1a DOWNS ROAD, HACKNEY, E5 8QJ: LONDON BOROUGH OF HACKNEY

ARCHAEOLOGICAL MONITORING OF GEOTECHNICAL BOREHOLES

SITE CODE: DSR16

PCA REPORT NO: 12406

MARCH 2016

PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

1a DOWNS ROAD, HACKNEY, E5 8QJ

AN ARCHAEOLOGICAL WATCHING BRIEF

Quality Control

Pre-Construct Archaeology Ltd	
Project Number	K4409
Report Number	R12406

	Name & Title	Signature	Date
Text Prepared by:	Phil Frickers		March 2016
Graphics Prepared by:	Jennifer Simonson		March 2016
Graphics Checked by:	Josephine Brown	Josephine Brown	March 2016
Project Manager Sign-off:	Tim Bradley		March 2016

Revision No.	Date	Checked	Approved

Pre-Construct Archaeology Limited
Unit 54
Brockley Cross Business Centre
96 Endwell Road
London
SE4 2PD

1a DOWNS ROAD, HACKNEY, E5 8QJ: ARCHAEOLOGICAL MONITORING OF GEOTECHNICAL BOREHOLES

LOCAL PLANNING AUTHORITY:	**LONDON BOROUGH OF HACKNEY**
SITE CODE:	**DSR16**
CENTRAL NGR:	**TQ 34137 85906**
COMMISSIONING CLIENT:	**CGMS CONSULTING**
PREPARED BY:	**PHIL FRICKERS** **PRE-CONSTRUCT ARCHAEOLOGY LTD**
	15TH MARCH 2016

Contractor: Pre-Construct Archaeology Limited
Unit 54, Brockley Cross Business Centre
96 Endwell Road
Brockley
London
SE4 2PD
Tel: 020 7732 3925
Fax: 020 7733 7896
Email: gstevenson@pre-construct.com
Website: www.pre-construct.com

CONTENTS

1 ABSTRACT

1.1 This document details the results of an archaeological watching brief at 1A Downs Road, Hackney, E5 8QJ, undertaken between 22nd February and 1st March 2016. The watching brief was designed to archaeologically monitor the excavation of cable percussive boreholes and windowless sample boreholes in advance of redevelopment of the site. The work was commissioned by CgMs Consulting.

1.2 No evidence of archaeological features was recorded during the investigations. Evidence of a probable historic watercourse, the Hackney Brook, was recorded, which appeared to have been infilled in the later 19th century. Elsewhere London Clay deposits were sealed by thick deposits of made ground / levelling deposits associated with the development of the site in the later 19th century and onwards.

2 INTRODUCTION

2.1 In advance of the redevelopment of 1a Downs Road, Hackney, Pre-Construct Archaeology Limited (PCA) was commissioned by CgMs Consulting to archaeologically monitor a series of boreholes excavated on the site.

2.2 The borehole programme consisted of the excavation of 3 Cable Percussion Boreholes to 35 metres in depth; 5 Cable Percussion Boreholes to 15 metres in depth, and 12 Windowless Sample Boreholes to depths between 4 and 6 metres. The monitoring took place from 22nd February to 1st March 2016.

2.3 The site does not lie within an Archaeological Priority Zone as designated by the London Borough of Hackney. The site is centred at NGR TQ 34137 85906.

2.4 The watching brief was supervised by Phil Frickers and the project managed by Tim Bradley, both of PCA. A Written Scheme of Investigation for the archaeological monitoring was prepared for the site (Bradley 2016). All work was undertaken in accordance with this document.

2.5 Once the site works and post-excavation project is complete, the entire site archive (comprising written and drawn records, and digital photographs) will be deposited with LAARC under the site code DSR16.

3 PLANNING BACKGROUND

3.1 Planning permission had been granted (2015/055) for the demolition of all existing buildings and structures and the erection of four buildings of between 1 and 15 storeys in height. The following condition relating to archaeology has been attached to the planning permission:

Condition 33:

A) No development other than demolition to existing ground level shall take place until the applicant (or their heirs and successors in title) has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the local planning authority in writing and a report on the results has been submitted to the local planning authority.

B) If heritage assets of archaeological interest are identified by the evaluation under Part A, then before the development, other than demolition to existing ground level commences, the applicant (or their heirs and successors in title) shall secure the services of an archaeological investigation in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the local planning authority in writing.

C) No demolition or development shall take place other than in accordance with the written scheme of investigation under Part B).

D) The development shall not be occupied until the site investigation and post-investigation assessment has been completed in accordance with the programme set out in the written scheme of investigation approved under part B), and provision of the analysis, publication and dissemination of the results and archive deposition has been secured.

REASON Heritage Assets of archaeological interest may survive on the site. The planning authority wishes to secure the provision of appropriate archaeological investigation, including publication of results, in accordance with Section 12 of NPPF.

3.2 In accordance with the above archaeological condition, a written scheme of investigation was prepared for the archaeological monitoring of a comprehensive scheme of geotechnical investigation across the site (Bradley 2016). This report details the results of that archaeological investigation.

