232-236 GREEN STREET, FOREST GATE, LONDON E7 8LE

AN ARCHAEOLOGICAL EVALUATION

LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF NEWHAM

PLANNING REFERENCE: 12/01385/FUL

EH (GLASS) REF: LAG 25/503

PCA REPORT NO: 11399

SITE CODE: GEN13

MARCH 2013

PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

232-236 GREEN STREET, FOREST GATE, LONDON E7 8LE

AN ARCHAEOLOGICAL EVALUATION

Quality Control

Pre-Construct Archaeology Ltd	
Project Number	K3042
Report Number	R11399

	Name & Title	Signature	Date
Text Prepared by:	Paw Jorgensen		March 2013
Graphics Prepared by:	Hayley Baxter		March 2013
Graphics Checked by:	Josephine Brown	Josephine Brown	March 2013
Project Manager Sign-off:	Chris Mayo		March 2013

Revision No.	Date	Checked	Approved

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

232-236 GREEN STREET, FOREST GATE, LONDON E7 8LE

AN ARCHAEOLOGICAL EVALUATION

Site Code:	**GEN13**
Central NGR:	**TQ 4100 8424**
Local Planning Authority:	**London Borough of Newham**
Planning Reference:	**12/01385/FUL**
English Heritage (GLASS) Ref:	**LAG 25/503**
Commissioning Client:	**ACR Investments Ltd**
Written/Researched by:	**Paw Jorgensen** **Pre-Construct Archaeology Limited**
Project Manager:	**Chris Mayo (MIfA)**

Contractor:	**Pre-Construct Archaeology Limited** **Unit 54 Brockley Cross Business Centre** **96 Endwell Road** **Brockley** **London SE4 2PD**
Tel:	**020 7732 3925**
Fax:	**020 7732 7896**
E-mail:	**cmayo@pre-construct.com**
Web:	**www.pre-construct.com**

March 2013

PCA Report No: R11399

CONTENTS

APPENDICES

PLATES

ILLUSTRATIONS

1 ABSTRACT

1.1 This report details the results of an archaeological evaluation commissioned by Radha Investment on behalf of ACR Investments Ltd carried out by Pre-Construct Archaeology Limited at 232-236 Green Street, Forest Gate, London E7 8LE in the London Borough of Newham prior to the site's redevelopment. The fieldwork was carried out between 25 February and 01 March 2013.

1.2 A Written Scheme of Investigation (Mayo 2013), approved by the London Borough of Newham, outlined the methodology for the excavation of six archaeological trenches. These included two trenches measuring 10m by 2m and four trenches measuring 20m by 2m. However, due to constraints imposed by the previous use of the site only five trenches could be excavated to the specified size while the sixth trench was divided into two smaller units (Trenches 6 and 7).

1.3 Evidence for the previous land use was discovered in the form of an undated ditch, presumably a field boundary, as well as two gravel extraction pits of late 19th century date and remains relating to the bus depot operating on site from 1906.

1.4 Given the extent of previous impact from the bus depot development, the general absence of archaeological features and finds, the perceived low significance of the recorded features and finds, and also the fact that the proposed development will not significantly impact upon the brickearth horizon, Pre-Construct Archaeology Limited does not consider that further archaeological work for this development would be necessary or appropriate.

2 INTRODUCTION

2.1 Between 25 February and 01 March 2013 Pre-Construct Archaeology Limited (PCA) carried out an archaeological evaluation of land at 232-236 Green Street, Forest Gate, London E7 8LE. The site is located in the London Borough of Newham and is centred at National Grid Reference TQ 4100 8424 (Figure 1). The work was commissioned by Radha Investments on behalf of ARC Investments Ltd in response to an archaeological condition attached to planning application (12/01385/FUL) for the redevelopment of the former bus depot at the address.

2.2 A Written Scheme of Investigation was prepared by PCA (Mayo 2013) and approved by Mr Single. It proposed the excavation of six trenches, distributed to achieve good spatial coverage and assess the archaeological potential of the site, with two measuring 10m by 2m and four measuring 20m by 2m. However, due to constraints imposed by the previous site use it was necessary to truncate one of the shorter trenches into two smaller units (Figure 2).

2.3 Project management of the archaeological work and report editing was carried out by Chris Mayo and the fieldwork was supervised by Paw Jorgensen, who also authored this report. Adam Single of English Heritage, Archaeology Advisor to the Local Planning Authority, monitored the work on behalf of the London Borough of Newham.

2.4 A desk based assessment for the site was produced in 2001 (Hardy 2001) for a previous, unfulfilled planning application for the study site.

2.5 The boundaries of the site are defined to the north, south and west by properties fronting Upton Park Road, Boleyn Road and Stukeley Road respectively and to the east by Green Street. Occupying the site itself are the dilapidated and now partially demolished remains of the former bus depot and its supporting structures. The site is centred at NGR TQ 4100 8424.

2.6 The project was assigned the unique Museum of London site code GEN13. Upon completion of all phases of the work the project archive will be deposited with the London Archaeological Archive and Research Centre (LAARC).

3 PLANNING BACKGROUND AND RESEARCH OBJECTIVES

3.1 National Guidance: National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) was adopted on March 27 2012, and now supersedes the Planning Policy Statements (PPSs). The NPPF constitutes guidance for local planning authorities and decision-takers both in drawing up plans and as a material consideration in determining applications.

3.1.2 In considering any planning application for development the local planning authority will be guided by the policy framework set by the NPPF, by current Local Plan policy and by other material considerations.

3.2 Regional Policy: The London Plan

3.2.1 The relevant Strategic Development Plan framework is provided by "The London Plan, Spatial Development Strategy for Greater London Consolidated with Alterations since 2004" (Feb 2008). It includes the following policy relating to archaeology within central London:

> **Policy 4b.15 Archaeology**
> The Mayor, in partnership with English Heritage, the Museum of London and Boroughs, will support the identification, protection, interpretation and presentation of London's archaeological resources. Boroughs in consultation with English Heritage and other relevant statutory organisations should include appropriate policies in their DPDs for protecting Scheduled Ancient Monuments and archaeological assets within their area.

3.3 Local Policy: Archaeology in the London Borough of Newham

3.3.1 This study aims to satisfy the objectives of the London Borough of Newham, which fully recognises the importance of the buried heritage for which they are the custodians. The Core Strategy of the Borough's Local Development Framework was adopted on the 26th of January 2012 and replaces the policies of the Unitary Development Plan. However, the Core Strategy contains no policies relating to archaeology; the relevant policy statements regarding the protection of the buried archaeological resource within the Borough are still the saved policies that form part of the UDP. These statements are outlined below:

> **ARCHAEOLOGY: Archaeology: Investigation, Excavation and Protection**
> 3.114 Archaeological remains often provide the only evidence of the Borough's past. They are a finite and fragile resource very vulnerable to modern development and land use. The archaeology of the Borough is a community asset which should be preserved and the needs of development balanced and assessed against this. Early consideration of and consultation on archaeological issues will maximise preservation in accordance with PPG16. The destruction of such remains should be avoided if possible and either left in situ if the remains are of national or particular local interest, or excavated and recorded prior to development, where remains are of lesser importance. Site layouts designed to retain archaeological features intact will be considered favourably by the Council.
> 3.115 The Greater London Archaeology Advisory Service (GLAAS - part of English

Heritage) provides impartial advice to Newham Council. Sites of potential archaeological importance, to which this policy relates, can be defined as any site within an Archaeological Priority Area (APA). APAs are defined by GLAAS as areas having particular interest or value (Please refer to Map EQ6), or as sites where it can reasonably be shown from existing sources of information (most notably the Greater London Sites and Monuments Record) that remains of archaeological importance may survive. For further information, please refer to SPG Note 'Archaeological Code of Practice'. An archaeological assessment (either a desk study or a preliminary field investigation) will normally be required for any development involving a site more than 0.4 acres within an APA. The Council will also require such an assessment for smaller sites within the APAs, and sites outside the APAs, where this is clearly justified by the archaeological sensitivity of the site. Developers should undertake early consultation with the Council, and recognised archaeological organisations such as GLAAS, to avoid uncertainty and later delays.

POLICY EQ43: The council will promote the conservation, protection and enhancement of the archaeological heritage of the borough. Developers of sites of potential archaeological importance will be required to produce a written report, as part of the application for planning permission, on the results of an archaeological assessment or field evaluation carried out by a suitably qualified archaeological contractor; and when remains of importance are identified, the council will seek preservation of the remains in situ. On other important sites, where the balance of other factors is in favour of granting planning permission by means of the imposition of conditions on the grant of planning permission, and possibly by legal agreements, the council will ensure that adequate provision is made for the protection, excavation and recording of remains, and the subsequent publication of the records of excavation, providing a written account of the archaeological exploration, including records of finds.

3.116 The Council will promote co-operation between landowners, developers and archaeological organisations in accordance with the British Archaeologists' and Developers' Liaison Group Code.

3.4 Site Specific Planning Background

3.4.1 On March 8, 2013 the planning application (application number 12/01385/FUL) for the redevelopment of the former bus depot which occupies the site was approved by the London Borough of Newham. The planning permission included the following condition relating to archaeology:

A) No development shall take place until the applicant has secured the implementation of a programme of archaeological works in accordance with a Written Scheme of Investigation which has been submitted by the applicant and approved by the local planning authority.

B) No development or demolition shall take place other than in accordance with the Written Scheme of Investigation approved under Part (A).

C) 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 (A), and the provision made for analysis, publication and dissemination of the results and archive deposition has been secured.

3.4.2 The justification for the condition was that:

Heritage assets of archaeological interest survive on the site. The planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development, in accordance with recommendations given by the borough and the National Planning Policy Framework adopted March 2012 and to Policy 7.8 of the London Plan, July 2011 and Policy SP5 of the Core Strategy, adopted 26 January 2012.

3.4.3 The site is not located within an Archaeological Priority Area as defined by the London Borough of Newham in their Core Strategy, adopted in January 2012. It does not contain any listed buildings or Scheduled Monuments; nor is it near to any.

3.5 Research Objectives

3.5.1 The evaluation aimed to address the following primary objectives:

- To determine the natural topography of the site, and the height at which it survives.
- To confirm the expected absence of palaeoenvironmental deposits at the site.
- To establish the presence or absence of prehistoric activity, its nature and (if possible) date.
- To establish the presence of absence of Roman and medieval activity. Can suspicions be confirmed that the site was unused during these periods?
- To establish the presence or absence of post-medieval activity at the site.
- To establish the nature, date and survival of activity relating to any archaeological periods at the site.
- To establish the extent of all past post-depositional impacts on the archaeological resource.

