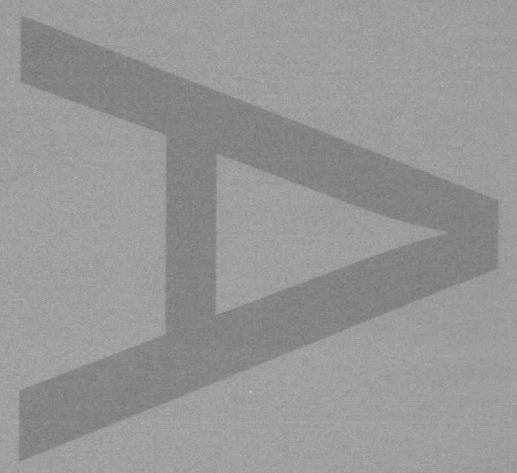
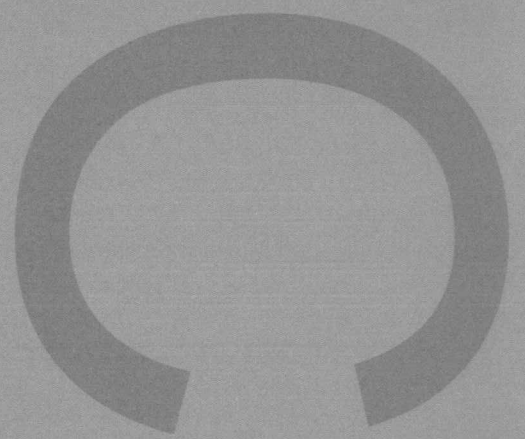
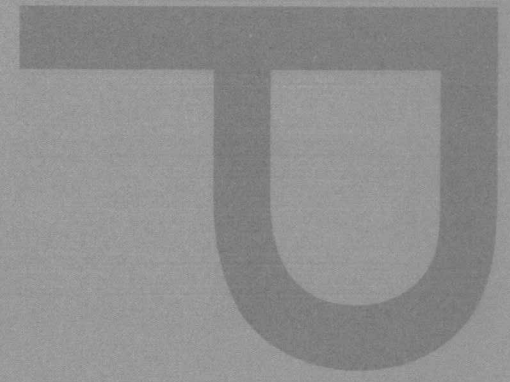


**ST ANDREW'S HOUSE, NORTHSIDE,  
ST ANDREWS BUSINESS PARK,  
NORWICH NR7 0HT**

**AN ARCHAEOLOGICAL WATCHING  
BRIEF OF GEOTECHNICAL  
INVESTIGATIONS**

**JUNE 2008**

**PRE-CONSTRUCT ARCHAEOLOGY**

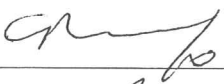
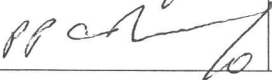


DOCUMENT VERIFICATION

St Andrew's House, Northside,  
St Andrews Business Park, Norwich NR7 OHT

Geotechnical Watching Brief

Quality Control

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**An Archaeological Watching Brief of Geotechnical Investigations at St Andrew's House, Northside, St Andrews Business Park, Norwich NR7 OHT**

**NHER Number: 51597**

**Central National Grid Reference: TG 28104 09194**

**Written by A G Pullen**

**Pre-Construct Archaeology Ltd, June 2008**

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June 2008

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## CONTENTS

1	Abstract	3
2	Introduction	4
3	Objectives and Methodology	7
4	Test Pit Descriptions	8
5	Conclusions	12
6	Acknowledgements	13

