LAND AT LOCKESLEY DRIVE, ORPINGTON, KENT BR5 2AY

AN ARCHAEOLOGICAL EVALUATION

LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF BROMLEY

PLANNING REFERENCE:
15/04610/FULL1

PCA REPORT NO: R13352

SITE CODE: LOK18

AUGUST 2018

PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

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LAND AT LOCKESLEY DRIVE, ORPINGTON, KENT BR5 2AYAN

ARCHAEOLOGICAL EVALUATION

Site Code:	**LOK18**
Central NGR:	**TQ 46478 67285**
Local Planning Authority:	**London Borough of Bromley**
Planning Reference:	**15/04610/FULL1**
Commissioning Client:	**CgMs Consulting**
On behalf of:	**Fernham Homes**
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PCA REPORT NO. R13352

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1 ABSTRACT

1.1 This report presents the results of an archaeological evaluation conducted by Pre-Construct Archaeology Limited on land at Lockesley Drive, Orpington, Kent BR5 2AY prior to its redevelopment for the construction of 35 dwellings. The site is centred at National Grid Reference TQ 46478 67285 in the London Borough of Bromley.

1.2 Following a Written Scheme of Investigation prepared by Pre-Construct Archaeology Limited (Pozorski 2017), an archaeological evaluation was undertaken over five days between 11th and 17th July 2018 in advance of development. The investigation comprised of seven archaeological evaluation trenches that had been designed to give even coverage across the site. All trenches were to some degree located slightly differently on the ground in relation to the proposed arrangement due to the presence of borehole stand pipes and encroaching tree canopies along the south of the site. However, none of the trenches were moved more than a metre or so from their planned locations.

1.3 The study area was located within a land parcel west of the Thames Water Pumping Station that had been built over a spring that had emerged along the spring-line of the River Cray valley. The main area within the access point off Lockesley Drive had been artificially levelled to form a plateau, whilst the ground fell away to the eastern and southern edges. The natural slope echoed the true underlying topography of the valley wall in juxtaposition to the artificial terrace created in the 20th century.

1.4 Trenches 2, 4, 5 and 7 were devoid of archaeology save for disturbances caused by bioturbation and modern interventions. These were duly investigated and dismissed accordingly. However, all trenches displayed a similar clay-with-flints drift geology with pockets of gravels with flints and, on the lower slopes, patches of sand and brickearth were also evident save for in Trench 7 which could not be bottomed. The drift geology was recorded at 59.04m OD at its highest point (in the north of the study area) and at 53.08m OD at the base of the slope in the south-east corner (in a sondage in Trench 6).

1.5 In Trench 3 a 4m-wide trench (or rectangular pit) was uncovered; it appeared that the sides may have been machine excavated although its purpose remained unclear. A sherd of whiteware pottery dating to the 19th century was recovered from its base. At the south end of Trench 1 and along the entire length of Trench 6 a loose colluvium of clayey sand with frequent rounded pebble inclusions was uncovered c.1.3m below ground level (BGL). Hand excavation recovered an abraded fragment of Roman tile, a small Roman pottery sherd and a burnt flint.

1.6 A sondage sunk to 1.8m below ground level (BGL) at the east end of Trench 6 revealed that it overlay a lower alluvium which in turn sealed an old ground surface of pinkish-brown brickearth; the surface of which displayed burning and spreads of charcoal. Some 40mm below this the natural geology of clay-with-flints was uncovered.

1.7 The site was given the unique site code LOK18.

2 INTRODUCTION

2.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Limited on land at Lockesley Drive, Orpington, Kent BR5 2AY in the London Borough of Bromley. The work was undertaken over 5 days between the 11th and 17th July 2018. The site was centred at National Grid Reference TQ 46478 67285 (Figure 1).

2.2 The site lies within the Upper Cray Archaeological Priority Area as defined in the London Borough of Bromley's Local Plan which indicates the potential for archaeological remains of all periods. The most notable monuments in the area are the Scheduled Monuments of a nearby Roman bathhouse and a Saxon cemetery (1001973) located 375m to the southeast (Pozorski 2017:3).

2.3 In advance of in the investigation PCA prepared a Written Scheme of Investigation (Pozorski 2017) which provided the design for the evaluation work and was approved in advance by Mark Stevenson of Historic England's Greater London Archaeological Advisory Service (GLAAS).

2.4 The evaluation was designed to consist of seven linear trenches, each measuring 30m x 2m and designed to assess the presence of archaeological remains within the stratigraphic sequence down to the natural geological deposits (Figure 2).

2.5 A number of changes had to be made on the ground due to constraints such as tree canopy and root systems to the south, as well as the presence of vertical borehole standpipes dotted across the land parcel. However, none was moved more than a metre beyond their planned location. Trench 7 had to be abandoned as made ground of loose building rubble was found to be present at depths beyond 1.3m which led to constant collapse of the trench sides.

2.6 The archaeological evaluation was conducted by PCA under the supervision of Wayne Perkins and the project management of Chris Mayo. The archaeological work was commissioned by CgMs Consulting on behalf of Fernham Homes and monitored by Mark Stevenson of GLAAS on behalf of the London Borough of Bromley.

2.7 The site was recorded continuing use of site code LOK18, issued by the Museum of London. The complete archive comprising written, drawn and photographic records will, upon completion of the project, be deposited with the London Archaeological Archive and Research Centre (LAARC) under that code.

3 PLANNING BACKGROUND & NATIONAL GUIDANCE:

3.1 National planning policy framework

3.1.1 The National Planning Policy Framework (NPPF) was adopted on March 27th 2012 and 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, published July 22nd 2011 and amended in 2015. Policy 7.8 headed "Heritage Assets and Archaeology" details guidance relating to strategy and planning decisions that affect the historic environment and the outlines the formulation of Local Development Framework for each London Borough.

3.3 Local Policy: Archaeology in Bromley

3.3.1 The local planning authority responsible for the study site is the London Borough of Bromley whose policy stipulates as follows:

POLICY BE16

Planning permission will not be granted for development that would adversely affect scheduled ancient monuments or other nationally important archaeological sites, involve significant alterations to them or harm their settings.

When considering planning applications for development involving excavation or other ground works the Council will require that:

(i) within Areas of Archaeological Significance, as defined on the Proposals Map and listed in Appendix IV, a written statement of the likely is submitted in the form of an archaeological assessment (which can be desk based); where necessary information cannot be obtained by other means, an archaeological field evaluation should be carried out prior to determination;

(ii) at sites of potential archaeological importance (as defined below), where permanent preservation in situ is not justified, provision shall be made for an appropriate level of investigation and recording to be is undertaken by a recognised archaeological organisation before any development commences.

Where investigations indicate that in situ preservation is inappropriate, excavation and recovery should be carried out by a reputable archaeological body, before development commences. Any such investigations shall be in accordance with a detailed scheme to be approved in advance by the Council and the results shall be subsequently published.

Where *in situ* preservation is appropriate, suitable designs, land uses and management strategies will be required and the Council's archaeology strategy promoted.

