

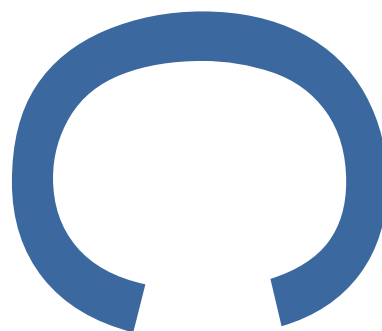
**GORESBROOK PARK,
DAGENHAM, LONDON**

AN ARCHAEOLOGICAL EVALUATION

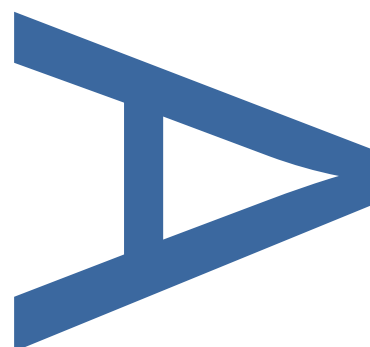


SITE CODE: OOL17

**PLANNING APPLICATION NUMBER:
16/01475/FUL**



**LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF BARKING AND
DAGENHAM**



PCA REPORT NO: R12894

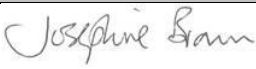

MAY 2017

PRE-CONSTRUCT ARCHAEOLOGY

GORESBROOK PARK, DAGENHAM, LONDON
 AN ARCHAEOLOGICAL EVALUATION

Quality Control

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**GORESBROOK PARK, DAGENHAM, LONDON
AN ARCHAEOLOGICAL EVALUATION**

Site Code: OOL17

Central NGR: TQ 48432 83233

Local Planning Authority: London Borough of Barking and Dagenham

Planning Reference: 16/01475/FUL

Commissioning Client: CgMs Consulting

on behalf of: **LMP DAGENHAM LTD**

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May 2017**

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1 ABSTRACT

- 1.1 This report details the results of an archaeological evaluation conducted between the 27th of March and the 3rd of May 2017 at Goresbrook Park in the London Borough of Barking and Dagenham. The evaluation was undertaken by Pre-Construct Archaeology Limited, and was commissioned by CgMs Consulting on behalf of LMP Dagenham Ltd.
- 1.2 The site comprised the grounds of the Eddie Stobart Goresbrook Park Depot, which is a large storage and distribution centre. Excavations conducted in 1993 to the immediate north of the study site recorded a Bronze Age causeway that is projected to run into the south/south east area of the site. Two trenches measuring 20m x 2.40m were excavated with the intention of ascertaining whether the causeway does indeed continue through the site as projected.
- 1.3 Trenches 1 & 2 were to be excavated in five separate 4m sections (labelled A–E) and to a depth of -2.50m OD or, if found, to the surface of the causeway, which was projected to lie at approximately -1.70m OD. No evidence for the causeway was recorded and all trenches were excavated to the depth of approximately -2.50m OD, with Trench 2B being further excavated in part to a depth of -3.30m OD and a hand auger trial in Trench 1C to the natural gravel at a depth of -4.66m OD.
- 1.4 Both trenches revealed a similar sequence of layers topped by concrete/tarmac surfaces with associated aggregate hardcore. This modern ground surface typically overlaid a sandy/gravelly silt layer, considered to be made ground, and subsequent alluvial deposits comprising a thick peat formation bounded between two sandy clay layers. The natural gravel underlying the lower sandy clay formation was encountered in Trench 1C through the use of a hand auger and is recorded within the boundaries of Trench 2 through previous geotechnical works.
- 1.5 Within the peat, an event horizon was recorded with significant horizontal timbers and frequent visible rooting that has a high potential for providing information regarding the environmental conditions during the Middle Bronze Age in this area. No evidence for human activity was recorded, suggesting that the felled tree horizon was naturally occurring. A single piece of timber was found in Trench 2B which had been embedded into the the lower alluvial deposit suggesting that it pre-dates the peat formation.
- 1.6 No evidence was recorded for Iron Age, Roman, medieval, or post-medieval activity.
- 1.7 Modern activity does not appear to have significantly truncated the underlying archaeological resource; however a number of drain runs were recorded as well as some areas of large concrete debris.

