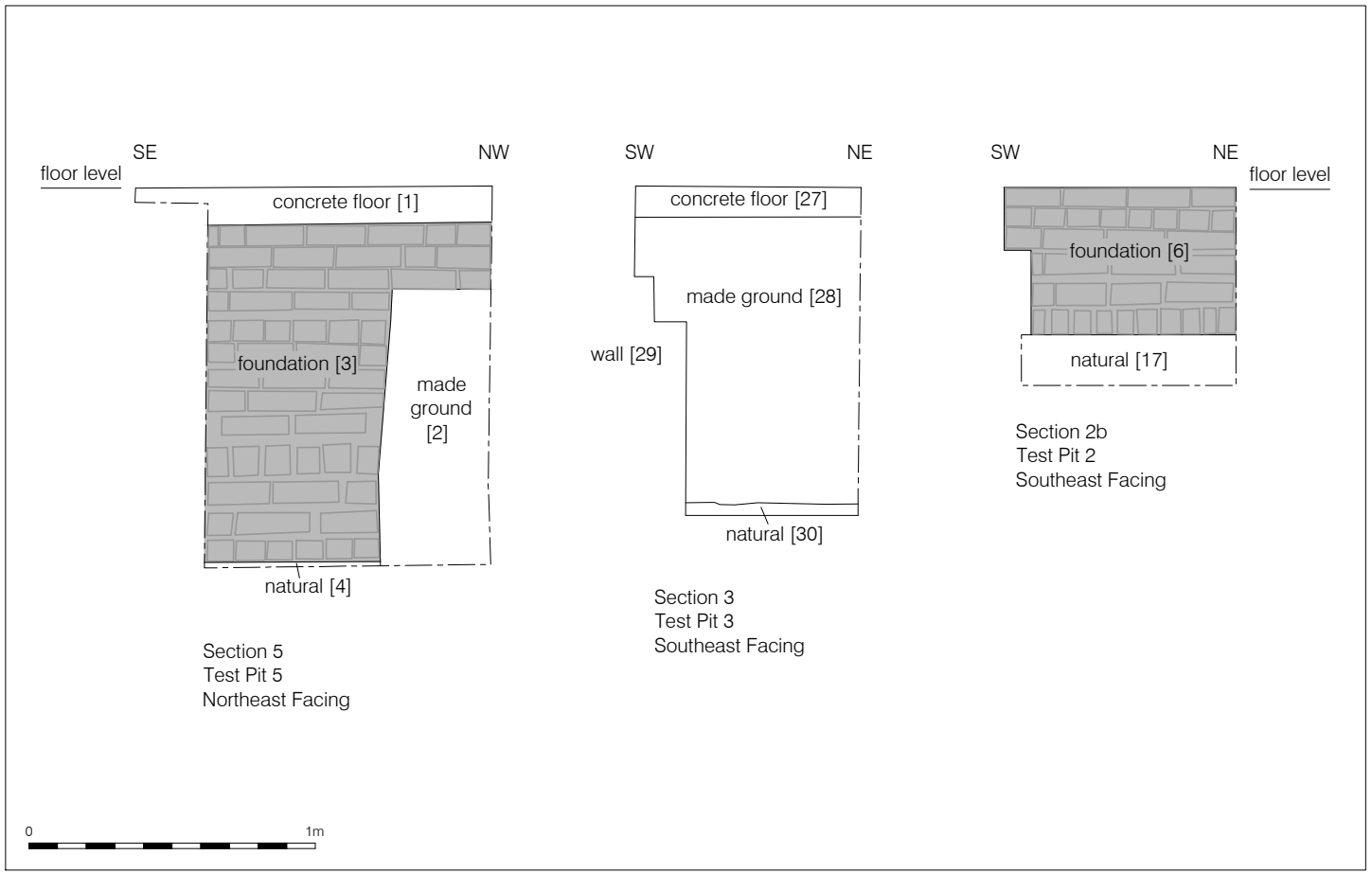
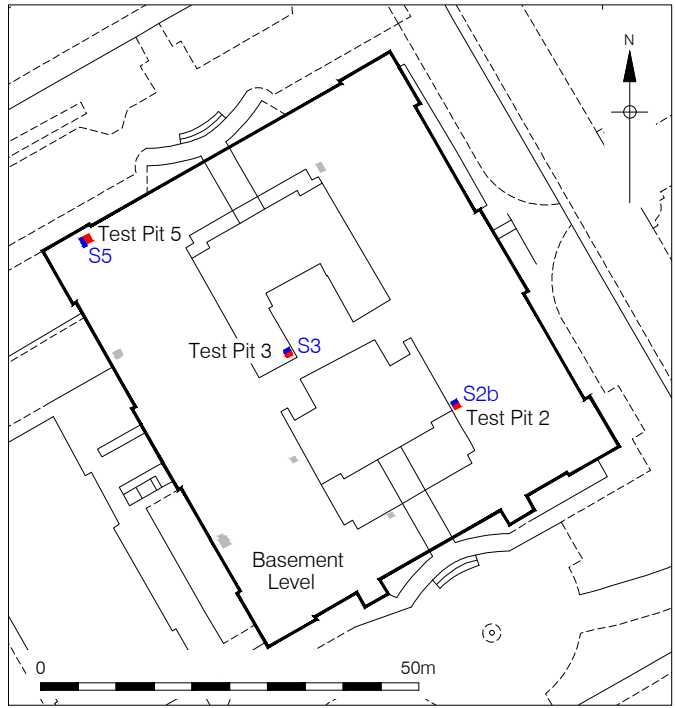