Ancient monuments and archaeological remains constitute the principal surviving evidence of the Borough's past. However they are vulnerable to modern development and changes in land use and are easily lost or damaged. The Council considers that preservation of archaeological sites and ancient monuments is a legitimate objective against which the demands of development must be balanced and fully assessed. The destruction of such remains should be avoided and should never take place without prior archaeological excavation and record.

In addition to Areas of Archaeological Significance, there are locations outside these defined boundaries where archaeological remains have been found and where there may be potential for further finds. Where development is proposed within an Area of Archaeological Significance (as shown on the Proposals Map), or near a site of archaeological potential, the Council will require a preliminary archaeological site evaluation before proposals are considered. The council will seek the appropriate professional advice and will require applicants proposing development to do the same. Where the Council considers it appropriate, detailed investigation shall be carried out to an agreed written specification of work by a professionally qualified archaeological organisation or archaeological consultant.

The Council will encourage early co-operation between landowners, developers and archaeologists in accordance with the Developers Liaison Group Code of Practice, and by attaching appropriate conditions to planning consents, and/or negotiate appropriate planning obligations (section 106 agreements).

It is important to increase public awareness of the historical and archaeological heritage of the Borough and to encourage its effective management as an educational and recreational resource. The Council will promote the conservation, protection and enhancement of ancient monuments and archaeological sites and their interpretation and presentation to the public.

The following sites in the Borough have been scheduled as Ancient Monuments:

(i) Fordcroft, Poverest Road, Orpington – Romano-British Site/Anglo Saxon Cemetery

(ii) Caesar's Camp, Holwood Park, Keston - Iron Age hill fort

(iii) Camp on Keston Common, Keston – earthworks

(iv) The Temple, west of Keston Court, Westerham Road, Keston – Romano British mausoleum

(v) Romano-British villa, Crofton Road, Orpington

(vi) St. Botolph's Church, Ruxley - former mediaeval church on site of earlier church

(vii) Romano-British site, Wickham Court Farm, West Wickham – site of substantial Romano British settlement

(viii) Ice Well at High Elms.

Sites (i), (iii), (iv), (v), (vii) and (viii) are owned by the Council.

The Council has published its Archaeological Strategy and will seek to use the planning process to implement its objectives. The Strategy provides a framework for dealing with archaeological issues and draws upon Planning Policy Guidance Note 16: Archaeology and Planning published by the Department of the Environment in 1990. Supplementary planning guidance will be prepared on archaeological issues and the preparation of statements.

3.4 Site Specific Planning Background

3.4.1 Planning consent has been approved for redevelopment on the site under application number 15/04610/FULL1. The consent comprises the re-development of excess land within the curtilage of Thames Water Pumping Station to provide a new residential development of 35 dwellings.

3.4.2 A planning condition (number 17) referring to archaeology has been attached to the planning consent. The condition is given below, along with its informatives:

17) No development shall take place until the applicant, or their agents or 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 in writing by the local planning authority.

3.4.3 The Archaeology Advisor to the London Borough of Bromley, Mark Stevenson of the Greater London Archaeological Advisory Service (GLAAS) at English Heritage, when consulted about the planning application, stated that:

The results of the fieldwork to be submitted as a report that will enable judgement to be made as to whether there is a continued archaeological interest and if so how it may be mitigated.

3.4.4 The fieldwork herein reported followed the methodology contained within an approved Written Scheme of Investigation (Pozorski 2018).

3.4.5 The site is located within an Area of Archaeological Significance as defined within the London Borough of Bromley's Unitary Development Plan. The site does not lie within the vicinity of a Scheduled Ancient Monument, Historic Battlefield or Historic Wreck site.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

4.1.1 The site is sub-rectangular in plan and comprises approximately 7,840m sq. of grassland attached to the pumping station located to the east and it is surrounded by residential properties on the other three sides. It is centred on TQ 46478 67285. It is demarcated by Lockesley Drive to the west, the rear of the houses facing onto Oakdene Road to the north, the pumping station and East Drive to the east and allotments adjacent to Poverest Park are located to the immediate southwest (Figure 1).

4.1.2 The British Geological Survey website records the solid geology of the area to be varied. Beneath the study site it is shown as chalk, the Seaford Chalk Formation and Newhaven Chalk Formation. The chalk is shown to be overlain beneath the site by superficial drift deposits of the Crayford Silt Member - clay and silt. Due west of the site the geology changes and is shown as Thanet Sand with no superficial deposits; due east the Seaford Chalk is shown to be overlain by alluvium formed of clay, silt, sand and gravel. Immediately to the northeast of the site the Seaford Chalk is overlain by the Taplow Gravel Formation formed of sand and gravel.[1]

4.1.3 In 2011 RSK carried out a Geo Environmental Assessment for the possibility of contaminants on the adjoining site of the pumping station on East Drive along with a general survey of the make-up of the ground and its geological substrata. Their boreholes retrieved a great deal of information about the sequence and deposition of the archaeological and geological layers. In particular the boreholes picked up 'made ground' of mixed, re-deposited natural and building materials as being between 0.20m 0.80m thick below the turf layer. Furthermore, borehole evidence generally upheld the view that the western portion of the site (and a good deal of the eastern area) were underlain by Crayford Silt. This in turn overlay the Thanet Sand formed over the deeper Seaford and Newhaven Chalk Formation complex. The report thus tied the relatively small environs of the development area into the larger, regional geological framework as outlined by the BGS (James 2011).

4.2 Topography

4.2.1 The site is located on a gently sloping land on the west side of valley of the River Cray, which is c.346m to the east. The present modern land surface falls from c.59.37m in the west end of the site to c.54.75m in the east end but this represents the former terracing and ground -raising operations undertaken in the 20th century around the pumping station.

4.2.2 The natural clay-with-flints drift geology was recorded at its highest point at 59.04m OD in Trench 2 at the north of the site falling to 53.08m OD in the south-east corner in Trench 6. This represents a dramatic fall from an artificially created plateau that dominates the main area of the site to a natural downward slope into the Cray Valley at the south and east.

[1] British Geological Survey: http://mapapps.bgs.ac.uk/geologyofbritain/home.html

4.2.3 The exposed topography accords well with an evaluation undertaken by PCA on the afore-mentioned adjoining land to the east at East Drive which revealed natural gravel-with-flint nodules across the site at a height of between 53.93m OD and 51.63m OD (Perkins 2015:10).

4.3 Site Formation Processes

4.3.1 The site had been landscaped in the 20th century following the construction of the Thames Water Pumping Station. This operation appears to have included the terracing or truncation of the existing stratigraphic layers down to the underlying drift geology to create a level area or plateau. However, surviving layers of colluvium exist along the southern and eastern border as exposed in Trenches 1 (south end only) and 7. These in turn seal a possible relict ground surface of brickearth and finally, the clay-with-flints geology itself, 6.29m below the artificially-raised modern ground level.