2 INTRODUCTION

- 2.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Limited at Goresbrook Park, Dagenham, Greater London, currently occupied by the Eddie Stobart Goresbrook Park Depot. The study site comprises two large rectangular warehouses (Units 4 and 5), HGV parking, a Traffic Office, Refuel Station, and Vehicle Maintenance Unit, with associated access roads and hard standing. The site is centred at NGR TQ 48432 83233 and covers an area of approximately 5.30ha (Figures 1 and 2).
- 2.2 The site is located within the Ripple Road Archaeological Priority Area as designated by the local planning authority, the London Borough of Barking and Dagenham.
- 2.3 An Archaeological Impact Assessment (AIA) was carried out by CgMs Consulting (Archer 2017) which concluded that there was a high archaeological potential for the Bronze Age period with particular potential for the presence of a causeway which had been identified immediately to the north and was projected to run into the south/south east area of the site (Figure 2); an evaluation trench was located here to investigate this. Furthermore, a review of the results of numerous geotechnical investigations by Historic England's Regional Scientific Advisor and Greater London Archaeological Advisory Service (GLAAS) led to the identification of potential evidence for the causeway recorded within WS113; the location of this intervention, at the southern edge of the site, was targeted within a second evaluation trench. A low archaeological potential was identified for all other past periods.
- 2.4 Planning permission for redevelopment of the site has been granted by the LPA under application number 16/01475/FUL with two archaeological conditions attached to the consent. Consultation between CgMs Consulting and GLAAS led to a requirement for a trial-trench evaluation to ascertain whether or not the Bronze Age causeway found immediately to the north extends into the site. If so, then a redesign may be required to preserve the causeway in situ, by relocating a proposed attenuation tank.
- 2.5 The archaeological evaluation works were carried out between the 27th of March and the 3rd of May 2017 and were commissioned by CgMs Consulting. The work was undertaken in accordance with an approved Written Scheme of Investigation (Mayo 2017) and following Historic England guidelines (GLAAS 2015).
- 2.6 The archaeological evaluation was supervised by Christina Reade and was project managed by Chris Mayo, both of Pre-Construct Archaeology Limited. The work was monitored by Adam Single, Historic England, Archaeology Advisor to the London Borough of Barking and Dagenham.
- 2.7 The completed archive comprising written, drawn, and photographic records and artefacts will be deposited with the London Archaeological Archive and Research Centre (LAARC).
- 2.8 The site was allocated the unique site code OOL17.

3 PLANNING BACKGROUND AND EVALUATION OBJECTIVES

3.1 National Guidance: National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) was adopted on March 27th 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 2011” (March 2016). It includes the following policy relating to archaeology within central London:

Policy 7.8 Heritage Assets and Archaeology

POLICY 7.8 HERITAGE ASSETS AND ARCHAEOLOGY

Strategic

A London’s heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.

B Development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site’s archaeology.

Planning decisions

C Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.

D Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.

E New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.

LDF preparation

F Boroughs should, in LDF policies, seek to maintain and enhance the contribution of

built, landscaped and buried heritage to London's environmental quality, cultural identity and economy as part of managing London's ability to accommodate change and regeneration.

G Boroughs, in consultation with English Heritage, Natural England and other relevant statutory organisations, should include appropriate policies in their LDFs for identifying, protecting, enhancing and improving access to the historic environment and heritage assets and their settings where appropriate, and to archaeological assets, memorials and historic and natural landscape character within their area.

3.3 **Local Policy: Archaeology in the London Borough of Barking and Dagenham**

3.3.1 The relevant local policy is provided by the Barking and Dagenham Local Plan, which was adopted in July 2010. It contains the following policy statement with regards to the Historic Environment:

POLICY CP2: PROTECTING AND PROMOTING OUR HISTORIC ENVIRONMENT

Barking and Dagenham has a rich local history. Signs of our fishing, maritime and industrial heritage can still be seen for example at Barking Town Quay, the Ford works in Dagenham, and the Malthouse and Granary buildings on Abbey Road. The Becontree Estate, the Curfew Tower and remains of Barking and Abbey, Eastbury Manor House, Valence House and Dagenham Village are also important symbols of our past.

However, compared to many other areas the Borough has relatively few protected historic environment assets such as listed buildings and conservations areas. With this in mind the Council will take particular care to:

- Protect and wherever possible enhance our historic environment.
- Promote understanding of and respect for our local context.
- Reinforce local distinctiveness.
- Require development proposals and regeneration initiatives to be of a high quality that respects and reflects our historic context and assets.

3.4 **Planning Permission**

3.4.1 Planning permission for the redevelopment of the site has been granted by the PLA under application number 16/01475/FUL. The application is for the 'demolition of Units 4 and 5, erection of new warehouse building adjacent to Unit 1 to provide 16,908sqm of floorspace (GIA) and relocation of existing traffic office, vehicle maintenance unit building, and HGV parking.'