4 BACKGROUND

4.1 Archaeological Potential

4.1.1. Prior to attendance a GLHER search of a radius of 500m around the study site was made (GLHER Report 12342). Use has also been made of PCA's report archive.

4.1.2. The Geological Survey of Great Britain 1:50 000 scale map of the area (Sheet 256, 'North London') showed that the site is on the margins of the Pleistocene deposits of Hackney Gravel (a post-diversionary Thames River Terrace Deposit composed of gravel, sand, and clay in part), although in the area of the site was not shown to be present, with Palaeogene London Clay potentially directly underlying the site. There was also thought to be potential for the presence of alluvium (not illustrated by BGS) associated with the former course of the Hackney Brook (see below).

4.1.3. The nearest major watercourse to the site is the River Lea, approximately 1.2km to the northeast. Additionally the Hackney Brook, a tributary of the Lea, used to run very close to, or through the area of the site from north to south.

4.1.4. Prehistoric

Five find spots for prehistoric evidence have been recorded within the study area, dating from the Palaeolithic to the Neolithic, generally clustered some distance to the south west of the site. Based on this it is unlikely that anything more than scattered finds from the prehistoric period might survive within the development site.

4.1.5. Roman

The study site lies to the east of the line of Roman Ermine Street, now Kingsland Street, and is likely to have been within an area of farmland. The GLHER contained no find spots dating to the Roman period within the study area. No substantial occupational evidence was known within the study area.

4.1.6. Saxon

Whilst the names of Hackney and Clapton are known to have linguistic origins in the Saxon period, no archaeological evidence from the Saxon period has been recorded from within the study area.

4.1.7. Medieval

The HER results show a low level of medieval activity in the study area, with suggestions that Lea Bridge Road may have medieval origins.

4.1.8. Post-Medieval and Modern

Cartographic evidence shows that the site had been located within open fields and very close to or partially occupied by the course of Hackney Brook. From the mid-late 19th century the Hackney Brook is no longer evident and the site is seen as being sub-divided as development commences along the northern edge of Hackney Downs. It is possible that evidence may exist from this initial

phase of residential development, such as possible early foundations or garden evidence. It is also possible that evidence may exist of earlier agricultural activity, or indeed the evidence for the presence of the former Hackney Brook.

5 RESEARCH DESIGN

5.1 The geotechnical exercise aimed to address the following broad and primary objectives:

Assess the level of truncation from the existing and previous building foundations and modern activity on the site;

Assess the interface of the soil deposits with the natural drift geology for archaeological features;

Assess the underlying deposits for evidence of deposits associated with the former Hackney Brook

Assess the site for prehistoric, Roman, medieval and post-medieval archaeology.

5.2 Within the broad research design set out above, and where archaeological deposits are encountered, the following research objectives, as featured in *A research framework for London Archaeology* prepared by the Museum of London and English Heritage in 2002, were selected as being potentially relevant to this site:

Prehistoric – Early Roman:
P2 Palaeolithic: gathering baseline information, establishing a chronology, informing research and developing relevant models.
P3 Palaeolithic-Mesolithic: gathering baseline information, understanding the locality and its evolution.
P4 Mesolithic-Neolithic: understanding the transition, reconstructing the environment, understanding settlement and economic development and patterns, and the influence of the landscape upon settlement and the creation of monuments; developing a pottery typology.
P5 Bronze Age-Iron Age: habitation and utilisation of the Thames Valley.
P6 Late Iron Age-early Roman: assessing the relationship of London with the rest of the southeast, agricultural intensification, settlement patterns and roads.

Roman:
R1 understanding the transition between Iron Age and Roman, including cultural interaction, evidence of the invasion, the economic and administrative development and decline of London and its hinterland.
R2 understanding the relationship between the landscape, river and settlement.
R3 understanding settlement in London and its hinterland.
R4 understanding the evolution of transport links and infrastructure, including built development.
R5 understanding domestic development.
R8 understanding population development.
R12 agriculture.

Saxon:
S2 identifying rural, agricultural land use; determining the impact on subsequent development with reference to Continental examples.

S3 relating settlement to watersources; understanding migration patterns, and the origin of rural settlement..

S7 understanding agricultural practice; fishing; town and country regarding food production and management; interaction of kingdoms in the region; transport; the economy; manufacturing; production specialisation.

Medieval:

M2 understanding human interaction with the environment; establishing baseline chronologies.

M6 synthesising breeding programmes and wildlife management, strategies and effects; understanding the development of specialist areas; challenge/complement historical sources; understanding patterns of consumption.

London After 1500

L2 understanding developing building design, and socio-economic relations; how London related to its hinterland; the effect of royal palaces; government buildings; developing infrastructure; the development of suburbs and recreational spaces.

L3 how archaeology contributes to understand social, economic, ethnic or religious aspects of different neighbourhoods, including sections of society with no history.

L4 understanding human physical survival in London.

L6 understanding the development of religious belief and related material culture.

L7 understanding the history of leisure, links with trade and the economy.

L8 understanding food production; London's growth and related environmental consequences.

L10 understanding London as a distribution, financial and fashion centre; the adaptation of smaller towns within the London area; its continued world pre-eminence.