4 TOPOGRAPHY AND GEOLOGY

4.1 Topographically there is very little variance between the eastern and western ends of the site. The general ground level within the site is approximately at a height of 9.40m OD.

4.2 A geotechnical investigation at the site recorded the underlying geology as River Terrace Gravel of the Taplow Gravel Formation over the London Clay formation over the Lambeth Group Formation (Card Geotechnics Limited 2012). The investigation recorded deposits of concrete and made ground above them, approximately 1.2m thick.

4.3 The findings of this study generally concurs with this although deposits of brickearth were observed overlying the river terrace gravels, filling what appears to have been a natural depression in the latter.

4.4 The site is currently formed at ground level by a concrete slab, the surface of which was recorded by PCA at heights between 9.29m OD in the east to a maximum of 9.40m OD elsewhere.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 Prehistoric

5.1.1 The site is located within an area seen to have potential for prehistoric remain because of its location above the Taplow Gravel Formation, which is known to have experienced activity during the prehistoric period. Chance finds nearby of flint tools including axes, projectile points and blades attest to at least an ephemeral prehistoric presence within the area though evidence for settlement in the vicinity is hitherto lacking (Mayo 2013).

5.2 Roman

5.2.1 There is no evidence for Roman activity within the immediate vicinity of the site.

5.3 Medieval

5.3.1 The site is located within what was historically the manor of Ham, which was recorded in 1086 as comprising eight hides and 30 acres and having a population of 130. Upton was fist mentioned in a 13th century document and again in the rental rolls of the 16th century although no evidence for human activity during this period has been found in the vicinity of the site (Hardy 2001).

5.4 Post-Medieval and Modern

5.4.1 Maps dating to the mid-18th century show the vicinity of the project area within agricultural fields on the west side of Green Street. The site appears to have remained in agricultural use until the late 19th century when Mr. Charles George Woodford opened a nursery on site. There is no mention of a nursery at the address in the Kelly directory for the year 1886 though it does appear in the 1890 directory, suggesting that the nursery was established during the last years of the 1880s. The area surrounding the site was becoming increasingly built up during the mid- to late 19th century and by 1895 urban development had engulfed the area entirely.

5.4.2 By 1906 the study site had been taken over by Great Eastern London Suburban Tramways and Omnibus Co. Ltd for use as the Upton Park terminus for their trams and busses. The site is shown on the 1919 Ordnance Survey map (not reproduced here) as functioning as a 'Motor Garage' and on the 1939 map as an 'Omnibus Depot'. According to Barker and Robbins (1974) the Upton Park Garage was rebuilt in 1936 to provide for more efficient inspection, servicing, cleaning and detailing of the company's growing fleet of busses. The rebuilding of the garage made it the largest of such depots in London (Barker and Robbins, 1974).

5.4.3 While the wider Upton Park area endured heavy bombing during World War 2 the area immediately surrounding the site appears to have escaped relatively unscathed. The closest recorded bomb strikes appear to have been along Wolseley Road to the northwest, Gwendoline Avenue to the southwest and Shaftesbury Road near its junction with Ashley Road to the east (Bomb Sight, 2012).

6 ARCHAEOLOGICAL METHODOLOGY

6.1 The methodology for evaluating the site was specified in the Written Scheme of Investigation (Mayo 2013). It proposed the excavation of a six evaluation trenches; four measuring 20m by 2m and two measuring 10m by 2m, distributed across the site to allow for optimal spatial coverage. However, the area of the proposed Trench 6, one of the shorter trenches, in the eastern portion of the site proved to consist of a thick layer of concrete encapsulating several metal pipes. Because it was unknown if these pipes were live it was decided that it would be safer to attempt to excavate the trench elsewhere. In the second attempted location (recorded as Trench 7) a modern brick built manhole and modern walls of the former offices in the eastern portion of the site were uncovered at which point the excavation of the trench was discontinued (Figure 2).

Trench No	*Proposed Dimensions*	*Approximate Alignment*	*Achieved Dimensions*
1	10m x 2m	E-W	9.74m x 2.12m
2	20m x 2m	E-W	20.25m x 2.24m
3	20m x 2m	NE-SW	19.71m x 2.00m
4	20m x 2m	NW-SE	20.43m x 1.96m
5	20m x 2m	E-W	19.97m x 2.11m
6	10m x 2m	NW-SE	2.68m x 1.57m
7	N/A	N-S	1.85m x 1.63m

6.2 A mechanical JCB excavator was used to first break out the overlying concrete slab and then to excavate the trenches. The machine was fitted with a toothless bucket to remove modern overburden under the supervision of an attendant archaeologist. Machine excavation continued in spits of approximately 100mm until archaeologically relevant material was observed. Spoil was piled a safe distance from the trench edges.

6.3 Following machine excavation, relevant faces of the trench that required further examination were cleaned and investigated using appropriate hand tools. Representative sections for each trench were then drawn on polyester based drawing film (permatrace) at a scale of 1:10.

6.4 All archaeological features were recorded using standard single context recording methods as detailed in PCAs Operations Manual 1 (Taylor 2009). A Leica GPRS unit was used to survey in all trenches and archaeological features uncovered. A full photographic record was made with black and white and colour transparencies (on 35mm film) along with digital photographs.

6.5 The project archive was assigned the unique site code GEN13.

7 ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1: Natural (Figures 3 & 4)

7.1.1 The earliest deposit encountered during the evaluation was a layer of naturally deposited reddish brown sandy gravel with occasional bands of silt and clay. This deposit was observed in Trenches 1, 2, 3, 4 and 5 where it was recorded variably as [16], [30], [19], [43] and [40] respectively. In Trench 1 to the west and Trench 5 to the east the gravel deposit occurred at its highest points of 8.76m OD and 8.68m OD respectively. From these points it sloped down towards the central portion of the site to a height of 8.27m OD forming a natural depression in the landscape.

7.1.2 In Trenches 2, 3 and 4 the natural gravel deposit was sealed by a layer of brickearth ([28], [18] and [42] respectively) ranging between 0.27m and 0.45m in thickness. It comprised light reddish brown sandy clay to sandy silt with occasional sub-rounded pebbles. At its highest point it was first seen at 8.86m OD and from here it sloped down slightly towards the east where it was recorded at 8.78m OD in Trench 4.

7.2 Phase 2: Undated (Figures 3 & 4)

7.2.1 Towards the western end of Trench 1 the natural gravel was cut by a north-northwest - south-southeast aligned ditch, [2], measuring approximately 1.40m wide by 0.70m deep, which extended beyond both the northern and southern limits of the trench. The sides of the ditch were moderately steep with a gradual break of slope at the top. At the base of the ditch was a roughly 0.30m wide channel with steep sides (Plate 1). The base of the channel sloped very slightly from 8.05m OD in the south to 8.03m OD in the north and the top of the ditch was recorded at 8.76m OD. At the top, along both the eastern and western sides of the ditch were approximately 0.20m high berms ([13] and [14]) created from upcast natural gravel. Filling the ditch itself was a deposit comprising firm mid-brown sandy clayey silt ([1]) containing sub-rounded pebbles occurring throughout the deposit with moderate frequency.

7.2.2 The entirety of the ditch exposed within the trench was excavated by hand, but no datable material was found.

7.3 Phase 3: Medieval to Post-Medieval (Figure 4)

7.3.1 Sealing the natural gravel in Trench 5, the brickearth in Trenches 2, 3 and 4 and the ditch in Trench 1 was a subsoil horizon (recorded variably as [12], [17], [29], [39] and [41]) ranging between 0.18m and 0.52m in thickness. It comprised moderately compact mid- to dark grey silty sand with occasional horizontal lenses of clay as well as frequent charcoal flecks and sub-rounded pebbles. The only temporally diagnostic find from this deposit was a jug sherd of Mill Green pottery (AD 1270-1350). While this does not provide sufficient evidence to securely place the subsoil horizon within this century it does offer a *terminus post quem* for the deposit.

7.4 Phase 4: 19th to 20th century (Figures 3 & 4)

7.4.1 At the eastern end of the site, occupying almost the entire eastern half of Trench 5, a large quarry pit [38] cut the subsoil horizon. Only a portion of the western edge of the feature was seen as the rest lay beyond the limits of the trench. Based on the exposed edge it would seem that the feature had near vertical sides with a sharp break of slope at both the top and base. The base of the pit appeared slightly concave, although this too is based on the small portion of the feature that was within the trench. As exposed the pit measured 1.80m north-south x 9.73m east-west x 1.80m deep and it was first observed at a height of 8.96m OD. Filling it was a deposit of stiff mid-grey sandy clay [37] containing occasional yellow brick fragments and sub-rounded pebbles. A number of pottery sherds were also recovered during the excavation of the fill though there seemed to be a general paucity of cultural material within the deposit. From the pottery that was recovered it can be said with some certainty that the pit was backfilled during the late 19th or early 20th century.

7.4.2 In Trench 2, near the eastern end of the trench, the subsoil was cut by the construction cut [24] for a square/rectangular brick built soakaway [23]. At least two metal drain pipes fed into the soakaway at a level of 8.57m OD. The soakaway itself had been constructed using purple bricks (measuring 200mm x 95mm x 65mm) in a stretcher bond laid one brick thick and bonded with light grey hard lime mortar with frequent charcoal flecks. As exposed the interceptor measured 1.72m north-south by 2.23m east-west by 0.68m high. However, these dimensions do not reflect the complete size of the feature as it extended beyond the southern limits of the trench and it had been truncated horizontally by the construction of a later brick wall, the foundation of which had filled the lower part of the soakaway with concrete, which resulted in excavation of the feature halting prior to the base being reached. At the highest point the soakaway survived to a height of 9.10m OD.

7.4.3 Towards the western end of the site, in Trench 1, the subsoil had been sealed by a buried topsoil horizon [11] surviving to a height of 9.22m OD. This comprised mid-greyish brown firm sandy clayey silt with occasional charcoal flecks and sub-angular and sub-rounded pebbles. Sherds of pottery and fragments of clay tobacco pipes provide a deposition date between the late 19th and early 20th century.