## APPENDICES

OASIS Report Form	14
Selected Test-Pit Photographs	16

## ILLUSTRATIONS

Site Location	5
Test Pit Location	6

## 1 Abstract

- 1.1 This report details the results and working methods of an archaeological watching brief of geotechnical investigations at St Andrew's House, Northside, St Andrew's Business Park, Norwich NR7 OHT. The site is centred at National Grid Reference TG 28104 09194.
- 1.2 The archaeological investigation consisted of recording the machine excavation of 14 geotechnical test pits, and demonstrated that no archaeological deposits predating the 19<sup>th</sup> century exist on the study site.
- 1.3 Extensive terracing and landscaping of the site has occurred since the initial construction of a hospital in circa 1815. The watching brief found that the natural sands had been truncated, that all original subsoils and topsoils had been removed and replaced and that therefore the potential for finding any evidence for previous landscapes or archaeological activities was low.
- 1.4 The test pits indicate that naturally formed, culturally sterile deposits, are overlain by 19<sup>th</sup> /20<sup>th</sup> century made ground. Clearly, any ground works associated with the redevelopment of the site are not therefore expected to impact adversely on archaeology at this site.

## 2 Introduction

- 2.1 An archaeological watching brief on geotechnical investigations was undertaken at St Andrew's House, Northside, St Andrew's Business Park, Norwich, NR7 OHT between the 19<sup>th</sup> and 20<sup>th</sup> May 2008 (Fig 1).
- 2.2 The site is owned by Norfolk PCT and is being sold and redevelopment for commercial office is the likely end use. The engineering investigation by Millard Consulting aimed to support an understanding of the ground conditions, as part of the purchase process. The archaeological watching brief was commissioned by Richard Hughes, ICHM, on behalf of KBC, so as to examine the effect that the modern terracing on the site may have had on the historic landscape. The watching brief, was undertaken by the author, and project managed by Peter Moore, Pre-Construct Archaeology Limited.
- 2.3 The investigation site is situated on lands surrounding St Andrew's House, Thorpe St Andrew to the east of Norwich. Hospital buildings covered the northern two-thirds and an associated playing pitch lay on the southern third. It is surrounded by a railway line and housing to the west, St Andrew's Business Park to the south, by Peachman Way to the east and the Norvic Clinic to the north.
- 2.4 The site lies in an area where a background of prehistoric activity is known from the area and indications of Roman settlement and industrial activities are known from archaeological investigations immediately to the northeast, west and south. However the site has been subject to extensive terracing since a hospital was first built on the site circa 1815. It is understood that some of the hospital buildings have basements/and or deep duct chambers. The watching brief was commissioned in an attempt to help define the level and extent of modern ground disturbance and the subsequent effect on the archaeological potential.
- 2.5 Fourteen geotechnical test pits (Fig. 2) were excavated to a depth of approximately 2.70m below ground level (bgl) into the made ground and underlying natural ground. The trial pits were approximately 1.50m by 0.60m.