Figure 4
Sections 2b, 3 & 5
Plan 1:1,000 and Sections 1:25 at A4

APPENDIX 1: CONTEXT INDEX

| Context No. | Type | Description | Trench No. | Plan No. | Section / Elevation | Dimensions NE-SW (m) | Dimensions SE-NW (m) | Height / Thickness (m) | Highest Level (bgl/bfl) | Lowest Level (bgl/bfl) | Phase | Period |
|-------------|---------|---|------------|----------|---------------------|----------------------|----------------------|------------------------|-------------------------|------------------------|-------|------------|
| 1 | Masonry | Concrete paving slabs 40mm, 600x200mm, 10mm of hard light grey cement mortar, late 20thC. | TP5 | TP5 | Sec. 5 | >1.20m | >1.00m | 50mm | 0m bfl | 0m bfl | 3 | Late 20thC |
| 2 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP5 | TP5 | Sec. 5 | >1.20m | >1.00m | 1.25m | 0.05m bfl | 0.05m bfl | 2 | Mid 18thC |
| 3 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP5 | TP5 | Sec. 5 | >1.20m | >1.00m | 1.30m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 4 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | TP5 | TP5 | Sec. 5 | >1.20m | >1.00m | N/A | 1.3mbfl | 1.3mbfl | 1 | Devensian |
| 5 | Masonry | Sandstone slabs, 600x 600mm to 250x360mm , 50mm thick. hard white lime mortar, 30mm thick, 1760's | TP7 | TP7 | Sec.7a&b | >1.10m | >1.20m | 80mm | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 6 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP7 | TP7 | Sec.7a&b | >1.10m | >1.20m | 0.37m | 0.08m bfl | 0.08m bfl | 2 | Mid 18thC |
| 7 | Masonry | Barrel vault wall foundation, frog-less red brick, 220x100x65 mm, inc. pan tile course in pier base, 1760's | TP7 | TP7 | Sec.7a&b | >1.10m | >1.20m | 0.35m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 8 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP7 | TP7 | Sec.7a&b | >1.10m | >1.20m | 0.45m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 9 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | TP7 | TP7 | Sec.7a&b | >1.10m | >1.20m | N/A | 0.45m bfl | 0.45m bfl | 1 | Devensian |