7.4.4 At the eastern end of Trench 1 the topsoil was cut by a large rubbish pit [4] containing two distinct fills, [3] and [15]. The pit measured at least 2.00m north-south by 3.67m east-west by 2.40m deep, though it extended beyond the limits of the trench to the east, north and south (Plate 2). A relatively large quantity of pottery was recovered from the lower fill [15] of the pit while slightly less was recovered from the upper fill [3]. Pottery sherds dating to the mid to late 19th century as well as arc-light carbon rods, bottle glass shards and fragments of ceramic building material were also recovered from both fills. The lower fill comprised dark brownish grey firm sandy silt with occasional lumps of concrete, brick fragments and sub-rounded pebbles. This fill was first observed at 8.65m OD. The upper fill comprised loose to friable dark grey sandy silt with moderate rounded and sub-angular pebbles, occasional lumps of concrete, metal fragments and brick fragments. This deposit was first

seen at 9.02m OD.

7.4.5 Truncating the brick soakaway in Trench 2 and cutting the subsoil in Trenches 3 and 4 and the quarry pit in Trench 5 were the construction cuts ([7], [10], [22], [27], [33], [36] and [46]) for a series of identical north-south aligned brick walls ([5], [8], [20], [25], [31], [34] and [44]). These had been constructed in cuts with vertical sides with a sharp break of slope at the top and (where seen) at the base. The cuts were wide enough to just accommodate the concrete footings of the walls. All of the walls had been constructed using frogged yellow stock bricks (measuring 230mm x 100mm x 70mm) in English bond and set in light grey cement mortar (Plate 3). Generally the walls survived to a height of between 8.95m OD and 9.13m OD. The variation in the level of the walls can be accounted for by truncation caused during the breaking of the concrete slab directly overlying the walls during the archaeological investigation. All of the construction cuts for these walls were filled with a similar greyish brown sandy silt (recorded variably as [6], [9], [21], [26], [32], [35] and [45]). Pottery recovered from the fills of the construction cuts was consistent with a date of 1805-1900+; however, since the cuts truncated features dating to the late 19th or early 20th century they cannot be earlier than these.

8 INTERPRETATION

8.1 Phase 1: Natural

8.1.1 Natural gravel was observed in all of the successfully excavated trenches, displaying high points at the eastern and western ends of the site falling to a slight depression in the centre of the site. Here the depression had been filled by naturally deposited brickearth.

8.2 Phase 2: Undated

8.2.1 At the western end of the site a section of a roughly north-south aligned ditch was uncovered in Trench 1. Full excavation of the exposed ditch segment yielded no finds, so the feature remains undated. Based on the areas' long history of agricultural use it is possible that the feature represents a field boundary ditch forming part of the wider field system which dominated the area until the mid-19th century.

8.3 Phase 3: Medieval or Post-Medieval

8.3.1 A single sherd of Mill Green pottery (AD1270-1350) was recovered from the subsoil horizon. Unfortunately this is not sufficient to securely date the deposit to this period although it does attest to at least ephemeral activity within the area during the later part of the 13th century or early part of the 14th century. This is not surprising considering that the farmstead or village of Upton is mentioned in documents dating to this period.

8.4 Phase 4: 19th and 20th Century

8.4.1 Portions of two large pits were recorded in Trenches 1 and 5. While the excavation of the fill of the pit in Trench 5 showed a relative dearth of finds excavation of the pit in Trench 1 yielded an abundance of such. Both pits cut deep into the natural gravel so it is likely that their original function was to extract gravel for use elsewhere. The pit in Trench 1 had then appears to have been used as a receptacle for the discard of rubbish during backfilling while the one in Trench 5 was backfilled with 'cleaner' material.

8.4.2 In the eastern part of Trench 2 the truncated remains of a brick built soakaway were recorded. This had been partially demolished by the construction of a later yellow brick wall and likely form part of either the pre-1936 'omnibus depot' or the late 19th century nursery.

8.4.3 The north-south aligned yellow brick walls observed in several of the excavated trenches appear to be spaced approximately 9-10m apart (east-west) and seem to extend across the full expanse of the site from north to south. It is likely that these represent sleeper walls of the 1936 rebuilt bus garage. Locally wider brick piers were built into the walls; presumably this was done to provide bases for steel columns supporting the steel framed roof.

8.4.4 A roughly east-west aligned concrete-cast bus inspection pit was observed towards the western end of Trench 2. This constituted a rectangular concrete structure measuring 5.65m east-west by 1.30m north-south by at least 1.45m in depth with a steep set of steps at the western end allowing for access into the inspection pit. While only one of these pits was exposed numerous others could be seen at surface level extending along much of the

western and northern sides of the side. The feature had extended deep enough to have caused total truncation to all possible archaeological deposits, and it is reasonable to assume that the other inspection pits visible from slab level would have had the same depth of impact.

9 CONCLUSIONS

9.1 Original Research Questions

9.1.1 What is the natural topography of the site, and the height at which it survives?

9.1.2 Natural gravel was observed in all of the successfully excavated trenches and it is therefore possible to gauge the natural topographical trends within the site. At the highest point, in Trench 1 in the western portion of the site, the natural gravels occurred 8.76m OD. From here a slight decline was observed with the lowest point recorded near the centre of the site in the eastern part of Trench 2 where the gravels occurred at 8.27m OD before rising again to the east to a height of 8.68m OD in Trench 5 in the eastern part of the site.

9.1.3 It thus appears that site was situated over a slight depression of the Taplow River Terrace. This depression was later filled by the natural deposition of brickearth which settled in the hollow.

9.1.4 Is there any evidence for prehistoric activity on site?

9.1.5 Despite a number of isolated finds of flint axes, projectile points and other stone tools in the vicinity of the study site, no evidence for prehistoric activity was uncovered during the current investigation.

9.1.6 Is there any evidence for Roman and/or medieval activity?

9.1.7 No Roman material is known to have been recovered from the vicinity of the site. Documentary evidence suggests that Upton existed as a village by at least the 13th century. Despite this no evidence for medieval activity has been documented in the vicinity of the site. This could suggest that the area was unused during these periods, or alternatively that it was in use as agricultural land. Another possibility is that the dearth of material related to these periods reflects a lack of previous archaeological work carried out in the immediate vicinity of the current site.

9.1.8 During the current investigation a single sherd of Mill Green pottery (AD 1270-1350) was found which does suggest at least ephemeral use of the area during the medieval period. The discovery of a possible field boundary ditch sealed by the subsoil horizon in Trench 1 may be evidence for the agricultural activity during this period although as the ditch remains undated it is impossible to confirm this.

9.1.9 Is there any evidence for post-medieval activity at the site?

9.1.10 Cartographic evidence shows that the site area remained in use as agricultural fields from at least 1746 to 1863. Two large quarry pits were discovered: one in Trench 1 and one in Trench 5. These both dated to the late 19th or early 20th century, though a late 19th century date is more likely considering the site was extensively occupied by buildings related to the late 19th century nursery. Sometime between 1886 and 1890 a nursery was established on the current site though by 1906 the site was home to one of the depots of the Great Eastern London Suburban Tramways and Omnibus Co. Ltd. The only evidence related either to the nursery or the 1906 depot was a brick built soakaway recorded in Trench 2.

9.1.11 In 1936 the depot was rebuilt making it the largest of its kind then in London. Evidence for

this phase of the depot was seen in the form of north-south aligned sleeper walls as well as a bus inspection pit.

9.2 Post-Depositional Impact

9.2.1 While some evidence exists for activity prior to the construction of the bus depot, much of the site was truncated during the construction of sleeper walls, drainage runs and bus inspection pits associated with the rebuilding of the depot in 1936. Due to this impact the survival of earlier archaeological remains are likely restricted to localised areas along the southern side of the site as well as the western part of the site, beyond the footprint of the 1936 garage building.

9.2.2 Where earlier remains survived these were, with the exception of an undated ditch in the western part of the site, related to gravel extraction during the late 19th century, shortly before the site came into use as a nursery.

9.3 Impact of the Proposed Development

9.3.1 The proposed development (Figure 5) intends to make use of the existing boundary walls with the added support of steel braces to counteract the increased lateral thrust on the existing walls caused by the addition of a second story. In addition to this footings for approximately 170 steel columns will need to be excavated (Figures 6-10). The impact of the largest of these footings is 1.7m by 1.7m, though the vast majority have a smaller footprint. These footings essentially form pad foundations, all of which will be excavated to a depth of 700mm (0.7m).

9.3.2 PCA is informed that the planned construction will see the existing slab at the site removed, crushed and relaid to form a hardcore base for the new site slab (pers comm. K Popat). This will sit at a surface level of c9.65m OD. The site is currently formed at ground level by a concrete slab, the surface of which was recorded by PCA at heights between 9.29m OD in the east to a maximum of 9.40m OD elsewhere.

9.3.3 The intention is to lay the hardcore base and then excavate the pad foundations, prior to the final surface. Assuming a final surface slab thickness of approximately 100mm, the pad foundations will therefore be excavated from an approximate height of 9.55m OD. The impact level for the pad foundations, therefore, is 0.70m below that level at c 8.85m OD. This compares to the highest recorded level of brickearth in the evaluation, at 8.86m OD, and the gravel at 8.76m OD. This means that excavation for the pad foundations should impact to the surface of the brickearth only.

9.3.4 Most of the area of the site to the west of the access road from Boleyn Road is going to be used as a service yard and thus little below ground impact is scheduled to occur in this area. The exception is the western extreme of the site which will be occupied by a service building extending east from the western site boundary by approximately 10m. As with the main building to the east this building is going to be supported by steel columns with pad foundations extending to the surface of the brickearth only. The majority of these columns are located along the southern, northern and western boundary walls of the site and are

likely to be within the construction cut for these former walls. Only three of the columns for this building are situated away from the existing walls and of these one falls within the area excavated as Trench 1 during the current investigation.

9.3.5 The proposed development drawings provided by the architects also include a drawing for the new drainage system. Of the new drainage runs the below ground impact is slight though two are of note. The first is the drain run is in the western part of the site from MH3 to MH2 (Figure 11). Here the proposed formation level ranges from approximately 8.49m OD in the west to roughly 8.34m OD in the east. Comparing these levels to the levels observed in Trenches 1 and 2 it can be estimated that this drainage run will extend into the natural gravels. Even so, the eastern half of this drainage run falls within an area heavily truncated by deep inspection pits associated with the former bus depot. The second drain of note is that from MH1 in the east to MH2 in the west. At the eastern end the impact of the drain is slight, only extending to a depth of approximately 9.13m OD and then falling to the west to 8.34m OD by MH2. The majority of the deeper portion of has already been excavated as Trench 2 during the current investigation.

9.4 General Conclusions and Recommendations

9.4.1 The evaluation demonstrated the presence of natural gravels sealed by a brickearth deposit at an upper height of 8.86m OD.