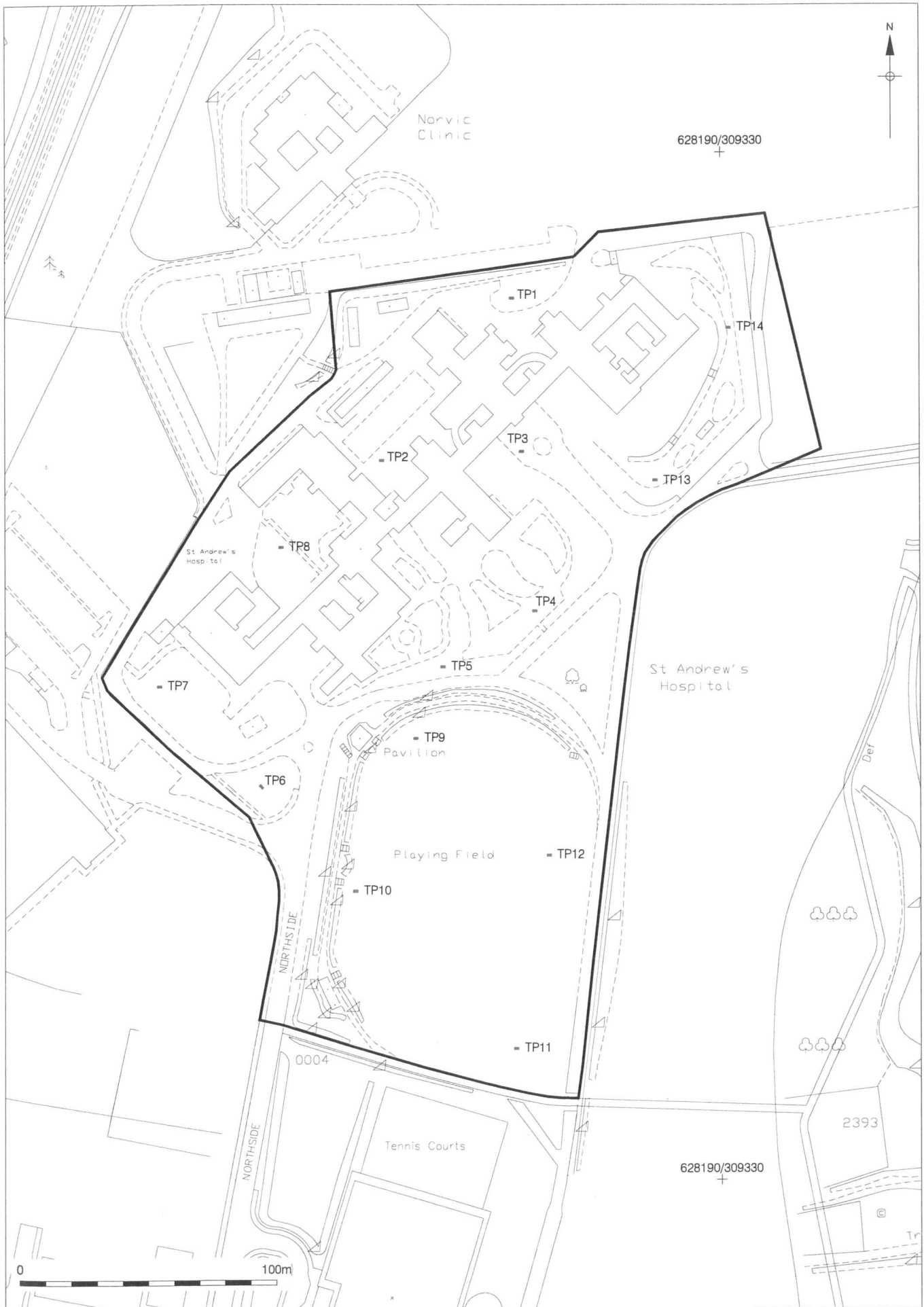


Figure 2  
 Test Pit Location  
 1:2,500 at A4



### 3 Objectives and Methodology

- 3.1 The objectives of this watching brief were to locate, define and record the character, date and extent of archaeological remains and soil formations of any period present on the site as seen in geotechnical test pits, especially those relating to modern disturbances and landscaping.
- 3.2 This watching brief was undertaken following the Institute of Field Archaeologists guidelines<sup>1</sup> and the requirements of the Association of Local Government Archaeological Officers for the East of England<sup>2</sup>
- 3.3 Fourteen geotechnical test pits were machine excavated by the geotechnical contractor to a depth of approximately 2.70m below ground level (bgl), depending on ground conditions, into the made ground and underlying natural ground. The trial pits were approximately 1.50m by 0.60m.
- 3.4 The depths of deposits were measured below ground level (bgl). Deposits were drawn and described from an appropriate section in each geotechnical pit test. Each test pit was photographed. Once recorded the test pits were immediately backfilled.

---

<sup>1</sup> Institute of Field Archaeologists, "Standard and Guidance for archaeological field evaluations", 1999

<sup>2</sup> D. Gurney, "Standards for Field Archaeology in Eastern England", East Anglian Archaeology Occasional Paper 14, 2003