| Context No. | Type | Description | Trench No. | Plan No. | Section / Elevation | Dimensions NE-SW (m) | Dimensions SE-NW (m) | Height / Thickness (m) | Highest Level (bgl/bfl) | Lowest Level (bgl/bfl) | Phase | Period |
|-------------|---------|---|------------|----------|---------------------|----------------------|----------------------|------------------------|-------------------------|------------------------|-------|-----------|
| 10 | Masonry | Sandstone slabs, 600x 400mm to 250x360mm , 50mm thick. hard white lime mortar, 30mm thick, 1760's | TP4 | TP4 | Sec.4a&b | >0.65m | >0.70m | 0.55m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 11 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP4 | TP4 | Sec.4a&b | >0.65m | >0.70m | 0.37m | 0.08m bfl | 0.08m bfl | 2 | Mid 18thC |
| 12 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP4 | TP4 | Sec.4a&b | >0.65m | >0.70m | 0.45m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 13 | Layer | Natural v. slightly clayey med. sand, brownish yellow, homogenous, occa. flint gravels, sub-soil / colluvial dep. | TP4 | TP4 | Sec.4a&b | >0.65m | >0.70m | N/A | 0.45m bfl | 0.45m bfl | 1 | Devensian |
| 14 | Masonry | Sandstone slabs, 600x 600mm to 250x360mm , 50mm thick. hard white lime mortar, 20mm thick, 1760's | TP2 | TP2 | Sec.2a&b | >0.80m | >0.90m | 70mm | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 15 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP2 | TP2 | Sec.2a&b | >0.80m | >0.90m | 0.43m | 0.07m bfl | 0.07m bfl | 2 | Mid 18thC |
| 16 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP2 | TP2 | Sec.2a&b | >0.80m | >0.90m | 0.68m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 17 | Layer | Natural v. slightly clayey med. sand, brownish yellow, homogenous, occa. flint gravels, sub-soil / colluvial dep. | TP2 | TP2 | Sec.2a&b | >0.80m | >0.90m | N/A | 0.53m bfl | 0.53m bfl | 1 | Devensian |
| 18 | Masonry | Sandstone slabs, 600x 600mm to 250x360mm , 50mm thick. hard white lime mortar, 30mm thick, 1760's | TP1 | TP1 | Sec.1a&b | >0.60m | >1.10m | 80mm | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 19 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP1 | TP1 | Sec.1a&b | >0.60m | >1.10m | 0.60m | 0.08m bfl | 0.08m bfl | 2 | Mid 18thC |

| Context No. | Type | Description | Trench No. | Plan No. | Section / Elevation | Dimensions NE-SW (m) | Dimensions SE-NW (m) | Height / Thickness (m) | Highest Level (bgl/bfl) | Lowest Level (bgl/bfl) | Phase | Period |
|-------------|---------|---|------------|----------|---------------------|----------------------|----------------------|------------------------|-------------------------|------------------------|-------|------------|
| 20 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP1 | TP1 | Sec.1a&b | >0.60m | >1.10m | 0.70m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 21 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | TP1 | TP1 | Sec.1a&b | >0.60m | >1.10m | N/A | 0.70m bfl | 0.70m bfl | 1 | Devensian |
| 22 | Masonry | Hard, monolithic, concrete floor slab, 230mm thick , plastic DPC, very late 20thC | TP6 | TP6 | Sec.6 | >0.95m | >0.85m | 0.23m | 0m bfl | 0m bfl | 3 | Late 20thC |
| 23 | Masonry | Red brick floor, frog-less 220x100x65mm, irregularly laid, no mortar, poor condition, 1760's | TP6 | TP6 | Sec.6 | >0.95m | >0.85m | 0.65mm | 0.23m bfl | 0.23m bfl | 2 | Mid 18thC |
| 24 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP6 | TP6 | Sec.6 | >0.95m | >0.85m | 0.60m | 0.32m | 0.32m | 2 | Mid 18thC |
| 25 | Masonry | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP6 | TP6 | Sec.6 | >0.95m | >0.85m | 0.70m | 0m bfl | 0m bfl | 2 | Mid 18thC |
| 26 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | TP6 | TP6 | Sec.6 | >0.95m | >0.85m | N/A | 0.93m bfl | 0.93m bfl | 1 | Devensian |
| 27 | Masonry | Hard, monolithic, concrete floor slab, 170 -200mm thick , plastic DPC, very late 20thC | TP3 | TP3 | Sec.3 | >0.80m | >0.80m | 0.20m | 0m bfl | 0m bfl | 3 | Late 20thC |
| 28 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; construction debris from 1760's | TP3 | TP3 | Sec.3 | >0.80m | >0.80m | 1.20m | 0.17m bfl | 0.20m bfl | 2 | Mid 18thC |
| 29 | Masonry | Ablutions block / court yard wall foundations, red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP3 | TP3 | Sec.3 | >0.80m | >0.80m | 1.20m | 0m bfl | 0m bfl | 2 | Mid 18thC |