Plate 1: View across the Cray Valley towards the south-east. The east bank of the valley (marked with white arrow) can be seen on the far horizon, the pumping station is visible to the left in the photo. Several vertical borehole stand pipes are visible within the field.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 The following background draws from a desk-based assessment (Chipping 2016) which was prepared for the site by CgMs Consulting and summarised in the WSI (Pozorski 2018) which is reproduced here;

5.2 No Palaeolithic finds are known from the area. Mesolithic flint tools as well as flint working site were found within 500m radius. Later archaeological evidence included Neolithic/Bronze Age pit, Bronze Age tools and Bronze Age barrow/mound, the latter present to the southwest of the site. None of the remains were found within the site or in the direct vicinity.

5.3 Roman remains are present in the area although not closer than approximately 300m away from the site. Late Iron Age and Roman pottery sherds and other Roman finds were found in various locations. The most significant find was a masonry building of a bathhouse (Scheduled Monument 1001973) located to the southeast. Other Roman sites included cremation burial ground close to the Bronze Age barrow to the southwest.

5.4 There is evidence of Saxon activity in the area. An early Saxon cemetery is located close to the Roman bathhouse and consists part of the same Scheduled Monument. The burials consisted of inhumations and cremations. The same location also contained medieval remains and to the north medieval agricultural soils were recorded.

5.5 The post medieval to modern cartographic sources show the site as agricultural land until 1940 when a pumping station can be found in the eastern end of the site. The modern residential development around the area also started in the 1930s.

6 ARCHAEOLOGICAL METHODOLOGY

6.1 The methodology for the proposed excavation of seven trenches which was outlined in the Written Scheme of Investigation produced for the site (Pozorski 2018).

6.2 The evaluation was designed to consist of seven linear trenches, measuring 30m x 2m each, designed to assess the presence of archaeological remains within the surviving stratigraphic sequence down to the natural geological deposits (Figure 2).

6.3 All trenches were laid out as specified in the WSI with a little modification to take into account tree canopies and rooting as well extant borehole stand pipe tubes dotted across the site. Only Trench 7 was not excavated to its total length due to the depth of the made ground (in excess of 1.3m) that was prone to collapse. The trench was abandoned after 7.5m of its 30m length, which had begun at its north end.

6.4 All trenches were excavated by a JCB under archaeological supervision until either significant archaeological horizons or natural deposits were encountered, at which point deposits were cleaned and excavated by hand. The table below summarises the dimensions of each of the trenches:

Trench	Orientation	Length (m)	Width (m)	Max. Depth (BGL) (m)
1	NE-SW	30.00	1.80	0.89
2	NW-SE	30.00	1.80	0.74
3	NE-SW	30.00	1.80	0.78
4	NW-SE	30.00	1.80	0.82
5	NW-SE	30.00	1.80	0.81
6	NW-SE	30.00	1.80	1.82
7	NE-SW	7.5	1.80	1.32

6.5 Once excavation had been completed and the trenches cleaned, all deposits were then recorded on proforma context sheets. Trench plans were drawn at scales of 1:50 and 1:20 and sections were drawn at a scale of 1:10 or 1:20. A digital photographic record was also kept of all eight trenches.

6.6 A temporary benchmark at a height of 57.30m OD (TBM 1) which was established on site for levelling purposes using the GPS system. This system was used to set out and locate the trenches upon excavation.

6.7 The completed archive produced during the evaluation, comprising written, drawn, photographic records and artefacts will be deposited with LAARC, identified by site code LOK18.

7 THE ARCHAEOLOGICAL SEQUENCE, BY TRENCH

The archaeological sequence at the site has been separated into five phases, as follows:

PHASE & STRUCTURE	DESCRIPTION OF ACTIVITY	PERIOD
1	Natural: drift geology: clay-with-flints	Pleistocene - Holocene
2	Natural: lower colluvium: possible relict land surface	Holocene - Prehistoric
3	Natural: upper colluvium	Post Roman to Post Medieval
4	Trench or ditch	Post medieval
5	Topsoil & turf, made ground	Modern

7.1 Trench 1

Phase 1: Natural

7.1.1 The earliest deposit encountered was a reddish dark brown clay-with-flints with pockets of gravel and silt [46], seen at the base of Section 10 in the north of the trench (not illustrated). It had been cut or truncated during the construction of the Thames Water Pumping Station and then sealed by made ground [45]. Its highest level was 58.83m OD at the north-east, sloping gently down to 57.36 m OD at the south-west end of Trench 1 before it dramatically fell away to the south. In the south end of Trench 1 it was covered by the upper colluvium [42] (Plate 2, Figure 3).

Plate 2: Trench 1, Section 11 showing made ground above colluvium [46]. Scale 1m

Phase 3: Upper Colluvium

7.1.2 The upper colluvium [42] was first observed in the south-west end of Trench 1 in Section 11 which covered the last few metres of the underlying clay-with-flints. They were composed of a friable, clayey sand with frequent rounded pebble inclusions as well as flecks of charcoal and fragmentary ceramic building material (CBM). Although not recovered in large quantities, anthropogenic material was present throughout the deposit. It was recorded at a height of 54.51m OD sloping away to the south. It is believed that this deposit represents the natural, un-truncated ground surface of colluvium working its way downhill to the south and east towards the River Cray through soil creep and erosion. This deposit had the same consistency as layer [10] in Trench 6 (from which a pot sherd, a fragment of CBM and a single burnt flint were recovered) and [35] seen in the east end of Trench 6 (Section 13).

Phase 5: Modern (20th Century)

7.1.3 The natural deposits were covered by a layer of made ground [41,45] and turf and topsoil [40,44]. The latter recorded at 59.14m OD at the north-east end of the trench sloping down to 55.16m OD at the south-west of Trench 1 to where the ground was beginning to slope away sharply.

7.2 Trench 2

Phase 1: Natural

7.2.1 The earliest deposit encountered in Trench 2 was a reddish dark brown clay-with-flints with pockets of gravel and silt [3, 39] seen at the base of Sections 1 & 2. It had been cut or truncated during the construction of the Thames Water Pumping Station then sealed by the made ground (Plate 3, Figure 3). Its highest level was 59.04m OD sloping gently down to 58.31m OD at the south-east in Section 2 (not illustrated). Trench 2 was located on the highest area of ground within the land parcel, at the north of the site.

Plate 3: Trench 2, Section 1, view to the north. Scale 1m.

Phase 5: Modern (20th Century)

7.2.2 In Trench 2 the natural geology was sealed by a layer of made ground [2,5] capped by a layer of topsoil and turf [1,4]. The latter was recorded at 59.20m OD in Section 1 falling away downhill to 58.20m in Section 2 (not illustrated) at the south-east end of the trench.

7.3 Trench 3

Phase 1: Natural

7.3.1 The earliest deposit encountered in Trench 3 was a reddish dark brown clay-with-flints with pockets of gravel and silt [47,48] seen at the base of Sections 4 & 12. It had been cut or truncated during the construction of the Thames Water Pumping Station. Its highest level was 58.45m OD at the north of the trench in Section 4 sloping gently down to 58.03m OD at the south-west in Section 12 (not illustrated).