6 SITE METHODOLOGY

6.1 General

6.1.1. All borehole locations were CAT scanned by a trained individual prior to excavation. The concrete slabs present over the positions of all the Boreholes and Windowless Sample holes were then broken out by jackhammer. Geotechnical investigation then started from this level.

6.1.2. During the excavation of the boreholes themselves, the archaeologist present then monitored the inner tubes of the Windowless Sample and examined the spoil produced during the drilling of the Boreholes through deposits down to the level of the geological sub-strata. Records were made onto *pro-forma* borehole recording sheets. Deposits were not given archaeological context numbers.

6.1.3. Some difficulties were encountered on site with ingress of water from ground level down into the boreholes themselves due to inclement weather, and in ground water present beneath the site, particularly in probes towards the eastern side of the site above the underlying natural clay. This resulted in the loss of deposits from the recovered tubes in some locations and smearing on the inside of the tubes themselves in others. In some instances this precluded precise measurements of some of the horizons of the deposits recovered, although general trends were recorded.

6.1.4. Some ground contamination was identified, probably relating to the previous use of the site as a petrol station. The soils were not directly handled.

6.1.5. Borehole and Windowless Sample Hole were located by GPS in 2D by the geotechnical contractor. No Ordnance Survey heights were available for the site so depths within the boreholes were calculated on a Below Ground Level (BGL) basis.

6.1.6. The Windowless Sample Holes (WS) were of the depths detailed as follows:

Windowless Sample	**Depth (m BGL)**	**Diameter (mm)**
WS01	3.80m	100mm
WS02A	4.00m	100mm
WS03	4.00m	100mm
WS04	4.00m	100mm
WS05	4.00m	100mm
WS06	4.00m	100mm
WS07	5.00m	100mm
WS08	6.00m	100mm
WS09	4.00m	100mm
WS10	3.00m	100mm
WS11	4.00m	100mm

6.1.7. A number of issues were encountered during excavation of the Windowless Samples.

6.1.8. In WS02A the 4th probe could not be released from the outer tube and therefore was not available for inspection. However by that stage grey "London Clay" had already been reached.

6.1.9. A number of Windowless Sample holes were very wet, particularly in the area of the previous stream running through the site. Seriously affected by this were; WS03, WS04, WS07 and WS09. WS10 was abandoned at 3.00m because of this issue.

6.1.10. The Boreholes (BH) were of the sizes detailed as follows:

Borehole	**Depth (m BGL)**	**Diameter (mm)**
BH1	16.00m	120mm
BH2	15.00m	120mm
BH3	15.10m	120mm
BH4	15.10m	120mm
BH5	1.80m	120mm
BH6	15.00m	120mm

6.1.11. BH5 refused at 1.80m BGL as it hit a concrete obstruction.

6.1.12. BH1 and BH4 will at a date beyond the scope of the watching brief be expanded and taken down to their full depth of 35 metres.

6.1.13. Due to access difficulties BH7; BH8; the replacement for BH5, BH5A; and WS12 were not excavated during the period of the watching brief.

6.1.14. The geotechnical investigation locations were backfilled after completion with gravel and in several cases monitoring tubes were inserted.

7 BOREHOLE DESCRIPTIONS

7.1 **Borehole records** - The results of the monitoring are displayed in tabulated form below:

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
WINDOWLESS SAMPLE (WS01)							
WS01	Layer	0.20	0		Very cemented, concrete slab	Concrete	Modern
WS01	Layer	1.50	0.20		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS01	Layer	unknown c.1.00	1.70		Soft, loose, light yellowish brown gravels	Levelling	19th Century
WS01	Layer	unknown	unknown c.2.80		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 3.80m							
WINDOWLESS SAMPLE (WS02A)							
WS02A	Layer	0.15	0		Very cemented, concrete slab	Concrete	Modern
WS02A	Layer	1.45	0.15		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS02A	Layer	1.10	1.60		Loose, sandy gravel, Dark grey silt matrix	Levelling	19th Century
WS02A	Layer	0.30 observed	2.70		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole logging finished at 3.00m							
WINDOWLESS SAMPLE (WS03)							
WS03	Layer	0.35	0		Very cemented, concrete slab, steel reinforcements	Concrete	Modern
WS03	Layer	1.55	0.35		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS03	Layer	unknown	1.90		Firm sub rounded	Levelling	19th Century

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
					gravels		
WS03	Layer	1.25 observed	2.75		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 4.00m							
WINDOWLESS SAMPLE (WS04)							
WS04	Layer	0.15	0		Very cemented, concrete slab	Concrete	Modern
WS04	Layer	unknown	0.15		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS04	Layer	unknown	unknown c.1.80		Light yellowish brown mixed clay	Levelling	19th Century
WS04	Layer	0.40	2.30		Loose sludgy gravel, grey silt	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS04	Layer	1.30 observed	2.70		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 4.00m							
WINDOWLESS SAMPLE (WS05)							
WS05	Layer	0.30	0		Very cemented, concrete slab	Concrete	Modern
WS05	Layer	1.10	0.30		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS05	Layer	1.45	1.40		Soft mixed clays contaminated to grey and blue. Small brick fragments	Levelling	19th Century
WS05	Layer	0.65	2.85		Soft light yellowish brown sandy clay	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS05	Layer	0.50 observed	3.50		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 4.00m							
WINDOWLESS SAMPLE (WS06)							
WS06	Layer	0.20	0		Cemented, concrete slab with half brick fragments	Concrete	Modern