9.4.2 In terms of archaeological remains a ditch was found in Trench 1 which is considered to represent a drainage or boundary feature. It contained one sterile fill with no datable artefacts, despite excavating all of the exposed feature. In other trenches two large pits were seen, for quarrying and rubbish disposal.

9.4.3 The proposed development will see numerous localised excavations for pad foundations but these will only extend to a depth of c8.85m OD, i.e. the surface of the brickearth. There will be some extremely localised deeper excavations for drainage.

9.4.4 The evaluation has shown that there have been numerous localised and severe truncations to the site by the development of the bus depot in the 20th century. Attempts to achieve evaluation trenches at the eastern end of the site showed widespread and severe truncation from 20th century activity.

9.4.5 Given the extent of previous impact from the bus depot development, the general absence of archaeological features and finds, the perceived low significance of the recorded features and finds, and also the fact that the proposed development will not significantly impact upon the brickearth horizon, Pre-Construct Archaeology Limited does not consider that further archaeological work for this development would be necessary or appropriate.

9.5 Site Archive and Publication

9.5.1 The results of the archaeological investigation will be published as an entry in the *London Archaeologist* 'Round Up'.

9.5.2 The entire site archive will be deposited at the London Archaeological Archive and Research Centre (LAARC) under site code GEN13, following approval of this report. PCA will provide

a copy of this report to the local studies library, and it will be supplied to the Greater London Historic Environment Record by the Archaeology Advisor to the London Borough of Newham.

9.6 Confidence

9.6.1 PCA considers that the archaeological evaluation was completed in accordance with all relevant guidelines, best-practice documents and the approved Written Scheme of Investigation.

9.6.2 The work was undertaken in good weather conditions.

9.6.3 We consider that the results detailed in this report are reliable, and are confident that the evaluation represents an accurate reflection of the archaeological potential of the site.

10 ACKNOWLEDGEMENTS

10.1 Pre-Construct Archaeology Ltd would like to thank Radha Investments Ltd for commissioning this archaeological evaluation and Adam Single of English Heritage for monitoring the work on behalf of the London Borough of Newham.

10.2 The author would like to thank Chris Mayo for project managing the site and editing this report, Ian Cipin and Patrick Cavanagh for their work on-site, Richard Archer for the survey work and Hayley Baxter for the illustrations.

11 BIBLIOGRAPHY

Printed Sources

Bomb Sight, 2012, Bomb Sight: Mapping the WW2 Bomb Census, available from http://bombsight.org/#16/51.5384/0.0312 (Accessed 11 March 2013).

Barker, T. C., and Robbins, M., 1974 *A History of London Transport, Volume 2: The Twentieth Century to 1970*, Allen and Unwin, London.

Card Geotechnics Limited, 2012, '232-236 Green Street, Forest Gate, London: Geotechnical and Geoenvironmental Interpretative Report', Unpublished report.

Hardy, L., 2001, 'Former Bus Depot, Green Street, Upton, London Borough of Newham: An Archaeological Desk-Based Assessment'. Thames Valley Archaeological Services, Unpublished report.

Mayo, C., 2013, '232-236 Green St, Forest Gate, London E7 8LE: Written Scheme of Investigation for an Archaeological Evaluation', Pre-Construct Archaeology Ltd, Unpublished WSI.

Powell, W. R. (ed.), 1973 *A History of the County of Essex: Volume 6, Victoria County History*, London.

Taylor, J with Brown, G 2009, *Fieldwork Induction Manual: Operations Manual 1*, Pre-Construct Archaeology Limited

Drawings

Dowling Blunt, Drawing "Ground Floor: Mechanical Services: Foul Drainage Layout", Drawing No: J2454-M-DR-G01 Rev B

RWP, Drawings "GA Foundations: Sheet 1 of 5" to "Sheet 5 of 5", Drawings Nos: 2046-XX17 Rev T1, 2046-XX18 Rev T1, 2046-XX19 Rev T1, 2046-XX20 Rev T1, 2046-XX21 Rev T1,

Wren Architecture and Design, Drawing "Planning Application: Existing Ground Level, First Level and Roof Plan and Section", Drawing No –P-EX-01

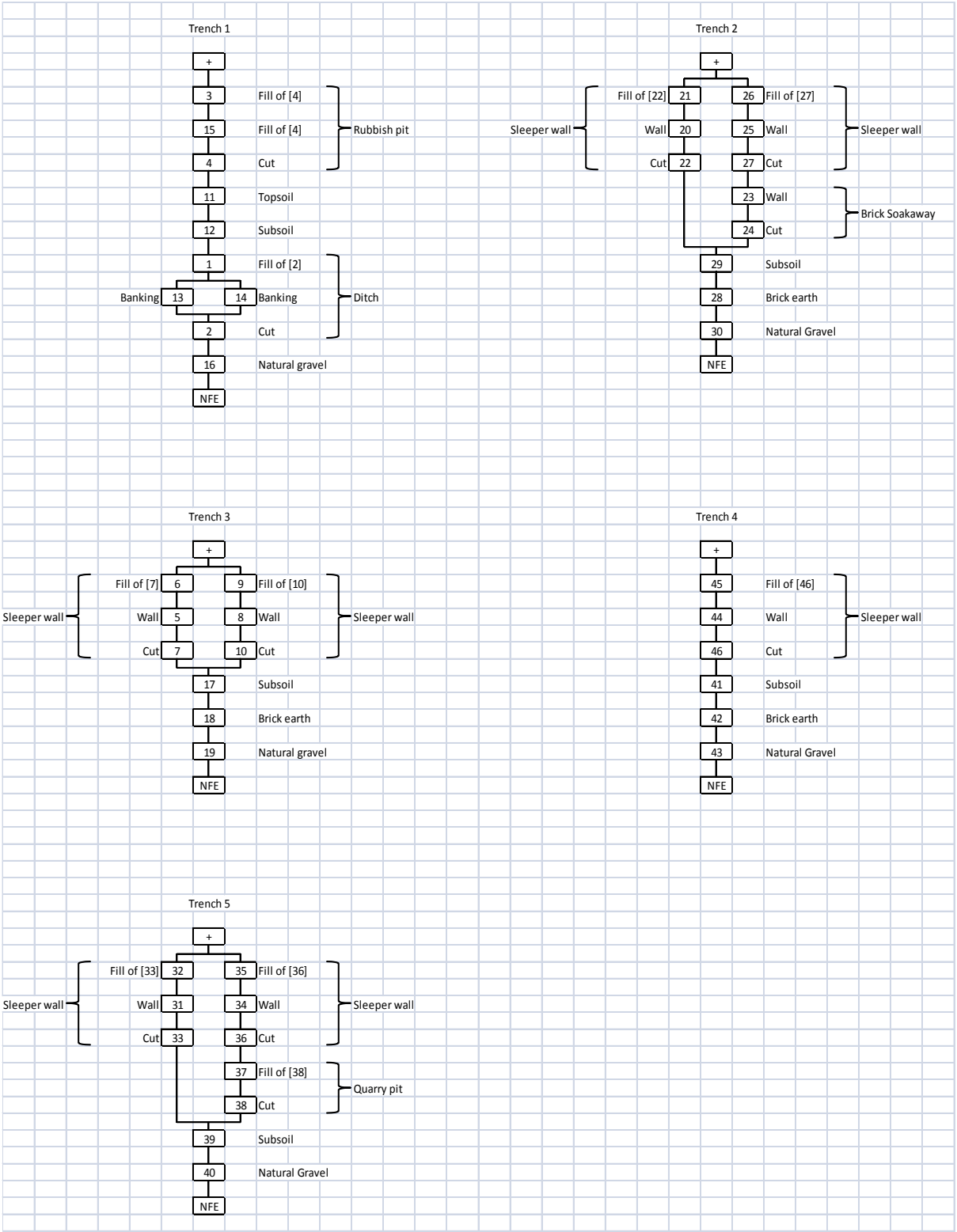
PLATES

Plate 1: Undated ditch in the west end of Trench 1, facing south

Plate 2: Quarry pit in the east end of Trench 1, facing east

Plate 3: North-south aligned brick sleeper wall in Trench 3, facing west

APPENDIX 1: SITE MATRIX



APPENDIX 2: CONTEXT INDEX

Site Code	Context	Trench	Type	Description
GEN13	1	TR 1	Deposit	Fill of [2]
GEN13	2	TR 1	Cut	North-south aligned ditch
GEN13	3	TR 1	Deposit	Upper fill of [4]
GEN13	4	TR 1	Cut	Rubbish pit
GEN13	5	TR 3	Masonry	North-south aligned sleeper wall
GEN13	6	TR 3	Deposit	Fill of [7]
GEN13	7	TR 3	Cut	Construction cut for (5)
GEN13	8	TR 3	Masonry	North-south aligned sleeper wall
GEN13	9	TR 3	Deposit	Fill of [10]
GEN13	10	TR 3	Cut	Construction cut for (8)
GEN13	11	TR 1	Layer	Topsoil
GEN13	12	TR 1	Layer	Subsoil
GEN13	13	TR 1	Layer	Gravel banking
GEN13	14	TR 1	Layer	Gravel banking
GEN13	15	TR 1	Deposit	Lower fill of [4]
GEN13	16	TR 1	Layer	Natural gravel
GEN13	17	TR 3	Layer	Subsoil
GEN13	18	TR 3	Layer	Brick earth
GEN13	19	TR 3	Layer	Natural gravel
GEN13	20	TR 2	Masonry	North-south aligned sleeper wall
GEN13	21	TR 2	Deposit	Fill of [22]
GEN13	22	TR 2	Cut	Construction cut for (20)
GEN13	23	TR 2	Masonry	Brick chamber
GEN13	24	TR 2	Cut	Construction cut for (23)
GEN13	25	TR 2	Masonry	North-south aligned sleeper wall
GEN13	26	TR 2	Deposit	Fill of [27]
GEN13	27	TR 2	Cut	Construction cut for (25)
GEN13	28	TR 2	Layer	Brick earth
GEN13	29	TR 2	Layer	Subsoil
GEN13	30	TR 2	Layer	Natural gravel
GEN13	31	TR 5	Masonry	North-south aligned sleeper wall
GEN13	32	TR 5	Deposit	Fill of [33]
GEN13	33	TR 5	Cut	Construction cut for (31)
GEN13	34	TR 5	Masonry	North-south aligned sleeper wall
GEN13	35	TR 5	Deposit	Fill of [36]
GEN13	36	TR 5	Cut	Construction cut for (34)
GEN13	37	TR 5	Deposit	Fill of [38]
GEN13	38	TR 5	Cut	Quarry pit
GEN13	39	TR 5	Layer	Subsoil
GEN13	40	TR 5	Layer	Natural gravel
GEN13	41	TR 4	Layer	Subsoil
GEN13	42	TR 4	Layer	Brick earth
GEN13	43	TR 4	Layer	Natural gravel
GEN13	44	TR 4	Masonry	North-south aligned sleeper wall
GEN13	45	TR 4	Deposit	Fill of [46]
GEN13	46	TR 4	Cut	Construction cut for (44)