## 4 Test Pit Descriptions

- 4.1 Test Pit 1 (1.50m x 0.60m x 1.85m) was located at the northern boundary of the site at the rear of the hospital building. A loose coarse yellow natural sand [5] was encountered at 0.80m bgl. This was overlain by a 0.24m thick, soft, mid yellow, naturally deposited, clay sand horizon [4], encountered at 0.50m below current ground level. Overlying this natural deposit [4] is a 0.20m thick soft greenish-grey sandy clay [3]. Above this is a layer of light yellowish-brown coarse sandy gravel with medium and large pieces of crushed modern concrete [2]. The top of this material was encountered at 0.1m bgl. This material is a levelling layer for overlying modern tarmac [1].
- 4.2 Test Pit 2 (1.50m x 0.60m x 2.40m) was located to the southwest of Test Pit 1 at the rear of the hospital building. A poorly consolidated yellow coarse natural sand [8] was encountered at 0.70m bgl. This layer was overlain by a 0.27m thick layer of probably natural soft yellow clay sand [7] encountered at 0.44m bgl. Layer [7] was overlain by a yellowish-brown sandy gravel with modern demolition rubble, encountered at 0.1m bgl. This is a levelling layer for the tarmac car park [1].
- 4.3 Test Pit 3 (1.50m x 0.60m x 2.70m) was located to the south of Test Pit 1 near the front of the hospital building. A loose yellow medium grained natural sand was encountered at 0.60m bgl [12]. The natural slopes downwards to the east where it is 1.10m bgl. Overlying [12] is a layer of reddish-brown clay sand [11]. This layer thickens east to west from 0.30m to 0.80m thick and is probably either re-deposited natural or a product 19<sup>th</sup> century landscaping. Layer [11] was first encountered 0.28m bgl. Above [11] there was a 0.30m thick mid brown sandy silt topsoil.
- 4.4 Test Pit 4 (1.50m x 0.60m x 1.0m) was located in front of the central part of the hospital building to the south of Test Pit 3. Test Pit 4 was abandoned at c. 1.0m bgl to avoid damaging a modern drainpipe. A 0.80m thick orange silty sand deposit [14] was encountered at 0.18m bgl. It contained small fragments of mortar and modern brick and overlay the drainpipe. Overlying [14] was a 0.18m thick mid brown sandy silt topsoil [13].
- 4.5 Test Pit 5 (1.50m x 0.60m x 2.30) was located near the centre of the site in front of the southeast wing of the hospital building. A loose, yellow, fine to medium natural sand was encountered at 1.51m bgl [17]. Overlying this deposit was a 1.32m thick layer of soft orange-brown silty sand encountered at 0.2m bgl [16]. It contained occasional small fragments of modern brick. This layer may be the result of 19<sup>th</sup> century landscaping. Layer [16] was overlain by a 0.20m thick sandy-silt topsoil

- 4.6 Test Pit 6 (1.50m x 0.60m x 1.70) was located along the southeast edge of the site to the northwest of the hospital playing field. A loose yellow coarse-grained layer of natural sand was encountered at 1.50m bgl [22]. This was overlain by a 0.7m thick loose orange coarse sandy gravel [21]. The top of this layer was 0.80m bgl. Overlying this layer was a 0.35m thick layer of orange-brown silty sand [20]. This layer was considered to be weathered or re-deposited natural. Overlying this layer was a 0.15m thick layer of light yellowish-brown coarse sand with occasional small (20mm) lumps of yellow clay [19]. This layer was encountered at 0.35m bgl and was probably re-deposited natural and may be the product of 19<sup>th</sup> landscaping. Above [19] was a 0.35m thick, mid brown sandy silt topsoil.
- 4.7 Test Pit 7 (1.50m x 0.60m x 2.50m) was located near the easternmost corner of the site northwest of test pit 6. A poorly consolidated natural orange clay sand with very occasional large flint cobbles was encountered at 2.1m bgl[25]. This layer was overlain by a 1.60m thick layer of orange-brown silty sand that may represent weathered or re-deposited natural [24]. The upper part of this layer appears to be a weakly developed subsoil with concentrated root activity in the upper 0.30m. The top of this layer was 0.40m bgl. Layer [24] was overlain by a 0.40m thick, mid greyish-brown sandy silt topsoil [23].
- 4.8 Test Pit 8 (1.50m x 0.60m x 1.50m) was located at the rear of the southeast wing of the hospital. A loose yellow coarse-grained natural sand was encountered at 0.20m bgl. This natural deposit graded into a sandy-gravel at c. 1.0m below the current ground surface. The upper metre of this deposit showed thin laminar iron banding. Directly overlying this natural deposit was a modern surface layer [26], consisting of pink brick and mortar rubble overlain by coarse gravel. A modern pipe truncated the corner of this test pit.
- 4.9 Test Pit 9 (1.50m x 0.60m x 2.80m) was located at the northeast edge of the hospital playing field. The lowest deposit encountered was a loose medium to coarse natural yellow sand showing thin horizontal bands of mineral deposition and occasional thin (10mm) lenses of clay [30]. This deposit was recorded at 0.40m bgl. The layer had an increasing gravel content with depth. Overlying this layer was [29] a loose yellowish-brown silty sand encountered 0.27m bgl. Above this layer is a soft brown sandy-silt topsoil [28].
- 4.10 Test Pit 10 (1.50m x 0.60m x 1.70) was located at the western edge of the hospital playing field. A layer of loose natural yellow and orange sand was seen 0.38m bgl [32]. Lenses (50mm thick) of clayey sand with gravel occur throughout. This layer