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
WS06	Layer	0.45	0.20		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS06	Layer	1.25	0.65		Loose mid yellowish brown sandy gravel, (coarse flint gravel)	Modern dump layer	Modern
WS06	Layer	0.60	1.90		Firm yellowish brown, bluish brown, mixed clay.	Levelling	19th Century
WS06	Layer	1.50 observed	2.50		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 4.00m							
WINDOWLESS SAMPLE (WS07)							
WS07	Layer	0.20	0		Cemented, concrete slab with half brick fragments	Concrete	Modern
WS07	Layer	0.30	0.20		Loose to mod compact, Mid dark brown sandy silt, Brick fragments	Made Ground	Modern
WS07	Layer	0.20	0.50		Dark red brick fragments	Modern dump layer	Modern
WS07	Layer	0.30	0.70		Dark grey brown clayey silt, Brick fragments, flint gravel	Modern dump layer	Modern
WS07	Layer	0.25	1.35		Mid grey brown clayey silt, Brick fragments, Flint gravel	Modern dump layer	Modern
WS07	Layer	0.15	1.60		Dark red brick fragments	Modern dump layer	Modern
WS07	Layer	0.25	1.75		Dark grey brown clayey silt some inclusions	Levelling	19th Century
WS07	Layer	0.45	2.40		Fine loose gravel	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS07	Layer	unknown	2.85		Soft, loose, grey clay	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS07	Layer	unknown	3.70		Mid brown organic clay, Wood	Fluvial deposit - deposited in river bed	Pre 19th Century

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
					fragments, Wood fibres		
WS07	Layer	0.30 observed	4.70		Soft dark brown clay, washed in inclusions?	Fluvial deposit - deposited in river bed	Pre 19th Century
Windowless Sample Hole terminated at 5.00m							
WINDOWLESS SAMPLE (WS08)							
WS08	Layer	0.20	0		Cemented concrete slab with half brick fragments	Concrete	Modern
WS08	Layer	0.30	0.20		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS08	Layer	1.05	0.50		Dark grey brown clayey silt, Brick fragments, Charcoal fragments, Mortar fragments	Made Ground	Modern
WS08	Layer	1.00	1.55		Fairly dense orangey gravel, Brick fragments and flecks, fewer inclusions with depth	Levelling	19th Century
WS08	Layer	0.45	2.55		Orange sand and dark grey clay gradually moving to clay	Levelling	19th Century
WS08	Layer	2.90 observed	3.10		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 6.00m							
WINDOWLESS SAMPLE (WS09)							
WS09	Layer	0.20	0		Cemented concrete slab with half brick fragments	Concrete	Modern
WS09	Layer	0.50	0.50		Dark grey clayey silt	Modern dump layer	Modern
WS09	Layer	0.25	1.30		Loose, very loose, Small brick fragments in yellow brown silt matrix	Modern dump layer	Modern
WS09	Layer	0.45	1.55		Soft dark grey clayey silt; Coal	Modern dump layer	

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
					fragments		Modern
WS09	Layer	0.70	2.20		Dark grey brown clayey silt, Flint gravel, Inclusions of whiteware pottery	Modern dump layer	Modern
WS09	Layer	0.10	2.90		Light orangey brown clayey sand	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS09	Layer	0.55	3.35		Loose, fine gravels and pea grits	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS09	Layer	0.10 observed	3.90		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Windowless Sample Hole terminated at 4.00m							
WINDOWLESS SAMPLE (WS10)							
WS10	Layer	0.35	0		Very cemented, concrete slab	Concrete	Modern
WS10	Layer	1.15	0.35		Loose dark grey brown sandy silt, Concrete fragments, Brick fragments, Flint gravel	Modern Backfill and Made Ground	Modern
WS10	Layer	0.50	1.50		Soft dark grey clayey silt contaminated	Levelling	19th Century
WS10	Layer	0.80	2.20		Soft redeposited sand and gravel contaminated	Levelling	19th Century
Windowless Sample Hole abandoned at 3.00m							
WINDOWLESS SAMPLE (WS11)							
WS11	Layer	0.25	0		Very cemented, concrete slab	Concrete	Modern
WS11	Layer	unknown	0.25		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
WS11	Layer	0.20	unknown c.1.80		Smooth grey clay	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS11	Layer	0.60	2.40		Smooth dark grey clay, Gravel inclusions	Fluvial deposit - deposited in stream bed	Pre 19th Century
WS11	Layer	unknown	unknown		Light yellowish	Fluvial deposit	Pre 19th