3.4.2 Two archaeological conditions are attached to the consent, as follows:

- 23) No demolition of development shall take place until a stage 1 detailed impact assessment has been submitted to and approved by the Local Planning Authority in writing. For land that is included within the Written Scheme of Investigation (WSI), no demolition or development shall take place other than in accordance with the agreed WSI, and the nomination of a competent person(s) or organisation to undertake the agreed works.

Reason:

Archaeology must be identified prior to the commencement of development to ensure that archaeological investigation is initiated at an appropriate point in the development process and that any areas of archaeological preservation are identified and appropriately recorded/preserved in accordance with Policy BP3 of the Borough Wide DPD (March 2011).

- 24) Where specific impacts have been identified by the modelling and evaluation assessment report in stage 1, a further stage 2 Conservation Management Plan for the mitigation of those impacts through preservation in-situ, including foundation design and the scientific monitoring of the agreed methodologies, shall be submitted to and approved by the Local Planning Authority in writing. For land that is included within the stage 2 WSI, no demolition/development shall take place other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site preservation and the nomination of a competent person(s) or organisation to undertake the agreed works;

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

Reason:

Archaeology must be identified prior to the commencement of development to ensure that archaeological investigation is initiated at an appropriate point in the development process and that any areas of archaeological preservation are identified and appropriately recorded/preserved in accordance with Policy BP3 of the Borough Wide DPD (March 2011).

3.4.3 Consultation between CgMs Consulting and GLAAS led to a requirement for a trial-trench evaluation to ascertain whether or not the Bronze Age causeway found immediately to the north extends into the site.

3.4.4 The fieldwork herein reported is, along with the AIA, undertaken to partially satisfy condition 23 by investigating whether the causeway survives through the site. If it is found to be present and at risk of impact from the proposed scheme then further work may be

necessary to mitigate it or preserve it in situ, as required by condition 24.

3.4.5 This document forms the post investigation assessment of the initial archaeological work, as defined above.

3.5 **Evaluation Objectives**

3.5.1 The Written Scheme of Investigation (Mayo 2017) highlighted the following research objectives:

- To establish whether the causeway found to the immediate north continues into and across the site.
- If present, to confirm its state of preservation.
- If present, to compare its form to that recorded in 1993.
- To ascertain whether the archaeological remains associated with the causeway are present.
- To establish the presence or absence of palaeo-environmental remains and, if present, assess their potential to contain yield information about the former environment of the site and/or human activity in the vicinity.
- To establish the presence or absence of archaeological remains of any other period, and allow the design of a suitable mitigation strategy if appropriate.
- To establish the extent of all past post-depositional impacts on the archaeological resource.

4 GEOLOGY AND TOPOGRAPHY

- 4.1 The British Geological Survey records the solid geology of the study site as primarily London Clay Formation (Clay, Silt and Sand) with the Lambeth Group (Clay, Silt and Sand) occupying the far southeast corner of the study site. Superficial deposits are recorded throughout the study site as Alluvium (Clay, Silty, Peaty, Sandy) with Taplow Gravel Formation (Sand and Gravel) running across the northwest boundary.
- 4.2 This geology is confirmed by previous geotechnical investigations of the site which recorded made ground to a maximum depth of 3.90m below ground level (bgl), though typically encountered at depths of c. 2.4m –3.0m bgl. Underlying the made ground are alluvial deposits comprising an upper strata of clay above horizons of peat which in turn seal sand/silts. Peat deposits were generally identified between 2.40m and 5.70m bgl, though BH03 recorded peat at 1.80m bgl. The highest horizons of peat occur in the west of the study site at -0.90m OD. This may indicate a location of higher gravels during the period of peat formation and therefore a possible focus for prehistoric activity.
- 4.3 Below the peat deposits, Kempton Park gravels were observed between c. 5m and 6m bgl, with London Clay identified below this.
- 4.4 The 1993 investigation to the north of the site (Divers 1996) recorded the same sequence of deposits.
- 4.5 This evaluation revealed the same sequence of deposits; i.e. a modern ground surface typically overlying a sandy/gravelly silt layer, considered to be made-ground, and subsequent alluvial deposits comprising a thick peat formation bounded between two sandy clay layers. The natural gravel underlying the lower sandy clay formation was encountered in Trench 1C through the use of a hand auger at -4.66m OD (approximately 5.50m bgl).
- 4.6 Modern ground level is relatively flat, lying between 0.73m – 1.05m OD, with variations predominantly due to artificial sloping of the concrete/tarmac surface rather than natural topography.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 The full archaeological and historical background is given in the Archaeological Impact Assessment (Archer 2017) and the most pertinent points to the evaluation summarised below (taken from the Written Scheme of Investigation (Mayo 2017)).
- 5.2 The AIA stated that “the study site is considered to have a high archaeological potential for the Bronze Age period with particular evidence for the Bronze Age causeway a possibility. A low archaeological potential is identified for all other past periods.”
- 5.3 The AIA report includes site records from numerous geotechnical investigations which have been completed at the site. Within one of these, WS113 completed in September 2014, GLAAS consider that potential evidence may be found for the causeway (pers comm J. Archer, CgMs Consulting).
- 5.4 The causeway, which dominates the archaeological record in the immediate area and is principally the subject of the proposed investigation, was Bronze Age in date and implied from radiocarbon dating to have been in use for over 100 years between 1520 and 1400 BC. It was constructed of gravel and burnt flint and orientated NNE/SSW. Its surface was recorded at a height of -1.70m OD within the upper level of a peat deposit also dated to the Bronze Age. The causeway was 4m in width and at least 23m in length (