was overlain directly by a 0.40m thick mid greyish-brown sandy silt topsoil [31]. There is little evidence for the development of subsoil between this layer and the underlying natural sand.

- 4.11 Test Pit 11 (1.50m x 0.60m x 3.0m) was located near the southeast corner of the hospital playing field. A deposit of loose yellow sand natural occurred at 1.20m bgl [36]. This was overlain by a 0.75m thick poorly consolidated yellowish-brown fine silty sand layer [35]. This layer had a diffuse basal contact with the underlying layer. This layer is not clean natural and may represent re-deposited or reworked natural deposits. It occurs at 0.48m bgl. Overlying this layer is a yellowish-brown silty sand with occasional small fragments of ceramic building material [34]. The top of this 0.27m thick deposit was 0.20m bgl. This layer may represent levelling activity in the construction of the playing field. Overlying this layer was a mid greyish-brown sandy-silt topsoil [33].
- 4.12 Test Pit 12 (1.50 x 0.60 x 2.60) was located near the eastern edge of the hospital playing field. The lowest layer observed in this test pit was a layer of loose yellow sand natural [40]. This occurred 2.10m bgl. Overlying this was a 0.65 m thick layer of soft light brown silty sand [39]. The upper part of this layer produced very small fragments of ceramic building material and small flecks of charcoal. The top of this deposit occurred at 0.58m bgl. Overlying [39] was a 0.23m thick layer of mixed yellow and orange coarse sand [38]. The top of this deposit was 0.28m bgl. This may be a levelling layer relating to the creation of the playing field. Overlying this layer was a 0.28m thick mid greyish brown sandy silt topsoil [37].
- 4.13 Test Pit 13 (1.50m x 0.60m x 2.50m) was located in front and to south of the northeast wing of the hospital. A loose yellow natural sand with sandy clay lenses occurs 1.30m bgl [44]. This is overlain by a 0.50m thick poorly consolidated yellow silty-sand [43]. This layer was interpreted as weathered or re-deposited natural. The top of this layer occurred 0.60m bgl. Overlying this layer was a 0.25m thick loose yellowish-brown sand with occasional small brick fragments [42]. This is 19<sup>th</sup> or 20<sup>th</sup> century made ground. The top of this layer is 0.30m bgl. On top of this layer is a mid greyish-brown topsoil [41].
- 4.14 Test Pit 14 (1.50m x 0.60m x 1.90m) was located near the northeast corner of the hospital. A layer of loose yellow and orange sand occurs 1.42m bgl [48]. This natural layer is overlain by a 0.48m thick layer of poorly consolidated orangey-brown sand [47]. Very occasional small modern brick fragments were observed in this deposit suggesting this layer is not a natural deposit. It is probably the result of 19<sup>th</sup> century landscaping. The top of this deposit occurred 0.43m bgl. This layer is overlain by a

0.20m thick, firm yellowish brown clay sand layer with small fragments of brick and lime mortar [46]. The top of this layer was 0.28m bgl. Overlying this layer was a mid brown sandy silt topsoil [45].