| Context No. | Type | Description | Trench No. | Plan No. | Section / Elevation | Dimensions NE-SW (m) | Dimensions SE-NW (m) | Height / Thickness (m) | Highest Level (bgl/bfl) | Lowest Level (bgl/bfl) | Phase | Period |
|-------------|---------|---|------------|----------|---------------------|----------------------|----------------------|------------------------|-------------------------|------------------------|-------|-------------------------|
| 30 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | TP3 | TP3 | Sec.3 | >0.80m | >0.80m | N/A | 1.2m bfl | 1.2m bfl | 1 | Devensian |
| 31 | Masonry | Tarmac surfacing with monolithic concrete sub-base, very late 20thC; each approx. 200mm thick | BH1 | - | - | 0.25m Dia. | 0.25m Dia. | 0.40m | 0m bgl | - | 3 | Late 20thC |
| 32 | Layer | Made ground, mixed rubbly, gravelly silt sand, freq. brick & mortar frag; from 1760's ,poss. inc. earlier | BH1 | - | - | 0.25m Dia. | 0.25m Dia. | 2.30m | 0.4m bgl | - | 2 | Mid 18thC poss. Earlier |
| 33 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | BH1 | - | - | 0.25m Dia. | 0.25m Dia. | N/A | 2.7m bgl | - | 1 | Devensian |
| 34 | Masonry | Tarmac surfacing with monolithic concrete sub-base, very late 20thC; each approx. 200mm thick | BH2 | - | - | 0.25m Dia. | 0.25m Dia. | 0.40m | 0m bgl | - | 3 | Late 20thC |
| 35 | Layer | Modern made ground, type 1 style, pink coarse sand and stone chippings, very late 20thC. | BH2 | - | - | 0.25m Dia. | 0.25m Dia. | 1.10m | 0.4m bgl | - | 3 | Late 20thC |
| 36 | Layer | Natural v. slightly clayey med. sand, brownish yellow, homogenous, occa. flint gravels, sub-soil / colluvial dep. | BH2 | - | - | 0.25m Dia. | 0.25m Dia. | 1.90m | 1.3m bgl | - | 2 | Mid 18thC |
| 37 | Layer | Natural sandy gravels, sub-ang. - well rounded flints, river terrace dep; Kempton Pk. Gr. Mem; Devensian | BH2 | - | - | 0.25m Dia. | 0.25m Dia. | N/A | 3.2m bgl | - | 1 | Devensian |
| 38 | Layer | Concrete floor slab, 180mm thick with a 100mm finer concrete screed, mid 20thC.; remains of parquet floor. | TP8 | - | - | >0.55m | >0.5m | 0.28m | 0m bgl | - | 3 | Late 20thC |
| 39 | Layer | Barrel vault wall foundations, frog-less red brick, 220x100x65 mm, hard white lime mortar, 1760's | TP8 | - | - | >0.55m | >0.5m | 0.28m | 0m bgl | - | 2 | Mid 18thC |