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
			c.3.50m		brown organic clay, Wood fibres, Organic fragments	- deposited in stream bed	Century
Windowless Sample Hole terminated at 4.00m							
BOREHOLE 1 (BH1)							
BH1	Layer	0.45	0		Very cemented, concrete slab	Concrete	Modern
BH1	Layer	0.55	0.45		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
BH1	Layer	0.70	1.00		Soft dark grey clayey silt, Inclusions	Modern dump layer	Modern
BH1	Layer	1.30	1.70		Loose dark yellowish brown sandy gravel (coarse sand, coarse gravel) No inclusions seen	Levelling	19th Century
BH1	Layer	11.10	3.00		Stiff, dark grey clay London Clay	Natural	Pre Holocene
BH1	Layer	1.90 observed	14.10		Stiff, blue grey clay Woolwich or Reading beds Lambeth Group	Natural	Pre Holocene
Bore Hole logging finished at 16.00m							
BOREHOLE 2 (BH2)							
BH2	Layer	0.30	0		Very cemented, concrete slab	Concrete	Modern
BH2	Layer	0.70	0.30		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
BH2	Layer	0.50	1.00		Soft, sticky, dark grey brown clayey silt, Inclusions	Modern dump layer	Modern
BH2	Layer	2.20	1.50		Fairly stiff, mid yellowish brown and grey mixed clay.	Levelling	19th Century
BH2	Layer	1.30	2.20		Soft, fluid, mid brown clay	Fluvial deposit - deposited in stream bed	Pre 19th Century

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
BH2	Layer	11.50 observed	3.50		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Bore Hole logging finished at 15.00m							
BOREHOLE 3 (BH3)							
BH3	Layer	0.30	0		Very cemented, concrete slab	Concrete	Modern
BH3	Layer	1.20	0.30		Soft dark grey clayey silt contaminated	Modern dump layer	Modern
BH3	Layer	1.10	1.50		Light brown silty clay and gravel Inclusions	Fluvial deposit - deposited in stream bed	Pre 19th Century
BH3	Layer	12.50 observed	2.60		Stiff, dark grey clay London Clay	Natural	Pre Holocene
Bore Hole logging finished at 15.10m							
BOREHOLE 4 (BH4)							
BH4	Layer	0.25	0		Very cemented, concrete slab	Concrete	Modern
BH4	Layer	0.85	0.25		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
BH4	Layer		1.10		Dark grey brown clayey silt	Modern dump layer	Modern
BH4	Layer	0.40	2.40		Stiff, brownish grey clay	Levelling	19th Century
BH4	Layer	11.80	2.80		Stiff, dark grey clay London Clay	Natural	Pre Holocene
BH4	Layer	0.50 observed	14.60		Dense brownish grey sand	Natural	Pre Holocene
Bore Hole logging finished at 14.60m							
BOREHOLE 5 (BH5)							
BH5	Layer	0.30	0		Very cemented, concrete slab	Concrete	Modern
BH5	Layer	1.50	0.30	Blocked by concrete	Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
Bore Hole abandoned at 1.80m							

Borehole No.	Deposit Type	Thickness (m)	Depth bgl(m)	Refusal (m)	Description	Interpretation	Date
BOREHOLE 6 (BH6)							
BH6	Layer	0.30	0		Very cemented, concrete slab, steel reinforcements	Concrete	Modern
BH6	Layer	2.30	0.30		Loose to mod compact, Dark grey brown sandy silt, Brick fragments, Flint gravel	Made Ground	Modern
BH6	Layer	1.00	2.60		Stiff, dark grey and other shades, mixed clay	Levelling	19th Century
BH6	Layer	1.40	3.60		Soft, sticky, grey and yellow brown mixed clay Gradually becomes more grey with depth	Levelling	19th Century
BH6	Layer	7.90	5.00		Stiff, dark grey clay London Clay	Natural	Pre Holocene
BH6	Layer	2.10 observed	12.90		Stiff, blue grey clay Woolwich or Reading beds Lambeth Group	Natural	Pre Holocene
Bore Hole logging finished at 15.00m							

8 THE RESULTS OF THE TEST PITS AND THEIR SIGNIFICANCE

Natural Geology

8.1 The underlying London Clay formation of stiff dark grey clay was recorded in all but three of the fully excavated Boreholes and Windowless Sample Holes. A number of examples of varying geological strata were also recorded; Woolwich or Reading bed clay in BH1 and BH6, and grey sand in BH4. London Clay was seen to its full depth in two of the boreholes, (BH1 and BH4), and measured at 11.10m and 11.80m respectively.

8.2 The top level of the clay changed across the site. On the west side it was flat, varying between 2.50m and 2.80m BGL, but it then sloped down to the east. Centrally, BH2 was at 3.50m BGL and WS08 at 3.10m. Along the east side of site from north to south the depths were: WS05, 3.50m; WS07 excavated to 5.00m without clay being seen; WS09 3.90m; WS11, excavated to 4.00m without clay being seen; and BH6, 5.00m.

8.3 These results appear to suggest the erosion of the London Clay in the eastern area of the site, likely to reflect the former course of a stream channel (see below). This enters the site from the north east then curves to the south, either exiting to the south or continuing to curve and exiting again to the east near to Downs Road. This channel is likely to form part of, or at least be associated with, the course of the Hackney Brook, which can be seen on early maps within the vicinity of the site.