- 4.15 Data from 5 boreholes also taken on the site, supplied by James and Milton Drilling Ltd, supports the evidence recorded in the geotechnical test pits. The stratigraphic sequence is natural sand deposits overlain by made ground (indicated by fine brick fragments) in turn overlain by topsoil.

## 5 Conclusions

- 5.1 The archaeological watching brief on geotechnical investigations, which consisted of 14 machine excavated test pits, found no archaeological deposits or artefacts predating the 19<sup>th</sup> century on the study site.
- 5.2 The sequence of deposits found on site consisted of natural sands covered by made ground deposits, redeposited sands, topsoils and surfaces. No soils which could be considered to be subsoils were encountered which leads to the assumption that all original subsoils were removed by landscaping and the current landscape is a result of redeposited materials. This also implies that the surface of the natural sands, and any evidence of the historic surfaces, were truncated to different degrees across the site.
- 5.3 This report therefore concludes that the potential for finding evidence of previous landscapes and archaeological activity to be very low.

## 6 Acknowledgements

- 6.1 Pre-Construct Archaeology Limited would like to thank Richard Hughes for commissioning the project and KBC for funding it, also Millard Consulting for their help and co-operation. The author would like to thank the staff of James and Milton Drilling Limited for their help, Hayley Baxter for the illustration and Peter Moore for his project management and editing.

## Appendix 1. Oasis Form

OASIS ID: preconst1-44213

### Project details

Project name St Andrew's House, Northside, St Andrews Business Par

Short description of the project An archaeological watching brief of geotechnical investigations was conducted at St Andrew's House, Northside, St Andrew's Business Park, Norwich NR7 OHT. The site is centred at National Grid Reference TG 28104 09194. The archaeological investigation consisted of recording the machine excavation of 14 geotechnical test pits, and demonstrated that no archaeological deposits predating the 19th century exist on the study site. Extensive terracing and landscaping of the site has occurred since the initial construction of a hospital in circa 1815. The watching brief found that the natural sands had been truncated, that all original subsoils and topsoils had been removed and replaced and that therefore the potential for finding any evidence for previous landscapes or archaeological activities was low. The test pits indicate that naturally formed, culturally sterile deposits, are overlain by 19th /20th century made ground. Clearly, any ground works associated with the redevelopment of the site are not therefore expected to impact adversely on archaeology at this site.

Project dates Start: 19-05-2008 End: 20-05-2008

Previous/future work No / Not known

Any associated project reference codes 51597 - HER event no.

Type of project Field evaluation

Site status None

Current Land use Community Service 1 - Community Buildings

Methods & techniques 'Test Pits'

Development type Not recorded

Position in the planning process Not known / Not recorded

Project location

Country England

Site location NORFOLK NORWICH NORWICH St Andrew's House, Northside, St Andrews Business Park, Norwich NR7 OHT

Postcode NR7 OHT

Site coordinates TG 28104 09194 52.6319660525 1.371200040430 52 37 55 N 001 22 16 E Point

Project creators

Name of Organisation Pre-Construct Archaeology Ltd

Project originator brief ICHM



Project design originator Richard Hughes

Project director/manager Peter Moore

Project supervisor Alexander Pullen

Type of Consultancy sponsor/funding body

Name of ICHM sponsor/funding body

#### Project archives

Physical Archive No Exists?

Digital Archive recipient Norwich Museum

Digital Contents 'Stratigraphic'

Digital Media available 'Images raster / digital photography', 'Spreadsheets', 'Text'

Paper Archive recipient Norwich Museum

Paper Contents 'Stratigraphic'

Paper Media available 'Context sheet', 'Correspondence', 'Matrices', 'Miscellaneous Material', 'Notebook - Excavation', 'Research', 'General Notes', 'Photograph', 'Plan', 'Section', 'Unpublished Text'

#### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title An Archaeological Watching Brief of Geotechnical Investigations at St Andrew's House, Northside, St Andrews Business Park, Norwich NR7 OHT

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## Appendix 2. Selected Test-Pit Photographs

Test-Pit 13



Test-Pit 14