| Context No. | Type | Description | Trench No. | Plan No. | Section / Elevation | Dimensions NE-SW (m) | Dimensions SE-NW (m) | Height / Thickness (m) | Highest Level (bgl/bfl) | Lowest Level (bgl/bfl) | Phase | Period |
|-------------|-------|---|------------|----------|---------------------|----------------------|----------------------|------------------------|-------------------------|------------------------|-------|-----------|
| 40 | Layer | Natural v. slightly clayey med. sand, brownish yellow, homogenous, occa. flint gravels, sub-soil / colluvial dep. | TP8 | - | - | >0.55m | >0.5m | N/A | 0.28m bfl | - | 1 | Devensian |

APPENDIX 2: SITE MATRIX

| | | TP1 | TP2 | TP3 | TP4 | TP5 | TP6 | TP7 | TP8 | BH1 | BH2 |
|------------------------|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | + | + | + | + | + | + | + | + | + | + |
| Archaeological Phase 3 | modern surfacing | | | 27 | | 1 | 22 | | 38 | 31 | 34 |
| | Late 20thC modern made ground | | | | | | | | | | 35 |
| Archaeological Phase 2 | original surfacing | 18 | 14 | | 10 | | 23 | 5 | | | |
| | Mid 18thC made ground | 19 | 15 | 28 | 11 | 2 | 24 | 6 | | 32 | |
| | foundations and walls | 20 | 16 | 29 | 12 | 3 | 25 | 7 | 39 | | |
| | | | | | | | 8 | | | | |
| Archaeological Phase 1 | sands | | 17 | | 13 | | | | 40 | | 36 |
| | Devensian gravels | 21 | | 30 | | 4 | 26 | 9 | | 33 | 37 |
| | | NFE | NFE | NFE | NFE | NFE | NFE | NFE | NFE | NFE | NFE |

APPENDIX 3: OASIS FORM

OASIS ID: preconst1-209782

Project details

| | |
|----------------------------------|--|
| Project name | Watching brief at the Dreadnought Building, University of Greenwich |
| Short description of the project | The watching brief consisted of monitoring 8 trial pits within in the basement of the Dreadnought Building and 2 bore holes immediately outside the building, in order to ascertain the depth and nature of any foundations and their supporting sub strata. |
| Project dates | Start: 13-04-2015 End: 24-04-2015 |
| Previous/future work | Not known / Not known |
| Type of project | Recording project |
| Site status | Area of Archaeological Importance (AAI) |
| Site status | Scheduled Monument (SM) |
| Site status | World Heritage Site |
| Current Land use | Other 2 - In use as a building |
| Monument type | NONE |
| Significant Finds | NONE |
| Investigation type | "Watching Brief" |
| Prompt | Scheduled Monument Consent |

Project location

| | |
|------------------|---|
| Country | England |
| Site location | GREATER LONDON GREENWICH The Dreadnought Building, University of Greenwich |
| Postcode | SE10 9LS |
| Study area | 3150.00 Square metres |
| Site coordinates | TQ 38446 77775 51.4814588424 -0.00599308676783 51 28 53 N 000 00 21 W Point |

Project creators

| | |
|---------------------------|--------------------------------|
| Name of Organisation | Pre-Construct Archaeology Ltd. |
| Project brief originator | Tim Bradley |
| Project design originator | Chris Mayo |

| | |
|------------------------------|-----------------------------|
| Project director/manager | Chris Mayo |
| Project supervisor | Aidan Turner |
| Type of sponsor/funding body | University |
| Name of sponsor/funding body | The University of Greenwich |

Project archives

| | |
|---------------------------|---|
| Physical Archive Exists? | No |
| Digital Archive recipient | LAARC |
| Digital Media available | "Images raster / digital photography" |
| Paper Media available | "Context sheet", "Map", "Miscellaneous Material", "Plan", "Section" |

| | |
|------------|---|
| Entered by | archivist (archivist@pre-construct.com) |
| Entered on | 24 April 2015 |

PCA

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