Phase 4: Post Medieval (19th Century)

7.3.2 A wide trench or rectangular pit [14] was uncovered in the north of the trench in Section 4 (Plate 4, Figure 3) which measured 4.1m wide by 0.38m deep. The top of the cut was at 58.45m OD and the base 58.07m OD It contained a single loose fill of yellowish, mid-brown sandy silt with frequent rounded pebble and sub angular flint nodule inclusions. A slot was hand dug against the section and a sherd of 19th century refined whiteware was recovered from the base of the feature (Jarrett 2018 Appendix 4).

Plate 4: Trench 3, Section 4. Wide trench or rectangular pit [14] in overlapping photographs. View to the north-west. Scale 1m

Phase 5: Modern

7.3.3 Made ground layers were recorded as [32] in Section 12 and as [12] in Section 4. Turf and topsoil landscaping layers were recorded as [11] and [31] respectively. The modern ground level was recorded at 58.85m OD at Section 4 falling to 58.46m OD at Section 12 to the south (not illustrated).

7.4 Trench 4

Phase 1: Natural

7.4.1 The earliest deposit encountered in Trench 4 was a reddish dark brown clay-with-flints with pockets of gravel and silt [17, 20] seen at the base of Sections 5 & 6 which had been cut or truncated during the construction of the Thames Water Pumping Station (Plate 5: Trench 4,

Section 5). Its highest level was 57.40m OD at the west of the trench in Section 5 sloping gently down to 55.90 m OD at the east in Section 6 (not illustrated). This dramatic drop of 1.50m at the east end of the trench denotes where the ground falls away more steeply to the east and towards the Cray Valley.

Plate 5: Trench 4, Section 5, modern capping layers [15,16] seal clay-with-flints natural [17]. View to north-east, scale 1m.

Phase 5: Modern

7.4.2 Made ground layers were recorded as [16] in Section 5 and as [19] in Section 6 (not illustrated). Turf and topsoil landscaping layers were recorded as [15] and [18] respectively. The modern ground level was recorded at 57.94m OD at Section 5 falling to 56.45m OD at Section 6 to the south-east.

7.5 Trench 5

Phase 1: Natural

7.5.1 The earliest deposit encountered in Trench 5 was a reddish dark brown clay-with-flints with pockets of gravel and silt [24, 28] seen at the base of Sections 7 & 8. It had been truncated during the construction of the Thames Water Pumping Station and sealed with made ground. Its highest level was 56.36m OD in the west of the trench in Section 7 (Plate 6, Figure 3) sloping gently down to 54.99m OD at the south-east in Section 8 (not illustrated) making a fall of 1.37m over 30m, and indicating the point at which the ground falls away to both the south and east towards the Cray Valley.

Plate 6: Trench 5, Section 7. Modern capping layers [21-23] seal natural clay-with-flints [24]. View to north, scale 1m.

Phase 5: Modern (20th Century)

7.5.2 Made ground layers were recorded as [22, 23] in Section 7 to the west and as [26, 27] in Section 8 (not illustrated). Turf and topsoil landscaping layers were recorded as [21] and [25] respectively. The modern ground level was recorded at 57.03m OD at Section 7 falling to 55.75m OD at Section 8 to the south-east which illustrates the fall of ground to both south and east.

7.6 Trench 6

Phase 1: Natural

7.6.1 The earliest deposit encountered in Trench 6 was a reddish dark brown clay-with-flints with pockets of gravel and silt [38] seen at the base of Section 13 and sealed by a putative early ground surface [37]. This in turn had been sealed by the upper and lower colluvium [35, 36] (Plate 7, Figure 3). It was not seen in Section 3 at the west end of the trench as it had only been excavated to c.1.2m BGL so therefore it had only exposed the top of the colluvial sequence. The deep sondage at the east end of Trench 6 was designed to resolve the true nature of the colluvium and the anthropogenic material within it. Its highest level was 53.09m OD – a total of 6.29m deeper than the artificial modern ground surface recorded in the north-west of the site – and illustrative of the way in which the natural topography falls dramatically east and southwards towards the River Cray at the east of the site.

Plate 7: Trench 6, Section 13. Colluvial layers [35,36] are below the orange line whilst the brickearth layer [37] is below the green line. In this photo it has been machined away to reveal the underlying drift geology [38] below and is only present in the section. View to north-east, scale 1m.

Phase 2: Lower Colluvium; relict land surface

7.6.2 A layer of pinkish brown brick-earth composed of sandy clay [37] was observed at the base of Section 13 in Trench 6 sealing the drifty geology [38]. It was only 40-60mm thick but had areas of apparent burning and light spreads of charcoal (Plate 8). It was recorded at 53.18m OD.

Plate 8: Trench 6, Section 13. Black arrows show areas of burning and light spreads of charcoal. View to north-east, scale 1m.

Phase 3: Upper Colluvium

7.6.3 The upper colluvium [10] were recognized in the west end of Trench 6 as being similar to the layer in the south end of Trench 1 which had been numbered [42]. Section 3 was excavated to a depth of 1.3m BGL to where the top of the upper colluvium deposit was exposed as a dark brown clayey sand with frequent rounded pebble inclusions [10] (Plate 9). Hand excavation of the deposit produced a single abraded sherd of Roman pottery (Appendix 4) and a fragment of Roman tile in a similar condition (Appendix 3). A large shattered fragment of flint nodule was also found in the same layer. In the same trench, the sondage excavated for Section 13 at the east end once more revealed the upper colluvium [35], identical to [10], which also displayed flecks of charcoal and fragmentary CBM/pottery inclusions. This was 0.27m thick. It sealed a further layer of colluvium [36] which was far sandier in nature and lacked the pebble inclusions, itself being a friable, mid brown clayey sand c.0.27m thick. No finds came from this layer but it, in turn, sealed the putative land surface [37] detailed above.

Plate 9: Trench 6, Section 3 at the east end of the trench. Photo shows the upper limit of the upper colluvium [10] from which a sherd of pottery and a fragment of ceramic tile was recovered along with a fragment of burnt flint. Section 13 was excavated a further 0.50m at the east end using stepped baulks (see Plate 8). View to north-east. Scale 1m.

Phase 5: Modern (20th Century)

7.6.4 Made ground layers were recorded as [7,8 & 9] in Section 3 to the west and as [34] in Section 13 to the east. Turf and topsoil landscaping layers were recorded as [6] and [33] respectively. The modern ground level was recorded at 55.42m OD at Section 3 falling to 54.75m OD at Section 13 to the south-east which illustrates the fall of ground to both south and east.

7.7 Trench 7

Phase 5: Modern

7.7.1 The made ground layers were recorded as [30] in Section 9 which was the only section recorded as the trench was abandoned 7.5m from its northern point due to the depth and instability of the made ground (Plate 10, Section 9). Turf and topsoil landscaping layers were recorded as [29]. The modern ground level was recorded at 55.17m OD at Section 9.

Plate 10, Trench 7, Section 9 showing depth of made ground layers. Although they had been compacted they were prone to collapse once machined; this trench was abandoned after 7.5m due to safety concerns.