APPENDIX 3: OASIS FORM

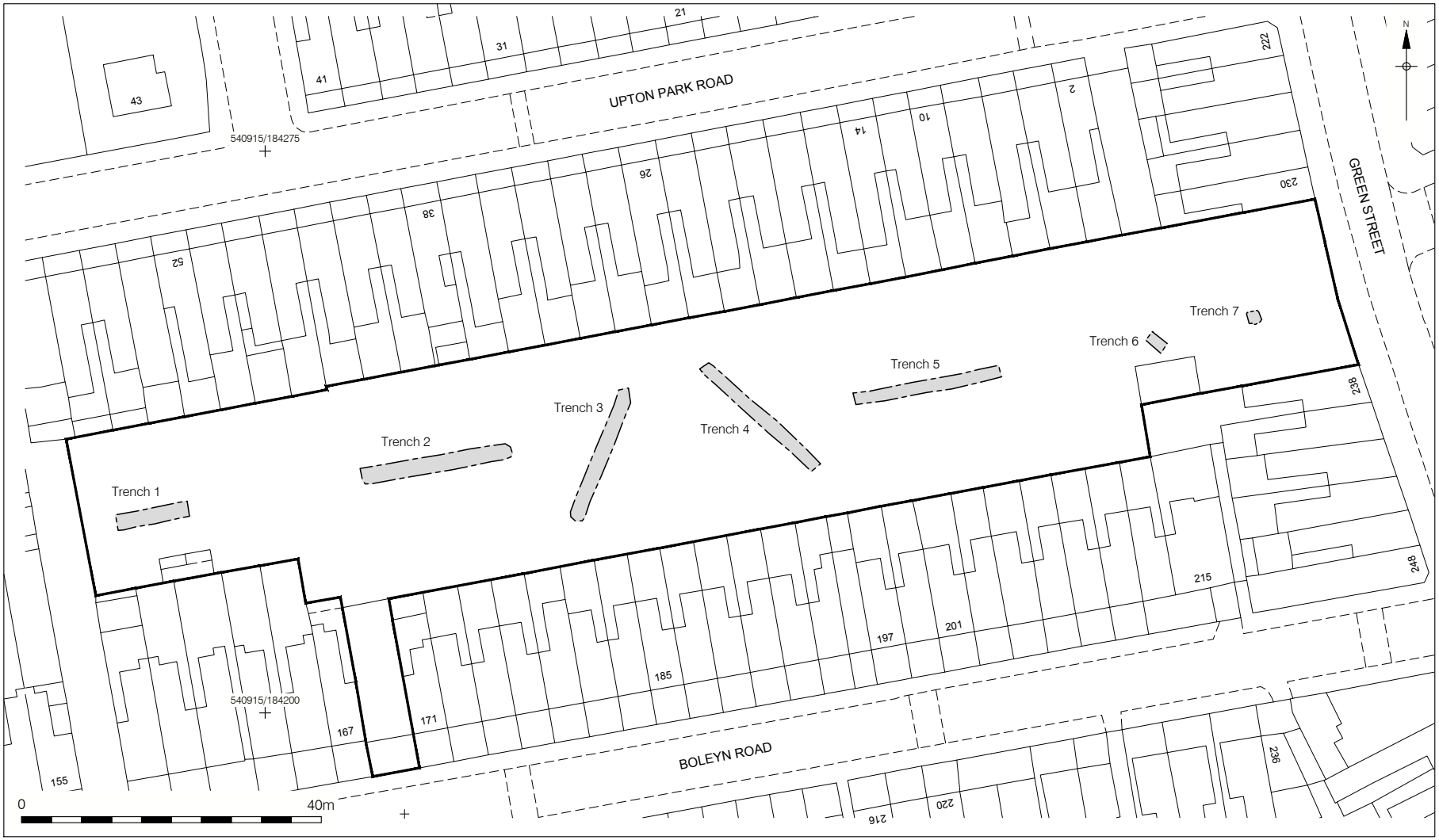
OASIS ID: preconst1-145571

Project details	
Project name	232-236 Green Street, Forest Gate, London
Short description of the project	An archaeological evaluation consisting of seven trenches was carried out in late February and early March by Pre-Construct Archaeology Ltd at the former bus depot on Green Street in Forest Gate. With the exception of two quarry pits and a north-south aligned field boundary ditch all archaeological remains recorded were related to the bus depot which had been operating on site since 1906. The majority of the remains comprised brick sleeper walls and a single bus inspection pit related to the later phase of the depot's history following its rebuilding in 1936.
Project dates	Start: 25-02-2013 End: 01-04-2013
Previous/future work	Yes / Not known
Any associated project reference codes	GEN 13 - Sitecode
Any associated project reference codes	12/01385/FUL - Planning Application No.
Type of project	Field evaluation
Site status	None
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	WALLS Modern
Monument type	QUARRY PIT Post Medieval
Monument type	DITCH Uncertain
Significant Finds	POTTERY Post Medieval
Significant Finds	CBM Post Medieval
Methods & techniques	"Targeted Trenches"
Development type	Urban commercial (e.g. offices, shops, banks, etc.)
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)
Project location	
Country	England
Site location	GREATER LONDON NEWHAM EAST HAM 232-236 Green Street, Forest Gate, London
Postcode	E7 8LE
Study area	4743.00 Square metres
Site coordinates	TQ 4100 8424 51 0 51 32 20 N 000 02 00 E Point
Lat/Long Datum	Unknown

Height OD / Depth	Min: 9.00m Max: 9.00m
Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	English Heritage
Project design originator	Chris Mayo
Project director/manager	Chris Mayo
Project supervisor	Paw Jorgensen
Type of sponsor/funding body	Developer
Name of sponsor/funding body	ACR Investments Ltd
Project archives	
Physical Archive recipient	LAARC
Physical Contents	"Ceramics","Glass","other"
Digital Archive recipient	LAARC
Digital Contents	"Stratigraphic"
Digital Media available	"Images raster / digital photography","Images vector","Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet","Drawing","Matrices","Photograph","Plan","Report","Section","Survey "
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	232-236 Green Street, London E7 8LE: An Archaeological Evaluation
Author(s)/Editor(s)	Jorgensen, P.
Other bibliographic details	R11399
Date	2013
Issuer or publisher	Pre-Construct Archaeology Ltd
Place of issue or publication	London
Description	Unpublished cleint field report, A4 spiral bound w blue covers
Entered by	Chris Mayo (cmayo@pre-construct.com)
Entered on	18 March 2013