Alluvial / Fluvial Deposits

8.4 Above the clay formations mentioned above, deposits of alluvial or fluvial origin were seen in 7 boreholes; WS01, WS04, WS05, WS07, WS09, BH2 and BH3. Further east the deposits recorded were very waterlogged and dissimilar to the earlier London Clay, consisting of soft mid brown clays (BH2), soft yellow brown sandy clay (WS05) and smooth grey clays (WS11). In WS09 orangey brown clayey sand was recorded, and in WS07 and WS09 fine loose gravels. These deposits appear to represent waterlain contexts, probably deposited during flood events, filling a small valley along the line of the Hackney Brook.

8.5 Organic deposits were recovered from two Windowless Sample Holes, WS07 and WS11. These were within the fluvial sequence recorded in the boreholes towards the eastern side of the site. They appeared in similar positions in the sequence, below washed in gravel (WS07) and clays in both boreholes, and at similar heights of 3.50m and 3.70m BGL. These deposits demonstrated that prior to infilling, the stream must have ceased to flow, allowing the formation of this organic layer.

Levelling Deposits

8.6 Significant levelling deposits were recorded in all but three of the fully excavated Boreholes and Windowless Sample Holes; BH3, WS09 and WS11. These deposits varied in their composition from gravels; WS01 and WS03; to mixed clays; WS04, WS05, WS06 and BH6; with one example of

orangey sand WS08. They were consistent though in all being composed of imported natural material containing just a few inclusions of brick and clay pipe stem etc. The level of these deposits was similar across the site, varying from 1.55m and 1.90m BGL, although there were certain exceptions; BH4 at 2.40m, and WS09 and BH6 at 2.90m and 2.60m respectively, which seem to have been within the Hackney Brook valley. Overall this sequence of deposits suggested a site-wide scheme of levelling-up the site, perhaps working from the north southwards using material quarried locally, and presumably taking place immediately in advance of the development of the site in the later 19th century.

Made Ground

8.7 Sealing these levelling layers were deposits of modern material. Recently laid "Made Ground" survived to a depth of around 1.00m across the site, reflecting Victorian and later activity. From two Windowless Sample Holes (WS07 and WS09) layers of brick fragments were recovered. No standing brick walls were recorded on site but these brick fragments may be the result of the demolition of structures on or close to the site, erected during the urbanisation of the area in the Victorian period, and comprehensively demolished prior to the construction of the petrol filling station and associated structures.

Finally the site was covered with a series of concrete slabs relating to its recent activity as a petrol filling and service centre. The slabs varied in thickness, with some of the more substantial slabs having steel rod reinforcements.

9 CONCLUSIONS

9.1 No archaeological finds or features were recorded during the monitoring of the geotechnical investigations. Natural geological deposits of London Clay were recorded throughout the interventions. In some locations along the eastern side of the site these were sealed by alluvial and fluvial deposits likely to be associated with the former course of the Hackney Brook. This was infilled in the later 19th century at the same time as the wider site area was levelled prior to development associated with the urbanisation of the area. Overlying deposits of made ground suggest a further phase of site clearance was undertaken in advance of the construction of the petrol filling station and car show room.

9.2 Whilst the evidence of a water course, likely to be associated with, or part of, the former Hackney Brook is of some local topographic interest, the complete absence of terrace gravels across the site, coupled with the significant thicknesses of late 19th century and modern made ground across the area, suggest the potential for archaeological activity on being recorded on the site is very limited.

10 BIBLIOGRAPHY

Bradley, T, 2016 1a Downs Road, Hackney E5 8QJ: A Written Scheme of Investigation for Archaeological Monitoring of Geotechnical Investigations

11 ACKNOWLEDGEMENTS

11.1 Pre-Construct Archaeology Limited would like to thank Richard Meager of CgMs Consulting for commissioning this project.

11.2 The Author would like to thank Tim Bradley for his project management and editing of this report and thanks also to Jennifer Simonson for the illustrations. Thanks to the drillers of Soils Limited for their assistance on site.

APPENDIX 1 – OASIS FORM

Project details

Project name	1a Downs Road, Hackney. A Report on the Watching Brief of the archaeological monitoring of Geotechnical Boreholes
Short description of the project	The Archaeological Monitoring of Geotecnical Boreholes consisting of 6 Boreholes and 11 Windowless Sample Holes. Evidence was found of the backfilling of the Hackney Brook, shown on maps up until the mid 19th century. No archaeological features were found.
Project dates	Start: 22-02-2016 End: 01-03-2016
Previous/future work	No / Not known
Any associated project reference codes	DSR16 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Industry and Commerce 1 - Industrial
Monument type	NONE None
Monument type	NONE None
Significant Finds	NONE None
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Planning condition

Project location

Country	England
Site location	GREATER LONDON HACKNEY HACKNEY 1a Downs Road
Postcode	E5 8QJ
Study area	8 Square metres
Site coordinates	TQ 34137 85906 51.555575615137 -0.064920622556 51 33 20 N 000 03 53 W Point
Lat/Long Datum	Unknown