5.5 Figure 2). The causeway was found during an investigation conducted in 1993 at the Hays Storage Depot (Divers 1996, site code DAHS93).

6 METHODOLOGY

- 6.1 The evaluation was undertaken according to a Written Scheme of Investigation (Mayo 2017) which was approved in advance by Adam Single, Historic England, Archaeological Adviser to the London Borough of Barking and Dagenham. The aim of the work was primarily to ascertain if the Bronze Age causeway, which was identified to the immediate north of the site at the Hays Storage Depot (Divers 1996), extended into the site.
- 6.2 The evaluation followed ClfA guidelines and the methodologies set out in Historic England (GLAAS) Guidance Papers for standards and practices in archaeological fieldwork, assessments and evaluation.
- 6.3 Two trenches of 20m x 2m were proposed: one trench, to the north, was targeted on the conjectured route of the causeway, whilst the southern trench was located around WS113, completed in 2014 and within which potential was considered to exist for the causeway.
- 6.4 The trenches were supported through the use of a trench box measuring 3.5m x 2.20m (Plate 16). Due to the reach of the mechanical excavator and the width of the box, each trench was excavated in five sections, measuring 4m in length. The width of the trenches had to be extended from the proposed 2m to 2.30/2.40m in order to accommodate the trench box. Furthermore, excavation in Trench 2 encountered a large concrete drain (ca. 700mm wide) running E-W along the southern edge of the trench necessitating a 1m shift of the trench to the north. As the uppermost concrete slab had been already cut on the south end, the width at the top of the trench measured 3.60m. This continued down to the level of the second concrete slab, at which point the trench was stepped in to measure 2.40m wide.
- 6.5 All excavations were supervised by the author and proceeded in 100mm spits using a 360 degree tracked excavator. The initial concrete surface was broken out, with the subsequent hardcore layers excavated with a toothed bucket and the alluvial clay and peat layers excavated with a toothless bucket.
- 6.6 Hand excavation of pertinent archaeological layers and features was conducted whenever necessary. Entry into the trench was facilitated by the insertion of the trench box and the shoring panels, with an electrical pump for water removal.
- 6.7 All necessary attendances to the archaeological work were provided by Hannafin Contractors who were commissioned by the client.
- 6.8 Trench 1 was backfilled with a rubble aggregate and the upcast spoil removed off-site due to concerns with the unsuitable nature of the spoil, while Trench 2 was backfilled with the upcast material. The backfilled trenches were intermittently compressed with a Ramax machine, and filled until the surfaces were level.
- 6.9 The surface of the causeway was recorded to the immediate north at -1.70m OD. The evaluation trenches were excavated to this level to ascertain whether it was present, and extended below this level to confirm its absence when not found. The trenches were all

excavated to a depth of around 3.5m bgl, equivalent to roughly -2.50m OD, with Trench 2B being further excavated in part to a depth of -3.30m OD and a hand auger trial in Trench 1C to the natural gravel at a depth of -4.66m OD.

6.10 The final trench dimensions and highest and lowest levels are tabulated below:

Trench Number	Length	Width	Highest ground level	Lowest level reached
1A	4.20/4.10m	2.30m	0.94m OD	-2.51m OD
1B	5.00m	2.30m	0.92m OD	-2.55m OD
1C	4.00m	2.30m	0.89m OD	-4.78m OD
1D	3.90m	2.30m	0.86m OD	-2.51m OD
1E	3.00m	2.30m	0.78m OD	-2.55m OD
2A	4.00m	3.60/2.40m	1.05m OD	-2.48m OD
2B	4.00m	3.60/2.40m	1.05m OD	-3.30m OD
2C	4.00m	3.60/2.40m	1.02m OD	-2.51m OD
2D	4.00m	3.60/2.40m	1.02m OD	-2.52m OD
2E	4.00m	3.60/2.40m	0.98m OD	-2.56m OD