8 RESEARCH OBJECTIVES AND CONCLUSIONS

8.1 Research Objectives

8.1.1 The following research objectives were contained within the Written Scheme of Investigation (Pozorski 2018) for the evaluation:

To establish the natural topography and geology of the site, and the height at which it survives.

8.1.2 The evaluation has identified the drift geology of the site which consists of a clay-with-flints deposit which contained pockets of sand and spreads of flint-with-gravel (Phase 1) sealed by a relict land surface of brickearth (Phase 2) which had been buried by two layers of colluvium (Phase 3).

8.1.3 The land at Lockesley Drive is characterized by a plateau or level area; however, beyond this plateau the land falls away to the east adjacent to the pumping station and southwards along the southern limit of the site. It had been presumed that the fall of the land had been artificially created or terraced for the pumping station, having been cut into the valley wall (or slope). These excavations have illustrated that this steep slope is entirely natural and has in turn precipitated a high degree of colluvium via soil creep and hill-wash.

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 1: Pleistocene to Holocene: drift geology, clay-with-flints	1	50	46	58.83	58.79
	2	1	3	59.04	58.94
	2	2	39	58.43	58.31
	3	12	47	58.03	58.00
	3	4	48	58.45	58.44
	4	5	17	57.40	57.28
	4	6	20	56.01	55.90
	5	7	24	56.36	56.32
	5	8	28	55.05	54.99
	6	13	38	53.09	53.08
	7	-	-	--	-

8.1.4 A thin layer 40-60mm of pinkish-brown brickearth [37] had formed on top of the drift geology and was exposed in the base of the sondage in Trench 6 (Phase 2). It displayed evidence for burning and there were thin scatters of charcoal recorded. However, the burnt areas did not constitute *in situ* hearths and no finds were recovered from this layer.

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 2: Undated; Relict ground surface	6	13	37	53.11	53.10

To establish the presence or absence of pre-historic activity if present, its nature and (if possible) date

8.1.5 No prehistoric activity was recorded on site.

To establish the presence or absence of Roman activity if present, its nature and (if possible) date

8.1.6 The relict land surface [37] was sealed by an upper [10, 35 & 42] and lower colluvium [36] of dark brown clayey sand with frequent pebble inclusions and flecks of charcoal and fragmentary CBM/pottery. The lower deposit was almost pure sand with no pebble inclusions (Phase 3).

8.1.7 Two finds dating to the Roman period were recovered from the upper colluvium [10] consisting of a single sherd of abraded pottery and a fragment of Roman tile in a similar condition (Valcarcel 2018 Appendix 3). Both appear to have been rolled or tumbled in the soil creep/hill-wash or have been plough-struck which would explain their condition. It is unlikely that this material would have been incorporated into the colluvium during the Roman period, so therefore they may have been ploughed-out from elsewhere or tumbled-in during later ploughing episodes.

8.1.8 There is no evidence in the map regression exercise to suggest that lynchets were established on this part of the valley wall (Chipping 2016), so it is likely that arable ground may have been established on the high ground beyond the valley edge to the west. Unfortunately, due to lack of corroboratively-dated strata, this layer can only be ascribed to the 'Post-Roman' period. However, a land drain had cut the top of [35] which was dated to the Post-Medieval period (c. AD 1800-1900), so this provides a *terminus post quem* for accumulation of the colluvial layers.

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 3:	1	11	42	56.58	56.56
Post Roman to Post Medieval	6	3	10	54.74	54.50
	6	13	35	53.09	53.08
Upper Colluvium	6	13	36	53.44	53.39

To establish the presence or absence of medieval activity if present, its nature and (if possible) date

8.1.9 No medieval archaeology was identified on site.

To establish the presence or absence of post-medieval activity on site

8.1.10 A 4m-wide trench or rectangular pit [14] was uncovered in Trench 3 containing one fill [13] (Phase 5). Its purpose remains unknown, but it was possibly machine-cut as it possessed almost vertical sides or walls. A single sherd of 19th century whiteware was recovered from the base of the fill [13] on the floor of the trench.

8.1.11 As mentioned above, a terracotta land drain was seen cutting the top of upper colluvium layer [35]. As the land had once been farmland it is possible to envisage the land drains had been laid probably in the late 19th century. The land drain was subsequently sealed by the modern made ground introduced as a landscaping layer in the 20th century.

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 4: Post Medieval to Modern Farming & land management	3	4	13	58.40	58.38
	3	4	14	58.45	57.64

To establish the nature, date and survival of activity relating to any archaeological periods at the site

8.1.12 Working on the above hypothesis that the upper colluvium is post-Roman but pre-Post Medieval, it is possible that the colluvial layers seal earlier activity on the lower slopes above the River Cray.

To establish the extent of all past post-depositional impacts on the archaeological resource

8.1.13 Truncation to the site occurred in the 20th century when the construction of the Thames Water Pumping station took place. It is unknown if the construction of the surrounding residential estates had any impact on the site or whether it was used for the storage/dumping of building materials. The made ground varies in thickness from a few centimetres at the west of the site to 1.3m in Trench 7 at the eastern limit.

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 5: Modern: 20th Century Layers of made ground.	1	1	41	54.93	54.89
	1	10	45	58.99	58.91
	2	1	2	59.20	59.15
	2	2	5	58.20	58.15
	3	4	12	58.76	58.58
	3	12	32	58.26	58.20

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
	4	5	16	57.54	57.44
	4	6	19	56.55	56.45
	5	7	22	56.83	56.75
	5	7	23	56.50	56.46
	5	8	26	55.62	55.51
	5	8	27	55.29	55.25
	6	3	7	55.37	55.37
	6	3	8	54.96	54.96
	6	3	9	54.76	54.44
	6	13	34	54.18	54.11
	7	9	30	54.76	54.76

Layer	Trench	Section	Context	Level m OD highest	Level m OD lowest
Phase 5: Modern: 20th Century Turf & Topsoil	1	11	40	55.16	55.10
	1	10	44	59.14	59.11
	2	1	1	59.37	59.36
	2	2	4	58.43	58.31
	3	4	11	59.23	59.05
	3	13	33	54.75	54.75
	4	5	15	57.94	57.85
	4	6	18	56.55	56.45
	5	7	21	57.03	56.96
	5	8	25	55.84	55.75
	6	3	6	55.42	55.36
	6	13	33	54.81	54.75
	7	9	29	55.17	55.15

8.1.14 The survival of the colluvial layers south of the ‘artificial’ plateau - that constitutes the most part of the land parcel - were evident along its southern edge. It was not picked up on its eastern

edge as the made ground proved to be unstable in Trench 7 leading to its abandonment during the evaluation. It is possible these deposits would have been exposed had the trench reached its full limit.

8.2 Conclusions

8.2.1 The recent evaluation has shed light upon the formation processes of the valley with the fall of land to the south east now verified as being part of the natural valley formation processes rather than modern terracing undertaken to establish the water pumping station.