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd
Project brief originator	CgMs Consulting
Project design originator	Tim Bradley
Project director/manager	Tim Bradley
Project supervisor	Phil Frickers
Type of sponsor/funding body	Developer

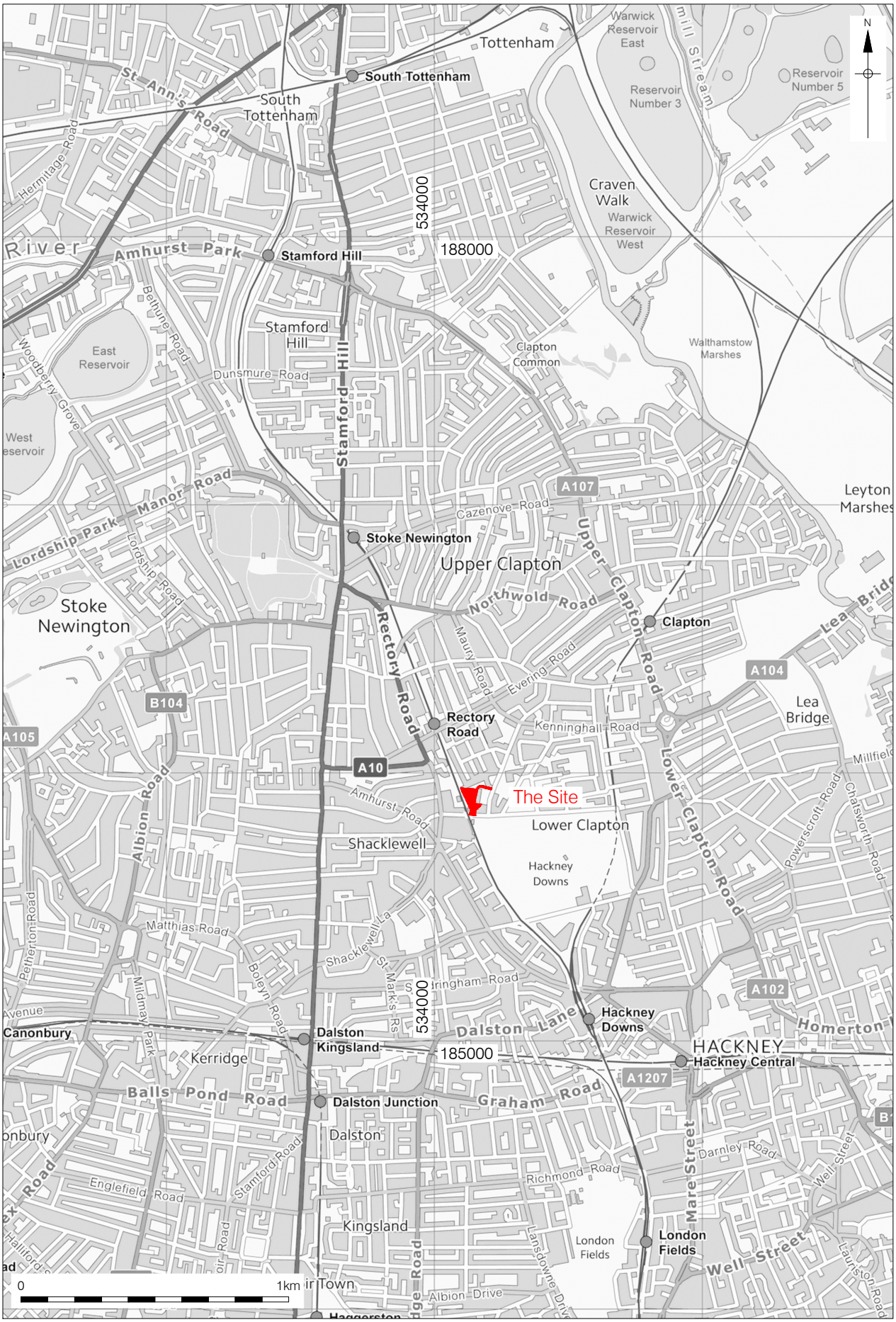
Project archives

Physical Archive Exists?	No
Physical Archive recipient	None
Digital Archive recipient	LAARC
Digital Archive ID	DSR16
Digital Media available	"Images raster / digital photography"
Paper Archive recipient	LAARC
Paper Archive ID	DSR16
Paper Media available	"Context sheet","Miscellaneous Material"