- 6.11 Recording of the deposits was accomplished using the Single Context Recording Method on pro-forma context and planning sheets. Contexts were numbered and are shown in this report within squared brackets. Relevant plans were drawn at a scale of 1:20 and section drawings at a scale of 1:20.
- 6.12 Digital photographs were taken of all trenches and features, a selection of which are presented in Appendix 4.
- 6.13 A Temporary Bench Mark (TBM) was established on the site using GPS survey equipment and pre-existing reference objects. The TBM for Trench 1 was S18A which had a value of 0.87m OD. A TBM for Trench 2 was established on a nearby railway slab to the south-east of the trench, with a value of 1.35m OD, based off of reference point S24 which had a value of 1.39m OD. The height of all principal strata and features were calculated relative to Ordnance Datum and indicated on the appropriate plans and sections.
- 6.14 The complete Site Archive, including all material generated electronically during post excavation, and the artefactual material will be packaged for long term curation. In preparing the Site Archive for deposition, all relevant standards and guidelines documents referenced in the *Standards in the Museum Care of Archaeological Collections* (1992) and *Towards an Accessible Archaeological Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland Scotland and Wales* (SMA 1995) will be adhered to. The depositional requirements of the body to which the Site Archive will be ultimately transferred will be met in full; for this project, the repository which is expected to take custody of the archive is the London Archaeological Archive and Research Centre (LAARC).

7 ARCHAEOLOGICAL PHASE DISCUSSION

The sequences recorded within Trenches 1 and 2 are shown in plan and section in Figures 3 and 4 respectively. Seven phases were noted during investigations:

Phase 1 represents the underlying Palaeolithic gravel formation

Phase 2 represents the probable Mesolithic sandy clay alluvial layer

Phase 3 represents the Neolithic to the Early Bronze Age peat formation

Phase 4 represents the Middle Bronze Age peat formation

Phase 5 represents the Late Bronze Age to Iron Age sandy clay alluvial layer

Phase 6 represents the post-medieval made ground layer

Phase 7 represents the modern concrete and associated hardcore

7.1 Phase 1

7.1.1 The underlying sandy gravel of the Kempton Park Gravel formation was uncovered through hand augering conducted in Trench 1C at a depth of -4.66m OD. It was recorded as context [72].

7.1.2 The window sample undertaken within the boundary of Trench 2 recorded the underlying gravel at a depth of -4.50m OD, though this was not reached during excavation.

7.2 Phase 2

7.2.1 A thick layer of alluvially deposited green-grey sandy clay with occasional to frequent rooting and fibrous material was recorded as Phase 2 comprising contexts [7], [13], [20], [39], and [44] in Trench 1 and [77], [69], [64], [58], and [53] in Trench 2.

7.2.2 This layer was recorded at heights between -2.02m OD and -2.47m OD in Trench 1 and -2.29m OD and -2.51m OD in Trench 2, and covered the entirety of both trenches without any apparent later impact.

7.2.3 The excavation depth of approximately -2.50m OD in each trench was enough to expose this layer in all instances, though not to evaluate or fully excavate it in its entirety. The full thickness of this layer was only noted in Trench 1C when evaluating the depth of the underlying gravels through hand augering, which recorded a thickness of 2.42m.

7.2.4 No human activity was recorded within this phase; however, a Mesolithic date for this layer is proposed based on the *terminus ante quem* of 3990 cal BC provided by radiocarbon dating of the peat at this level from the Hays Storage Services excavation (Divers 1996).

7.3 Phase 3

7.3.1 A natural build up of peat, characterised by very frequent fibrous and woody material inclusions, was recorded as Phase 3. This lower level of peat was not recognised as a separate phase to the layer above it until a significant density of large horizontal timbers was noted in Trench 1C (Figure 3; Plate 6; Plate 7; Plate 8). This timber horizon in Trench 1C, located at approximately -2.00m OD, had the appearance of a trackway and was examined