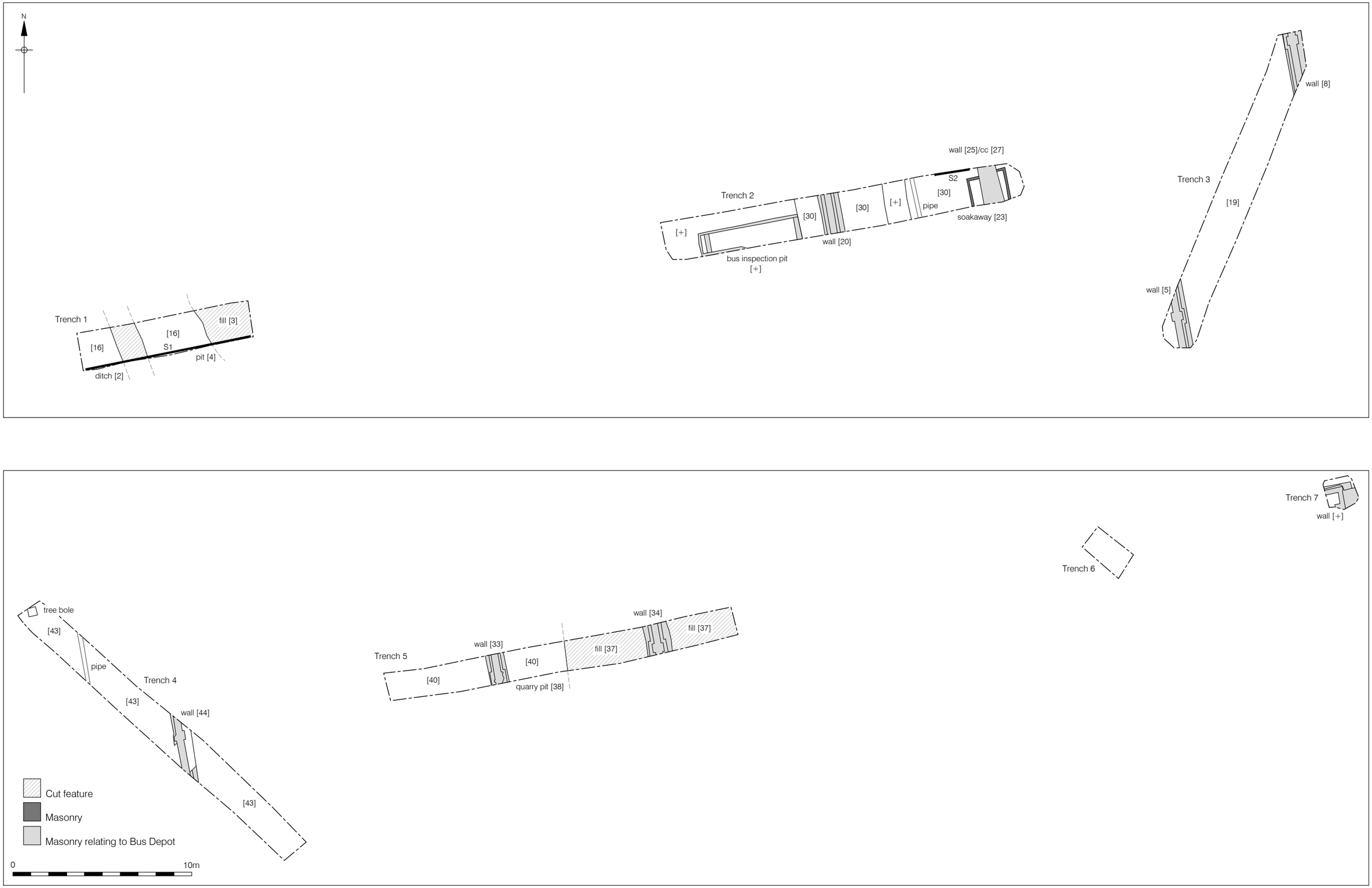
18/03/13 HB

Figure 1
Site Location
1:20,000 at A4



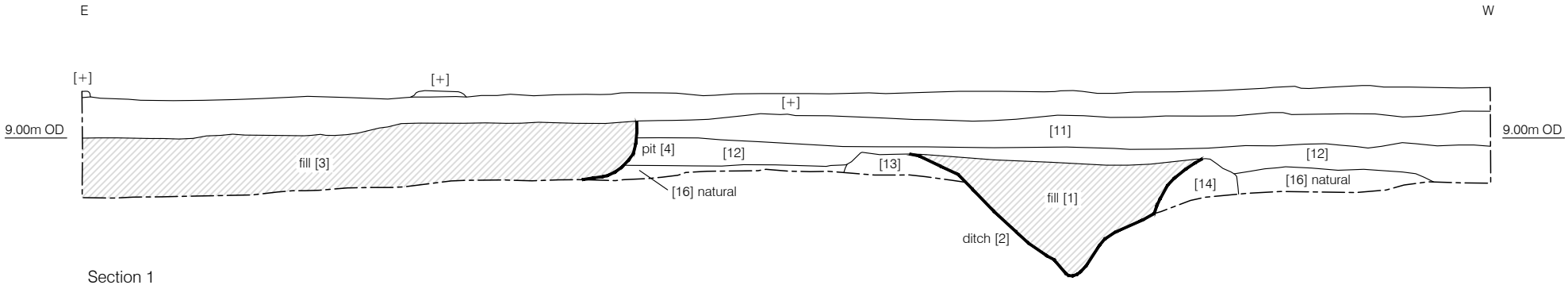
JB 14/02/13 (Updated 18/03/13 HB)

Figure 2
Trench Location
1:800 at A4

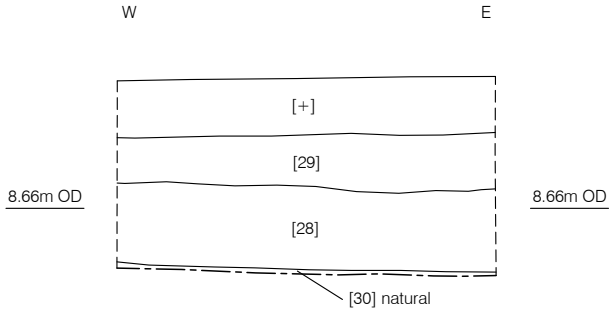


18/03/13 HB

Figure 3
Plan of Trenches 1-7
1:200 at A3



Section 1
North facing
Trench 1



Section 2
South facing
Trench 2

Cut feature

0 2m

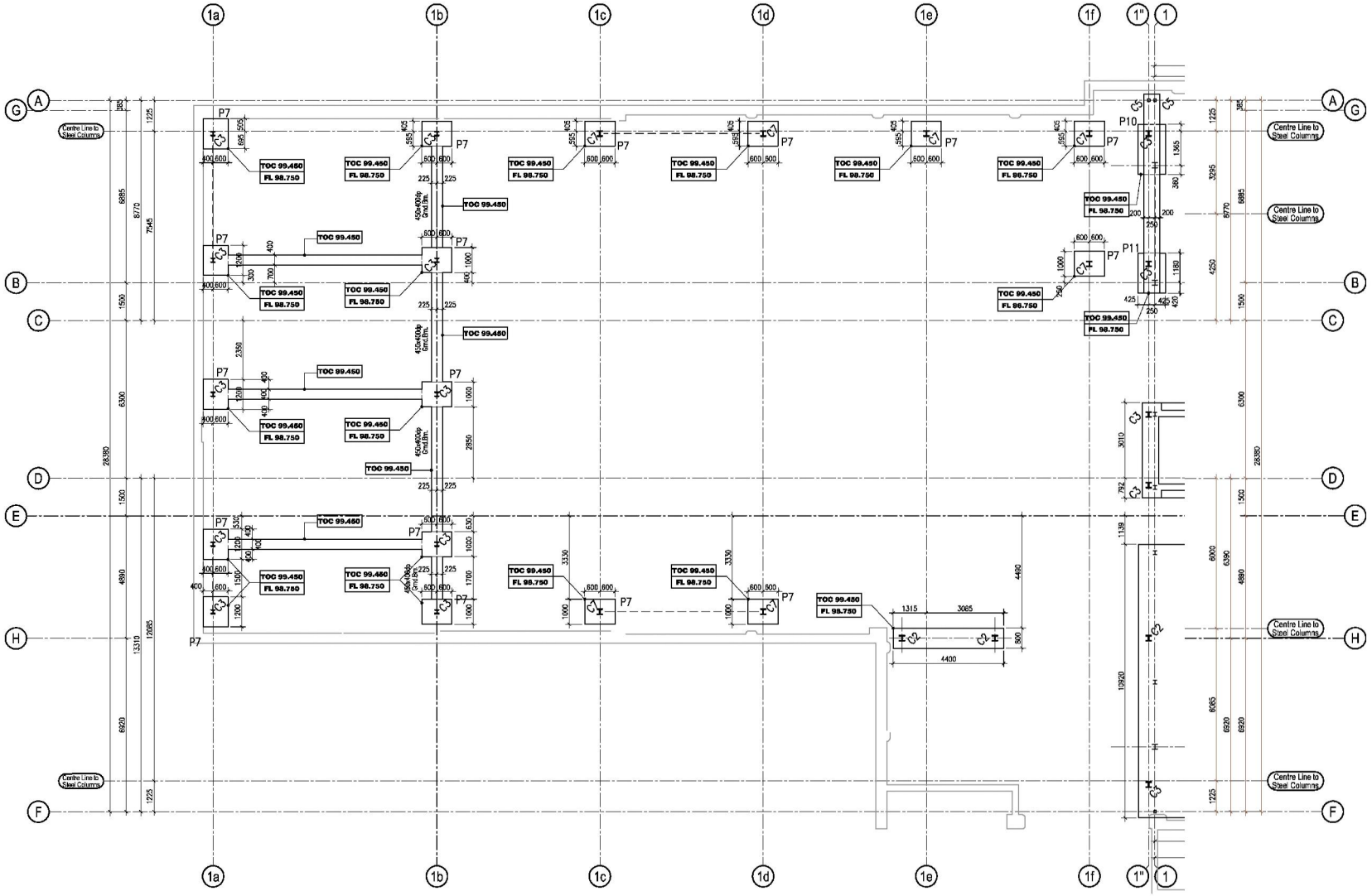
18/03/13 HB

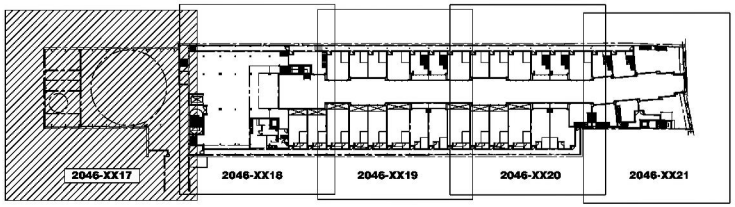
Figure 4
Sections 1 & 2
1:40 at A4

Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

Figure 5
Proposed Development
Ground Floor Plan
1:800 at A4





KEY PLAN

PAD FOUNDATION SCHEDULE

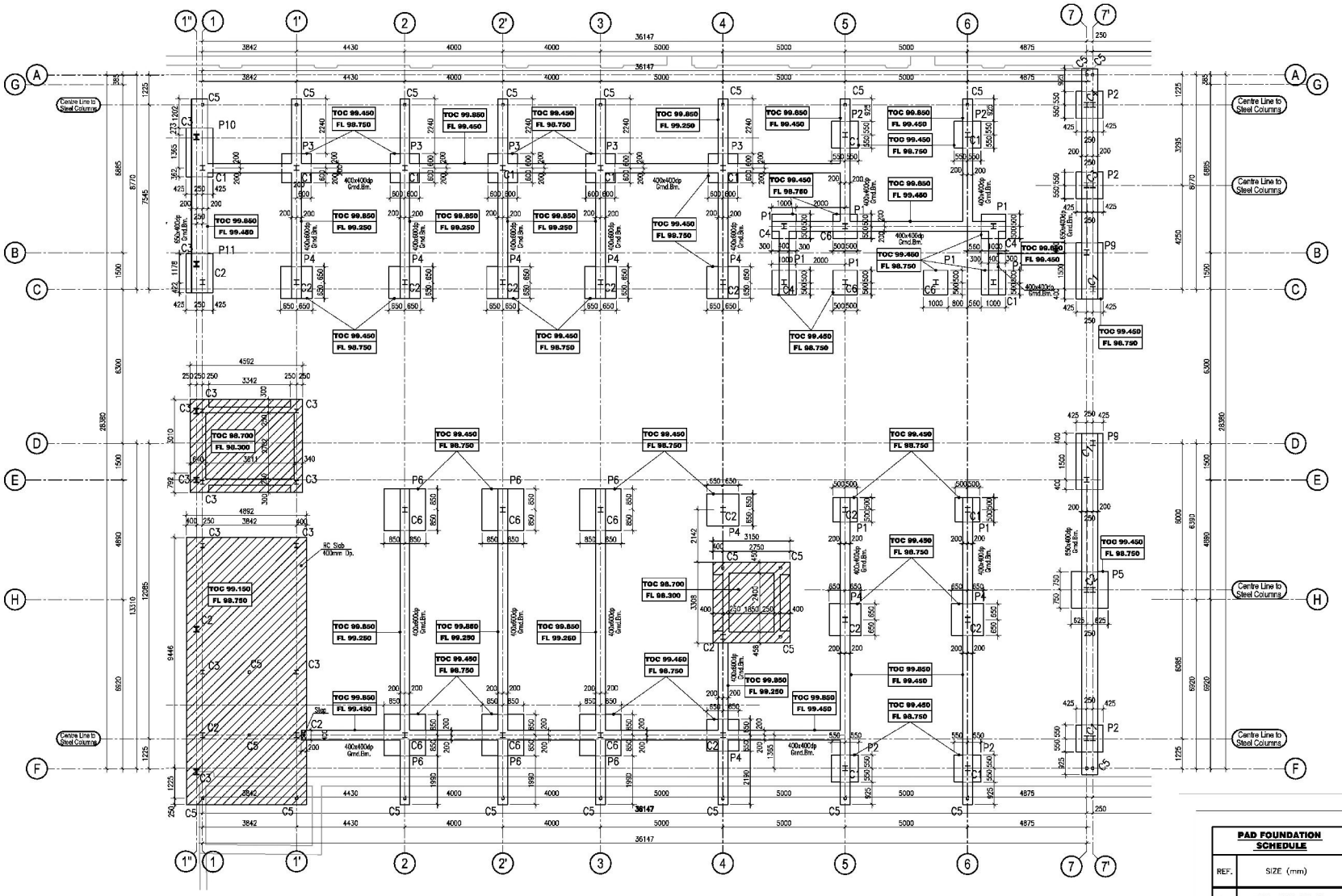
REF.	SIZE (mm)
P7	1000x1200x700 Dp
P10	1100x2000x700 Dp
P11	1100x1600x700 Dp