Project bibliography 1

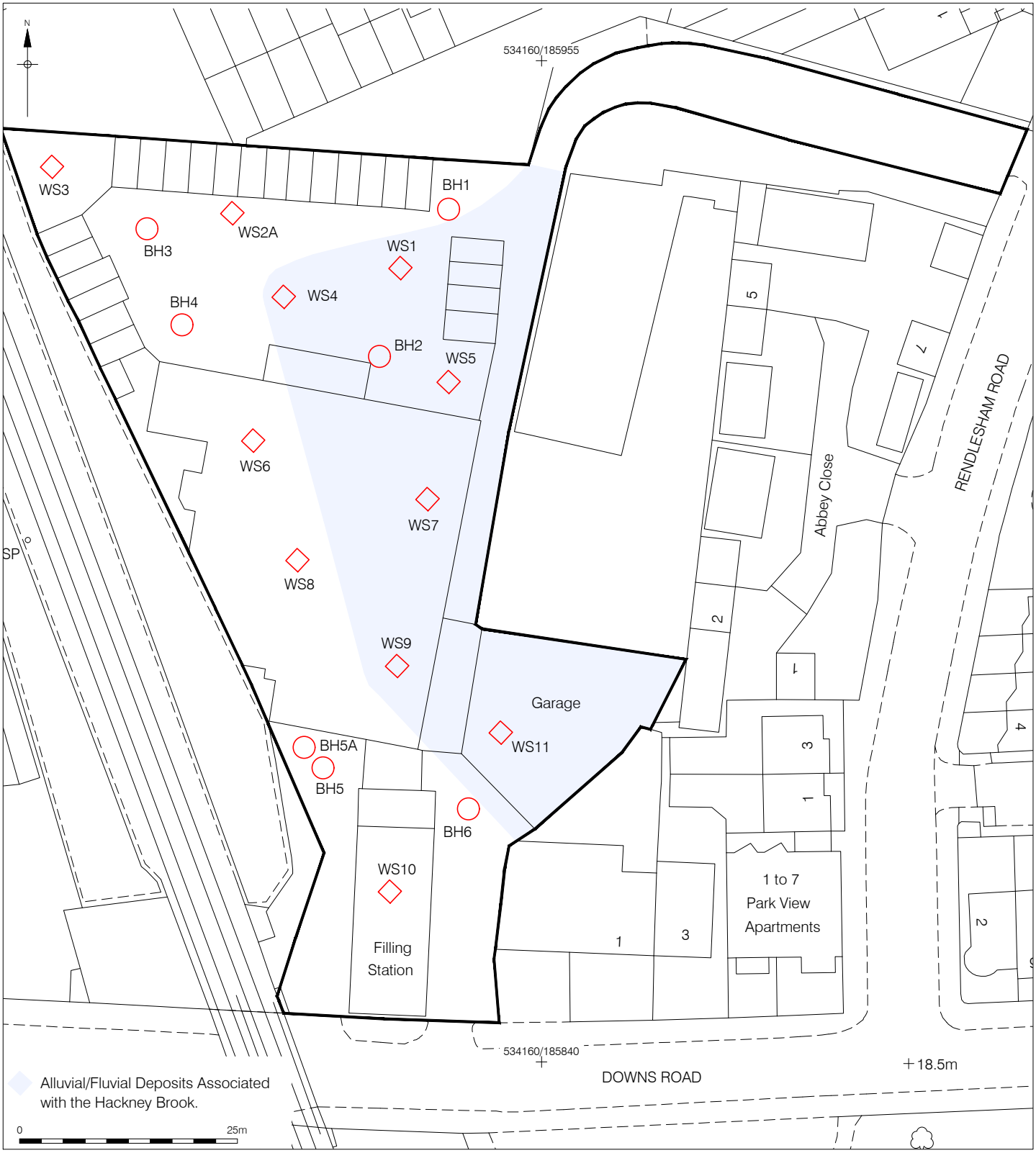
Publication type	Grey literature (unpublished document/manuscript)
Title	A Report on a Watching Brief of the archaeological monitoring of Geotechnical Boreholes
Author(s)/Editor(s)	Frickers, P.
Date	2016
Issuer or publisher	Pre Construct Archaeology
Place of issue or publication	London
Description	A4 Spiral Bound Blue Cover

Entered by	Phil Frickers (pfrickers@o2.co.uk)
Entered on	7 March 2016



14/03/16 JS

Figure 1
Site Location
1:20,000 at A4



14/03/16 JS

Figure 2
Intervention Locations
1:625 at A4

P C A

PCA SOUTH
UNIT 54
BROCKLEY CROSS BUSINESS CENTRE
96 ENDWELL ROAD
BROCKLEY
LONDON SE4 2PD
TEL: 020 7732 3925 / 020 7639 9091
FAX: 020 7639 9588
EMAIL: info@pre-construct.com

PCA NORTH
UNIT 19A
TURSDALE BUSINESS PARK
DURHAM DH6 5PG
TEL: 0191 377 1111
FAX: 0191 377 0101
EMAIL: info.north@pre-construct.com

PCA CENTRAL
THE GRANARY, RECTORY FARM
BREWERY ROAD, PAMPISFORD
CAMBRIDGESHIRE CB22 3EN
TEL: 01223 845 522
FAX: 01223 845 522
EMAIL: info.central@pre-construct.com

PCA WEST
BLOCK 4
CHILCOMB HOUSE
CHILCOMB LANE
WINCHESTER
HAMPSHIRE SO23 8RB
TEL: 01962 849 549
EMAIL: info.west@pre-construct.com

PCA MIDLANDS
17-19 KETTERING RD
LITTLE BOWDEN
MARKET HARBOROUGH
LEICESTERSHIRE LE16 8AN
TEL: 01858 468 333
EMAIL: info.midlands@pre-construct.com