- for worked elements by woodwork specialist Damian Goodburn; however he concluded that it was a natural deposit of carr woodland trees and branches with later roots growing down into it and was not a man-made structure (Appendix 3).
- 7.3.2 This timber horizon was noted in other sections of both Trench 1 and Trench 2 with varying degrees of density. The surface of this Phase 3 peat layer with fallen timbers was recorded between -1.60m to -2.00m OD, though the top of this layer in relation to the peat of Phase 4 above it was not always clearly delineated. The thicknesses recorded varied between 0.26m and 0.80m. The peat accumulation was recorded as contexts [80], [21], [38], and [43] in Trench 1 and contexts [76], [68], [63], [57], and [52] in Trench 2.
- 7.3.3 The timbers themselves were recorded in Trench 1B as [14] and [15] (Plate 2), and in Trench 1C as [22], [23], [24], [25], [26], [27], [28], [29], [30], [31], and [32] (Plate 6). Wood samples of each were collected for species identification by Ian Tyers, and are considered to be predominantly alder with most originating from roots.
- 7.3.4 Above and through the fallen timbers was also a significant density of later rooting activity. It has been proposed that the fallen trees may have raised the surface of the wetland which was ideal for facilitating growth of fen carr trees such as alder or willows (Appendix 3). This was recorded as context [33] in Trench 1C, but was noted elsewhere within this phase of peat in both trenches with varying density.
- 7.3.5 A comparable layer of peat with large wooden timbers was recorded in the Hays Storage Services excavations. 'Group 14' was similarly characterised as 'several fallen trees found lying randomly in a layer of peat (context 134)' which were the remains of alder woodlands. None of the trees here shows signs of being worked, but two were heavily burnt at one end leading to a hypothesis of being burnt from a lightning strike or forest fire (Divers 1996, p. 23). The peat layer was analysed and is believed to have built up over a many years with radiocarbon dating providing a *terminus post quem* date for the start of the peat as 3990 cal BC and a *terminus ante quem* date for the end of this phase as 1520 cal BC. This date range is likely to be contemporary with Phase 3 here.
- 7.3.6 The only notable feature encountered in the second trench was recorded in Trench 2B as timber [59] (Figure 4; Plate 17; Plate 18), which had the appearance of a vertical post although it was found in isolation and was not worked to a point on both sides. It had been truncated horizontally and was only recorded within the lower sandy clay layer of Phase 2 (context [58]), with no evidence for the continuation of it within the overlying peat layer. Timber [59] measured 400mm in circumference and 510mm in length and the top of the potential post was recorded at a height of -2.49m OD. Due to persistent water influx and ground conditions the timber was difficult to assess fully *in situ*. Furthermore, the timber disintegrated upon lifting. Photographs of the timber have been studied by woodwork specialist Damian Goodburn, who was unable to confirm whether or not the timber had been worked although he considered it unlikely; additionally he commented that trees dying in wetlands are known to cast branches that can fall almost vertically into the soft sediments building up below (pers comm D. Goodburn 8/5/2017).

7.3.7 Within layer [58], a single piece of flint was recovered which was notable as no other flint was found; however the find was not worked or burnt, and is considered a natural inclusion.

7.4 Phase 4

7.4.1 Phase 4 comprised a further peat accumulation above the timber horizon. This was recorded as contexts [6], [12], [19], [37], and [42] in Trench 1 and as [75], [67], [62], [56], and [51] in Trench 2.

7.4.2 This layer, whilst still organic, had significantly fewer fibrous and woody inclusions than the peat recorded as Phase 3. The surface of this peat lay at -0.82m to -1.08m OD with the thickness varying between 0.98m and 0.62m.

7.4.3 No evidence for human activity was found within this Phase, but a Middle Bronze Age date was proposed based on the radiocarbon date range of 1400 – 1000 cal BC provided by a sample from the comparable layer (Phase 4) from the Hays Storage Services excavations (Divers 1996, p. 6).

7.5 Phase 5

7.5.1 Phase 5 comprises an alluvial sandy-clay layer above the peat formation recorded as contexts [5], [11], [18], [36] and [41] in Trench 1 and contexts [74], [66], [61], [55] and [49] in Trench 2. This layer was recorded at a height of -0.60 to -0.78m OD and was between 0.18m to 0.44m thick.

7.5.2 This phase is comparable to the Hays Storage Services excavation Phase 5, which was believed to have a *terminus post quem* date of 1400 cal BC.

7.5.3 No evidence for human activity was found within Phase 5.

7.6 Phase 6

7.6.1 Phase 6 comprises the made ground silt layer which overlay the alluvial clay. No artefactual evidence was found within this layer for dating purposes, apart from a post-medieval ceramic drain recorded in Trench 2E at a height of -1.40m OD (context [78] and [79]). The drain ran at a slight east-northeast to west-southwest angle with the cut visible from a height of -0.76m OD to -1.70m OD at base, and was approximately 1.00m wide. Fill [78] was predominantly comprised of grey-green sandy clay that was comparable to the Phase 5 layer.

7.6.2 The silty layer itself was recorded as contexts [4], [10], [17] and [35] in Trench 1. The comparable Trench 2 contexts [73], [65], [60], [54], and [48] were slightly more mixed with gravel and may have been a bit more disturbed by the construction of the lower concrete slab, but were essentially very similar in nature to the Trench 1 contexts.