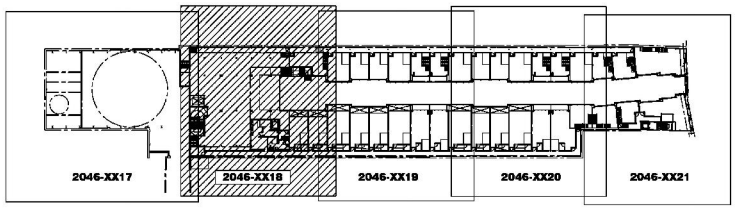
0 10m

Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

Figure 6
Proposed Development
GA Foundations; Sheet 1 of 5
Dwg no. 2046-XX17
1:250 at A4





KEY PLAN

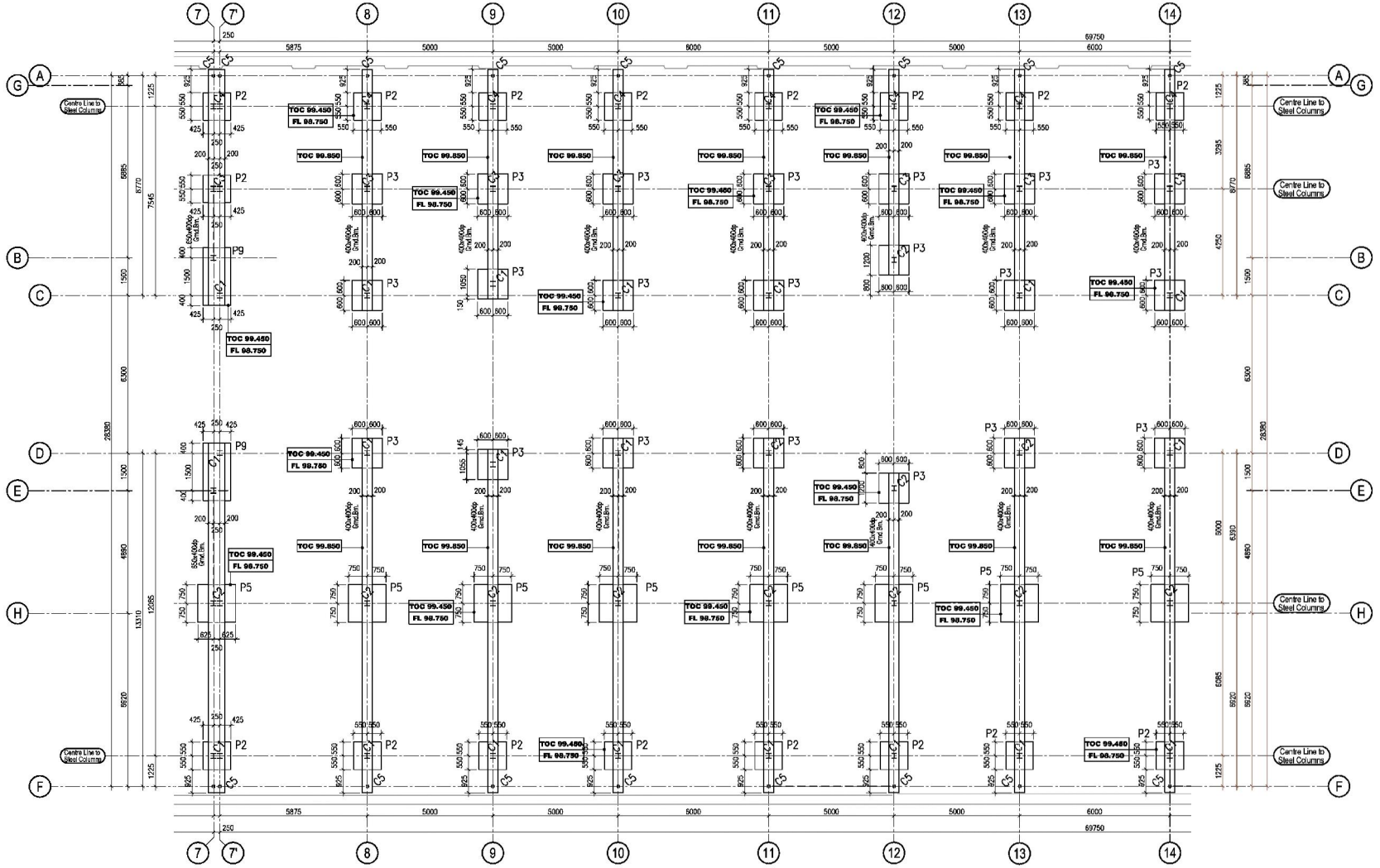
PAD FOUNDATION SCHEDULE	
REF.	SIZE (mm)
P1	1000x1000x700 Dp
P2	1100x1100x700 Dp
P3	1200x1200x700 Dp
P4	1300x1300x700 Dp
P5	1500x1500x700 Dp
P6	1700x1700x700 Dp
P9	1100x2300x700 Dp
P10	1100x2000x700 Dp
P11	1100x1600x700 Dp

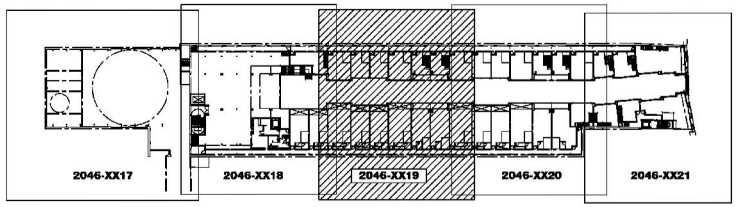
0 10m

Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

Figure 7
Proposed Development
GA Foundations; Sheet 2 of 5
Dwg no. 2046-XX18
1:250 at A4





KEY PLAN

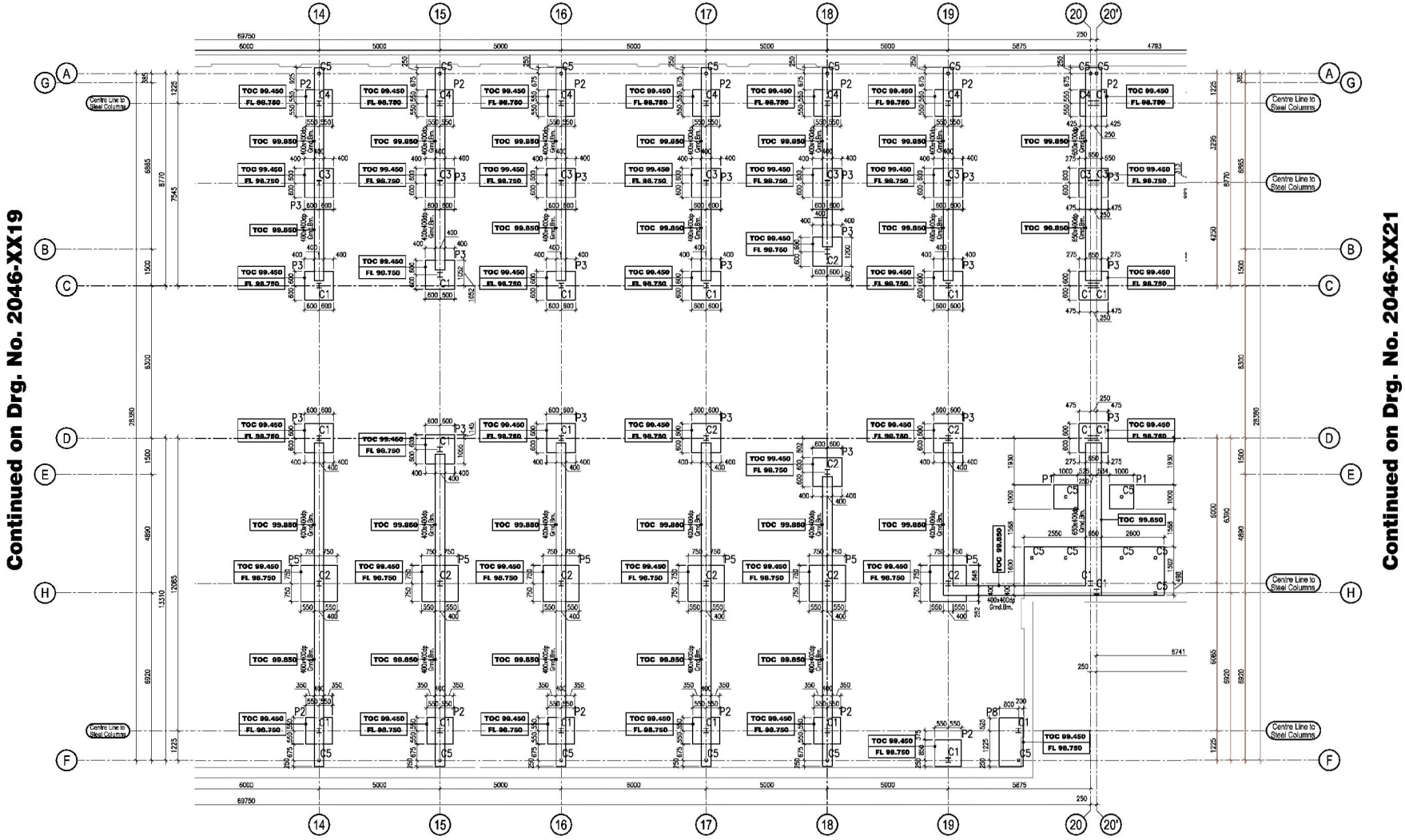
0 10m

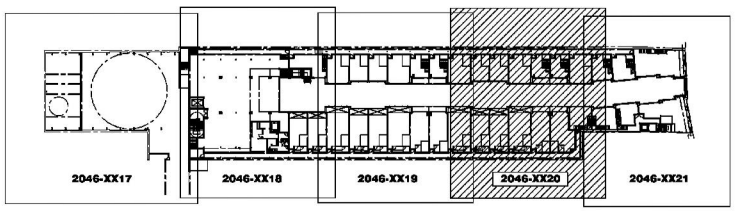
Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