8.2.2 The drift geology of clay-with-flints was exposed in all of the trenches save for Trench 7.

8.2.3 A possible relict ground surface of brickearth [37] was exposed in Trench 6 which had evidence for burning and scorch marks with thin scatters of charcoal. This was sealed by the colluvium.

8.2.4 The abraded Roman material recovered from the upper colluvium suggest they were naturally deposited, possibly by hill-wash and soil creep exacerbated by later ploughing on the fields along the valley edge to the west. The Roman material may have originated from the nearby Roman bath house located 300m to the east (Valcarcel 2018 Appendix 3). A large quantity of building material including fragmentary pottery and hypocaust elements were found at the site (Chipping 2016:11) which may have subsequently spread or been re-deposited elsewhere. Other nearby archaeological evaluations and watching briefs have also turned up Roman material (Chipping 2016:11)

8.2.5 The discovery of a terracotta land drain cutting the top of the colluvium dated to c. AD 1800-1900 is evidence for arable (or possibly pasture) land use prior to the 20th century building of the pumping station and proven through the map regression exercise (Chipping 2016). They were laid *before* construction of the pumping station but *after* the colluvium had formed containing the Roman material.

8.2.6 The purpose of the large post-medieval trench or rectangular pit exposed in Trench 3 is unknown. It was dated by the find of a 19th century pottery sherd from its base although no other culturally derived material was forthcoming.

8.2.7 All the made ground layers displayed crushed building materials dating from the 20th century and had been later landscaped with turf.

8.2.8 Once the project is deemed complete and this report approved by the London Borough of Bromley, the completed archive comprising all site records from fieldwork will eventually be deposited with LAARC under site code LOK18 and a summary report published in the *London Archaeologist* annual round-up.

9 ACKNOWLEDGEMENTS

9.1 Pre-Construct Archaeology Limited would like to thank Duncan Hawkins of CgMs for commissioning the work and Mark Stevenson of GLAAS for monitoring the project on behalf of the London Borough of Bromley

9.2 The author would like to thank Bruce Ferguson & Armi Utriainen for their assistance with the fieldwork and Tanya Jones for the survey.

9.3 The author also thanks:

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- Amparo Valcarcel for the Buildings Material Assessment
- Ella Egberts for the Lithics assessment.
- Sevinc Duvari and her team who processed the finds.

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Online Resources

Geology of Britain Viewer

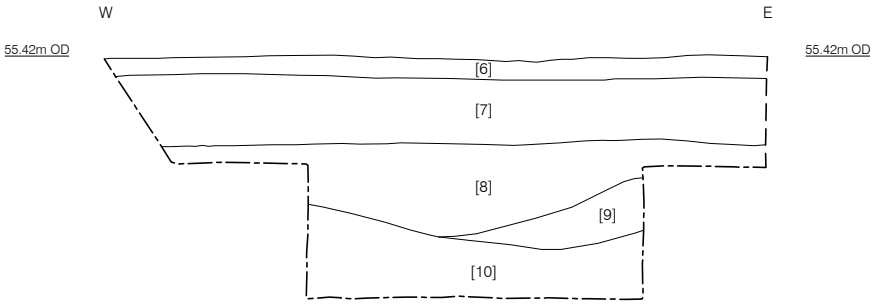
http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

24/07/18 MS

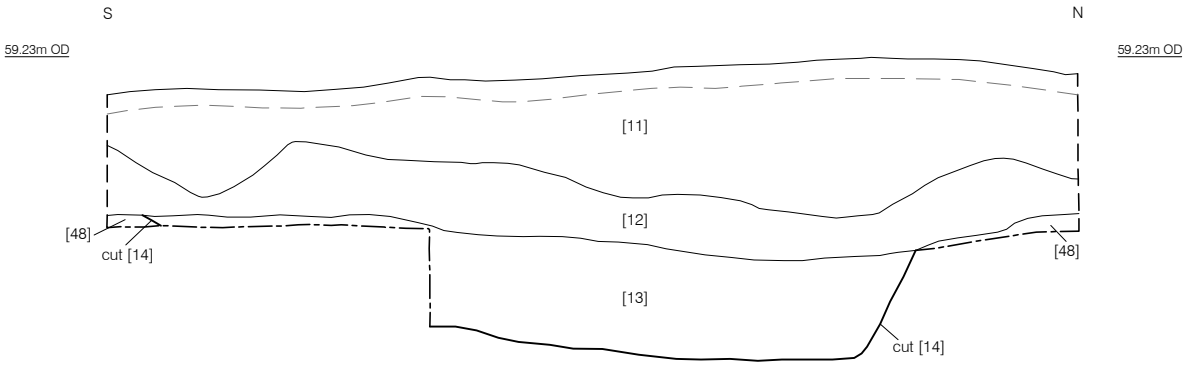
Figure 1
Site Location
1:20,000 at A4

24/07/18 MS

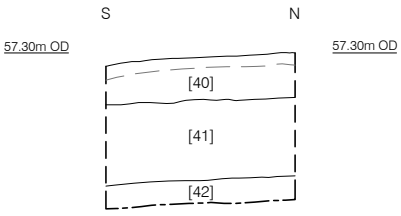
Figure 2
Detailed Site Location
1:800 at A4