7.6.3 In Trench 1 this layer was recorded at a height of between 0.00m and -0.72m OD with the lowermost height representative of modern impact upon this layer, and with a thickness ranging between 0.04m and 0.76m. Further impact on this layer was seen as it was truncated entirely in the easternmost 4 metres of Trench 1. In Trench 2 this layer ranged in thickness from 0.88m to 0.36m and was recorded at a height that sloped down from 0.14m

OD in the east to -0.40m OD in the west, which was representative of the sloping concrete slab overlying it and therefore is potentially due to modern landscaping rather than any natural underlying topography.

7.7 Phase 7

- 7.7.1 Phase 7 is largely comprised of the concrete and tarmac slabs with associated hardcore aggregates in both trenches. Trench 1 recorded an uppermost tarmac ground surface [1] at between 0.73m to 0.94m OD that was approximately 0.16m thick. The variation in surface height was due to drainage and localised irregularities rather than a consistent gradient. This modern surface overlay a 0.64m-thick layer of Type 1 stone hardcore and an underlying terram recorded as Context [2]. Trench 2 recorded two reinforced concrete slabs: context [45] recorded at 0.97m OD in the west and 1.05m OD in the east with a thickness of approximately 0.20m and context [47] recorded at -0.12m OD in the west sloping up to 0.54m OD in the east with a thickness of approximately 0.20m. The hardcore in this trench comprised two layers of brick rubble aggregate recorded as contexts [46] and [50]. Context [46] varied between 0.40m thick in the eastern side of the trench to 0.90m thick in the western side in order to level the uppermost slab [45] in comparison to the sloping lower slab [47]. Context [50] was a maximum of 0.22m thick but was very thin to non-existent at the westernmost end of the trench.
- 7.7.2 Trench 1 also contained significant deposits of large reinforced concrete building debris, such as pillars, that may have been related to the mid 20th century greyhound track that was previously at the site or to the more modern redevelopment of the nearby warehouse during the 1990's.
- 7.7.3 Two modern drain runs were also recorded. Cut [9] with fill [8] was recorded in Trench 1A at a height of -0.06m OD with a depth of 0.98m. This drain run was oriented north to south across the 2.30m width of the trench and was approximately 0.90m wide. Cut [71] with fill [70] was recorded in Trench 2D at a height of -0.12m OD with a depth of 0.70m. This cut, which contained what appeared to be a lead drain pipe, was oriented north to south across the 2.40m width of the trench and was 0.64m wide.

8 RESEARCH OBJECTIVES

8.1 The original research objectives and questions contained within the Written Scheme of Investigation can now be addressed as follows:

To establish whether the causeway found to the immediate north continues into and across the site. If present, to confirm its state of preservation and to compare its form to that recorded in 1993.

8.2 No evidence for the causeway was recorded within the evaluation.

8.3 The stratigraphic sequence recorded in Trenches 1 and 2 were both comparable to that recorded during the Hays Storage Solutions excavations in 1993 as follows:

Stratigraphic Layer	DA HS 93			00L17		
	Phase	Approx. Level (m OD)		Phase	Approx. Level (m OD)	
		Max	Min		Max	Min
Gravel	Not Recorded			Phase 1	-4.66	
Alluvial Sandy Clay/Silt	Phase 1	-2.33	-3.09	Phase 2	-2.02	-2.51
Peat with timber horizon	Phase 2	-1.98	-2.80	Phase 3	-1.60	-2.00
Causeway	Phase 3	-1.63	-1.72	Not Recorded		
Peat	Phase 4	-1.56	-1.66	Phase 4	-0.82	-1.08
Alluvial Clay	Phase 5	-0.35	-1.55	Phase 5	-0.60	-0.78
Soil Horizon/ Made Ground	Phase 6	-0.40	-1.10	Phase 6	0.00	-0.72
Modern Ground Surface	Phase 7	0.55	0.31	Phase 7	1.05	0.73

8.4 The similarities within the stratigraphic sequence and the layers of peat and alluvium recorded suggest that if the causeway were to continue along the projected route, that it would have been located between phases 3 and 4 at Goresbrook Park.

8.5 The levels recorded suggest a variation in height between the alluvial formation levels between the two investigations; for example, the DAHS 93 evaluation recorded the underlying sandy clay/silt layer at approximately 300–500mm lower than recorded in OOL17 and the very top of the peat formation was recorded at DAHS 93 as being 600–700mm lower than in OOL17. A similar disparity in ground level was noted between the two trial trenches excavated in 1993, with the alluvial sequence in Trench 2, which was the location of the causeway, lying approximately 0.70m lower than in Trench 1 to the west. This could suggest that the DAHS 93 Trench 2 was situated in an area of lower ground during the Prehistoric period. This area of lower ground may have prompted the construction of the causeway across the, presumably wetter and boggy, dip in the terrain.