PAD FOUNDATION SCHEDULE	
REF.	SIZE (mm)
P2	1100x1100x700 Dp
P3	1200x1200x700 Dp
P5	1500x1500x700 Dp
P9	1100x2300x700 Dp

Figure 8
Proposed Development
GA Foundations; Sheet 3 of 5
Dwg no. 2046-XX19
1:250 at A4





KEY PLAN

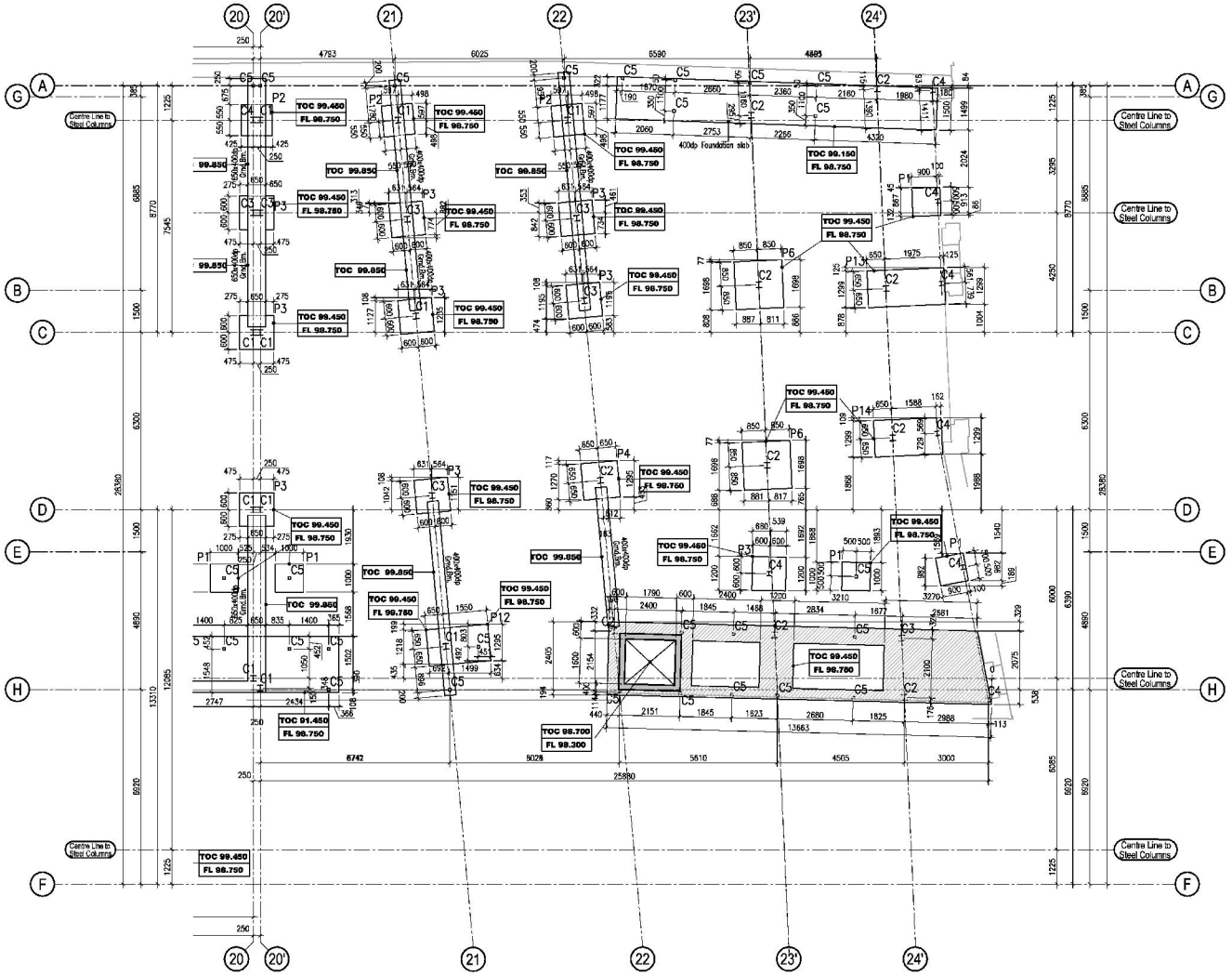
PAD FOUNDATION SCHEDULE	
REF.	SIZE (mm)
P1	1000x1000x700 Dp
P2	1100x1100x700 Dp
P3	1200x1200x700 Dp
P5	1500x1500x700 Dp
P8	1000x2000x700 Dp

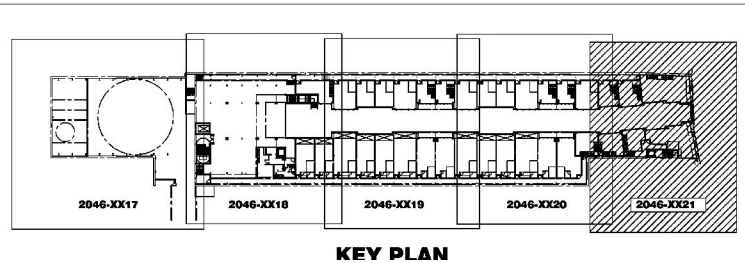
0 10m

Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

Figure 9
Proposed Development
GA Foundations; Sheet 4 of 5
Dwg no. 2046-XX20
1:250 at A4





KEY PLAN

PAD FOUNDATION SCHEDULE

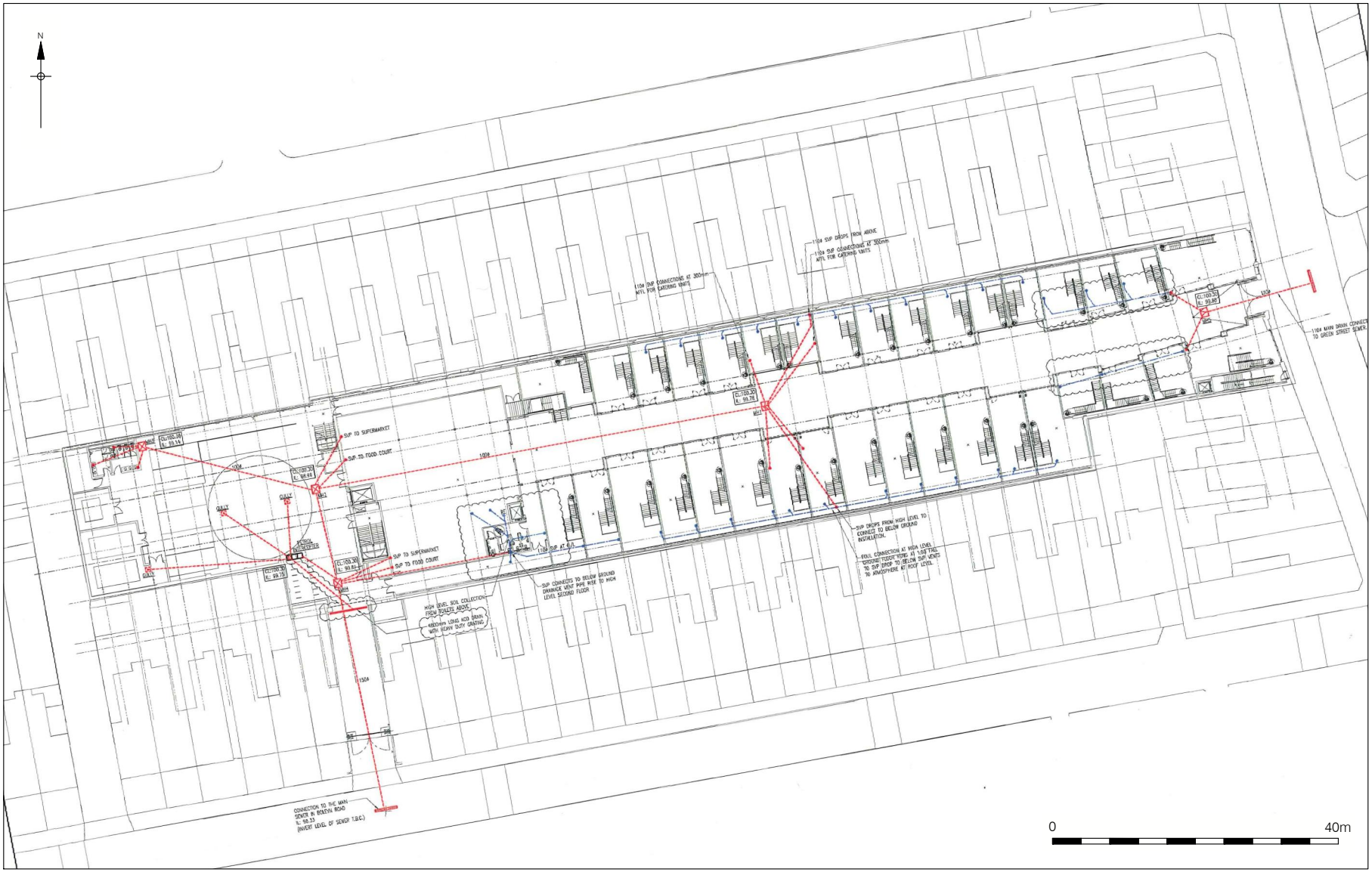
REF.	SIZE (mm)
P1	1000x1000x700 Dp
P2	1100x1100x700 Dp
P3	1200x1200x700 Dp
P4	1300x1300x700 Dp
P5	1500x1500x700 Dp
P6	1700x1700x700 Dp
P12	1300x2200x700 Dp
P13	1300x2400x700 Dp
P14	1300x2750x700 Dp

0 10m

Drawing supplied by Dowling Blunt, January 2013

19/03/13 HB

Figure 10
Proposed Development
GA Foundations; Sheet 5 of 5
Dwg no. 2046-XX21
1:250 at A4



Drawing supplied by Dowling Blunt, January 2013

18/03/13 HB

Figure 11
Proposed Development
Ground Floor Mechanical Services Foul Drainage Layout
1:800 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
7 GRANTA TERRACE
STAPLEFORD
CAMBRIDGESHIRE CB22 5DL
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