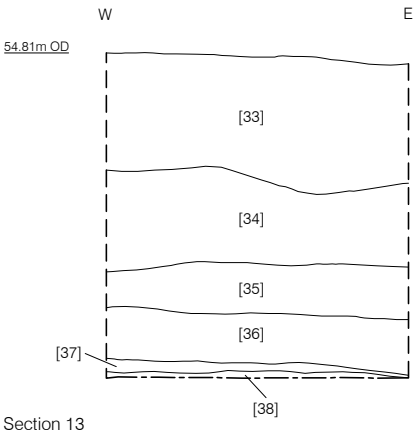
Section 3
South Facing
Trench 6



Section 4
East Facing
Trench 3



Section 11
East Facing
Trench 1



Section 13
South Facing
Trench 6

0 2m

24/07/18 MS

Figure 3
Sections
1:40 at A4

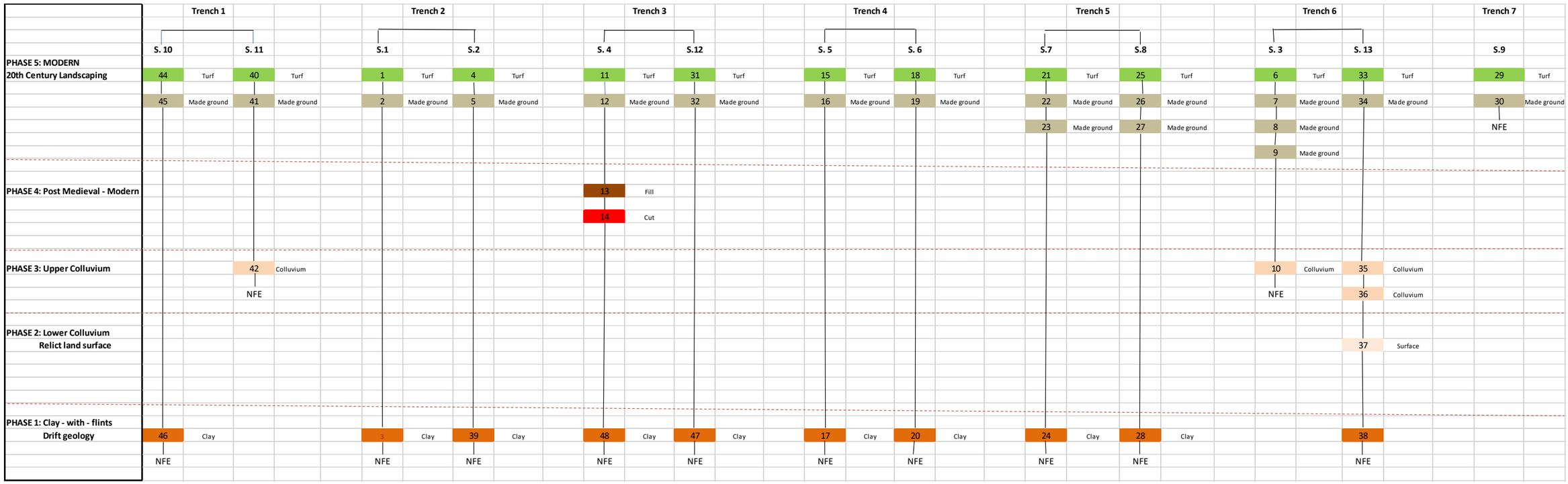
11 APPENDIX 1: CONTEXT INDEX

Context	CTX_Type	Trench	CTX_Interpretation	CTX_Category	CTX_Levels_high	CTX_Levels_low	Phase
1	Layer	2	Turf & topsoil	Garden Soil	59.37	59.36	LOK18-PH5
2	Layer	2	Made ground of compacted demolition material	Make-up	59.2	59.15	LOK18-PH5
3	Layer	2	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brickearth development in some areas.	Natural	59.04	58.94	LOK18-PH1
4	Layer	2	Turf & Topsoil. Same as 6, 11, 15, 18, 21, 25, 29 & 33	Garden Soil	58.43	58.31	LOK18-PH5
5	Layer	2	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 7, 8, 9, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	58.2	58.15	LOk18-PH5
6	Layer	6	Turf & Topsoil: same as 11, 15, 18, 21, 25, 29 & 33	Garden Soil	55.42	55.36	LOK18-PH5
7	Layer	6	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 8, 9, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	55.37	55.37	LOK18-PH5
8	Layer	6	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 9, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	54.96	54.96	LOk18-PH5
9	Layer	6	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	54.76	54.44	LOK18-PH5
10	Layer	6	Upper colluvium consisted of a dark-brown reddish clayey-sand with occasional flecks of charcoal and CBM/pottery inclusions. Same as 35, 42	Natural	54.74	54.50	LOK18-PH3
11	Layer	3	Turf & Topsoil: same as 6, 15, 18, 21, 25, 29 & 33	Garden Soil	59.23	59.05	LOK18-PH5
12	Layer	3	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 16, 19, 22, 26, 30, 34 & 40	Make-up	58.76	58.58	LOK18-PH5
13	Fill	3	A friable yellowish mid-brown back-fill of sandy silt	Backfill	58.40	58.38	LOK18-PH4
14	Cut	3	A ditch (or trench) 4m wide and 0.27m deep oriented NW to SW not uncovered in any of the other evaluation trenches. Function unknown Filled by [13].	Ditch	58.40	57.64	LOK18-PH4
15	Layer	4	Turf & Topsoil: same as 6, 11, 18, 21, 25, 29 & 33	Garden Soil	57.94	57.85	LOK18-PH5
16	Layer	4	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 19, 22, 26, 30, 34 & 40	Make-up	57.54	57.44	LOK18-PH5
17	Layer	4	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1, 3, 20, 24, 28, 32, 38, 41 & 46	Natural	57.44	57.28	LOK18-PH1
18	Layer	4	Turf & Topsoil: same as 6, 11, 15, 21, 25, 29 & 33	Garden Soil	56.55	56.45	LOk18-PH5
19	Layer	4	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 22, 26, 30, 34 & 40	Make-up	56.18	56.08	LOK18-PH5
20	Layer	4	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1,3, 17, 24, 28, 32, 38, 41 & 46	Natural	56	55.97	LOK18-PH1
21	Layer	5	Turf & Topsoil: same as 6, 11, 15, 18, 25, 29 & 33	Garden Soil	57.03	56.96	LOK18-PH5
22	Layer	5	Made ground of compacted, fragmentary building materials and debris.	Make-up	56.83	56.75	LOK18-PH5

Context	CTX_Type	Trench	CTX_Interpretation	CTX_Category	CTX_Levels_high	CTX_Levels_low	Phase
			Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 26, 30, 34 & 40				
23	Layer	5	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	56.5	56.46	LOK18-PH5
24	Layer	5	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1, 3, 17, 20, 28, 32, 38, 41 & 46	Natural	56.36	56.32	LOK18-PH1
25	Layer	5	Turf & Topsoil: same as 6, 11, 15, 18, 21, 29 & 33	Make-up	55.84	55.75	LOK18-PH5
26	Layer	5	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 30, 34 & 40	Make-up	55.62	55.51	LOK18-PH5
27	Layer	5	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 30, 34 & 40	Make-up	55.29	55.25	LOK18-PH5
28	Layer	5	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1,3, 17, 20, 24, 32, 38, 41 & 46	Make-up	55.05	54.99	LOK18-PH1
29	Layer	7	Turf & Topsoil: same as 6, 11, 15, 18, 21, 25 & 33	Garden Soil	55.17	55.15	LOK18-PH5
30	Layer	7	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 34 & 40	Make-up	54.76	54.76	LOk18-PH5
31	Layer	3	Turf & Topsoil: same as 6, 11, 15, 18, 21, 25, 29 & 33	Garden Soil	62.09	62.06	LOK18-PH5
32	Layer	3	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1,3, 17, 20, 24, 28, 38, 41 & 46	Natural	61.84	61.8	LOK18-PH1
33	Layer	6	Turf & Topsoil: same as 6, 11, 15, 18, 21, 25, 29	Garden Soil	54.81	54.75	LOK18-PH5
34	Layer	6	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 30 & 40	Make-up	54.18	54.11	LOk18-PH5
35	Layer	6	Upper colluvium consisted of a dark-brown reddish clayey-sand with occasional flecks of charcoal and CBM/pottery inclusions Same as 10, 42	Natural	53.67	53.64	LOK18-PH3
36	Layer	6	A layer sealed by the upper colluvium which consisted of a dark-brown reddish sandy clay (a greater clay content with less rounded pebbles) with occasional flecks of charcoal and CBM/pottery inclusions	Natural	53.44	53.39	LOK18-PH3
37	Layer	6	Friable, pinkish mid-brown brick-earth suggestive of an old land surface. Areas of burning and thin spreads of charcoal. No finds.	Natural	53.11	53.1	LOK18-PH2
38	Layer	6	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1,3, 17, 20, 24, 28, 32, 41 & 46	Natural	53.09	53.08	LOK18-PH1
39	Layer	2	Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1, 3, 17, 20, 24, 28, 32, 38, 41 & 46	Natural	58.43	58.31	LOK18-PH1
40	Layer	1	Turf & Topsoil: same as 6, 11, 15, 18, 21, 25, 29 & 33	Garden Soil	57.30	57.20	LOK18-PH5
41	Layer	1	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 30, 34	Make-up	57.03	56.99	LOK18-PH5

Context	CTX_Type	Trench	CTX_Interpretation	CTX_Category	CTX_Levels_high	CTX_Levels_low	Phase
42	Layer	1	Upper colluvium consisted of a dark-brown reddish clayey-sand with occasional flecks of charcoal and CBM/pottery inclusions Same as 10, 35 & 36	Natural	56.58	56.56	LOK18-PH3
43	Void						
44	Layer	1	Turf & Topsoil: same as 6, 11, 15, 18, 21, 25, 29 & 33	Garden Soil	59.14	59.11	LOK18-PH5
45	Layer	1	Made ground of compacted, fragmentary building materials and debris. Made ground same as 2, 5, 7, 8, 9, 12, 16, 19, 22, 26, 30, 34	Make-up	58.99	58.91	LOK18-PH5
46	Layer		Dark red clay-with-flints drift geology with pockets of sand and outcrops of gravel and flints. Superficial brick-earth development in some areas. Natural same as 1,3, 17, 20, 24, 28, 32, 38	Natural	58.83	58.79	LOk18-PH1

12 APPENDIX 2: SITE MATRIX



13 APPENDIX 3: CERAMIC BUILDING MATERIAL ASSESSMENT

By Amparo Valcarcel, Pre-Construct Archaeology Limited, July 2018

13.1 BUILDING MATERIALS SPOT DATES

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
8	Terracota;3115	Drain; natural flint pebble	2	1800	1900	1800	1900	1800-1900	No mortar
10	3056	Silty Roman tile (abraded)	1	50	350	50	350	50-350	No mortar

13.2 Review

13.2.1 The small assemblage (3 fragments, 963 g) consists of pieces of late post-medieval drain [8] made of terracotta and a single silty Roman tile [10]. The tile is abraded and probably was repositioned from the bath-house documented close to the site. The flint pebble recovered from [8] is natural.

13.2.2 The building material assemblage reflects the occupation of the area from Roman to post-medieval period and none of the material is of intrinsic interest. No further work is recommended.

14 APPENDIX 4: ROMAN & POST-ROMAN POTTERY ASSESSMENT

By Chris Jarrett, Pre-Construct Archaeology Limited, July 2018

14.1 A total of two sherds (13g) of pottery were recovered from the archaeological work and this was found in two contexts. Deposit [10] produced a very abraded sherd of pottery in an oxidised fine sandy powdery ware that is possibly late Roman in date. Deposit [13] has recorded for it a sherd of a possible rounded bowl made in refined whiteware (REFW) dated 1805–1900. The pottery is of no significance as it is in a fragmentary state and with little meaning. The only potential of the pottery is to date the context it was recovered from. There are no recommendations for further work on the assemblage.

15 APPENDIX 5: LITHIC ASSESSMENT

By Ella Egberts, Pre-Construct Archaeology Limited, July 2018

15.1 One unworked burnt flint fragment has been recovered from context [10] from the above-mentioned site. It weighs 117.2g and is decoloured and fire-crazed. It is a weathered nodular flint fragment. Unworked burnt flint is not specific to any period in time and may be intentionally heated or accidentally burnt.

15.2 No further work is recommended, however, if further fieldwork will be carried out, the retrieval of additional flint material could help elucidate the nature of the here described piece.

16 APPENDIX 6: OASIS FORM

OASIS ID: preconst1-323393

Project details	
Project name	Land at Lockesley Drive, Orpington: An Archaeological Evaluation
Short description of the project	A seven-trench evaluation was undertaken at Land at Lockesley Drive, Orpington over 5 days between the 11th and 17th July 2018. All trenches were excavated to a length of 30m and a width of 1.8m except Trench 7 which was halted after 7.5m due to collapsing ground at a depth of over 1.3m. Trenches 2 to 5 confirmed that the drift geology was a reddish-brown clay-with-flints that had been truncated during the construction of the Thames Water Pumping Station in the 20th Century. In trenches 1 and 6 layers of colluvium were identified, the upper layer of which contained an abraded Roman pottery sherd and a fragment of Roman tile. A trial sondage was sunk to 1.8m BGL in the east end of Trench 6 which revealed the thickness of the colluvium and that they were sealing a possible relict land surface of brick-earth. This surface showed evidence of burning and a light scatter of charcoal but the area was too small to make any further interpretations. In the 19th century the land parcel was still farmland and a terracotta land drain had cut the top of the colluvial layers providing a *terminus post quem* for this phase of the sites formation processes. Other post-medieval activity included a 4m-wide trench (or rectangular pit) in Trench 3 from which a sherd of whiteware was recovered but its function remains unknown. In summary, the sondage in Trench 6 had revealed a fall in the natural topography from the west of the site on the artificially created plateau (recorded at 59.37m OD) to the clay-with-flints natural at 53.08m OD to the east. The excavation proved that the steep slope eastwards into the Cray Valley was in fact natural and that a putative land surface survived along the south of the site beyond the area of truncation.
Project dates	Start: 11-07-2018 End: 17-07-2018
Previous/future work	No / No
Any associated project reference codes	LOK18 – Site code
Type of project	Field evaluation
Site status	Area of Archaeological Importance (AAI)
Site status (other)	Upper Cray Archaeological Priority Area
Current Land use	Grassland Heathland 3 - Disturbed
Monument type	LAND SURFACE Uncertain
Monument type	COLLUVIUM Early Medieval
Monument type	TRENCH Post Medieval
Significant Finds	POTTERY Roman
Significant Finds	TILE Roman
Project location	
Country	England

Site location	GREATER LONDON BROMLEY BROMLEY Land at Lockesley Drive, Orpington
Postcode	BR5 2AY
Study area	7840 Square metres
Site coordinates	TQ 46478 67285 51.385162418171 0.105268922791 51 23 06 N 000 06 18 E Point
Height OD / Depth	Min: 53.08m Max: 59.04m
Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	CgMs Consulting
Project design originator	Chris Mayo
Project director/manager	Chris Mayo
Project supervisor	Wayne Perkins
Project archives	
Physical Archive recipient	Bromley Museum
Physical Contents	"Ceramics"
Digital Archive recipient	Bushey Museum
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Buckinghamshire County Museum
Paper Contents	"Ceramics"
Paper Media available	"Context sheet","Drawing","Matrices","Photograph","Plan","Report","Section","Survey "
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Land at Lockesley Drive, Orpington, Kent BR5 2AY: An Archaeological Evaluation
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