8.6 Alternatively, the lack of causeway within the evaluation trenches could indicate that the results from DAHS 93 may have been misinterpreted. An alternative suggestion is that the “causeway” may have actually been a burnt mound; which would not be an unusual feature

for this area as other burnt mounds have been recorded within the East London area (Stafford 2012). However, the low relative frequency of burnt flint (15%) within the sand and gravel make-up of the feature would be unusual in such a feature; additionally the recorded 4m x 20m dimensions are not consistent with the typical shape of burnt mounds (Historic England 2011).

To ascertain whether archaeological remains associated with the causeway are present.

- 8.7 No archaeological remains that may be associated with the causeway were recovered.
- 8.8 A single potentially anthropogenic timber element, resembling a vertical post, was found within Trench 2 which appeared to pre-date the lower peat formation. This cannot be conclusively shown to be worked, and the potential for it to have been naturally deposited must be considered. This feature was found in isolation, and no associated structural elements were recorded.

To establish the presence or absence of palaeo-environmental remains and, if present, assess their potential to yield information about the former environment of the site and/or human activity in the vicinity.

- 8.9 The recorded peat and alluvial deposits have a high potential to yield information about the former environment about the site. In particular, it adds to the corpus of evidence for reconstruction of the later prehistoric landscape.
- 8.10 More detailed analysis of the peat layers would be necessary in order to fully assess the nature and timescale of the peat formation; however a broad interpretation of successive wet and dry periods can be proposed. It is possible that the fallen trees made a slight rise in the wetland surface which was ideal for colonisation by fen carr trees such as alder or willows (Appendix 3).

To establish the presence or absence of archaeological remains of any other periods, and allow the design of a suitable mitigation strategy if appropriate

- 8.11 Evidence for potential archaeological remains comprised the presence of a ceramic field drain within Trench 2E. This is thought to possibly represent the post-medieval agricultural use of the area, potentially also represented by the made-ground layer of Phase 6. No other artefacts or features dating to this period were recorded. No mitigation is warranted based on these findings.
- 8.12 Modern archaeological remains may have also been encountered in Trench 1 in relation to the mid 20th-century greyhound stadium in the form of demolition debris. This attribution is, however, uncertain and the remains, which have already been damaged from the process of demolition, are not *in situ*. No mitigation is warranted based on these findings.

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

- 8.13 In Trench 1 large concrete blocks and pillars which are likely demolition debris from 20th-century activity were recorded to a maximum depth of -1.20m OD (approximately 2m bgl), which truncated through the upper alluvial sandy clay layer and into the underlying peat formation. However, this level of impact was rare and only visible in the final easternmost section of the trench.
- 8.14 The modern drain runs in both Trench 1 and 2 partially truncate the sandy-clay alluvial layer, while the post-medieval ceramic drain run is at a significantly lower depth and partially truncated the lower peat formation (to a depth of -1.70m OD / 2.68m bgl).
- 8.15 Ultimately, these post-depositional truncations are isolated and limited in their extent, with the majority of the archaeological layers surviving with minimal to no impact.

9 CONCLUSIONS

- 9.1 The results of the evaluation have shown that the causeway found to the north in 1993 does not continue into the study site along the projected route. The similarities within the stratigraphic sequence between the current evaluation and the Hays Storage Solutions investigations suggests that if the causeway were to be present within the evaluation trench areas that it would have been *in situ*, as no significant post-depositional impacts were recorded, and it should have been visible during the recent work.
- 9.2 No evidence for a prehistoric settlement or reason for the termination of the causeway was found. The higher elevation of the alluvial sequence in the evaluation trenches to the south and in the DAHS93 Trench 1 to the west, compared to that surrounding the causeway, suggests that the area of activity may be focused around a localised depression in the landscape rather than leading further south across the entirety of the flood plains.
- 9.3 The only evidence for past human activity on the site is a drain pipe dating to the post-medieval period.
- 9.4 Once the project is deemed complete and this report approved by GLAAS on behalf of the local planning authority, the completed archive comprising all site records from the fieldwork will be deposited by PCA with LAARC under site code OOL17. Until then the archive will be stored at PCA's headquarters in Brockley, London.
- 9.5 The results of the archaeological investigation will be published as an entry in the *London Archaeologist* 'Round Up'.

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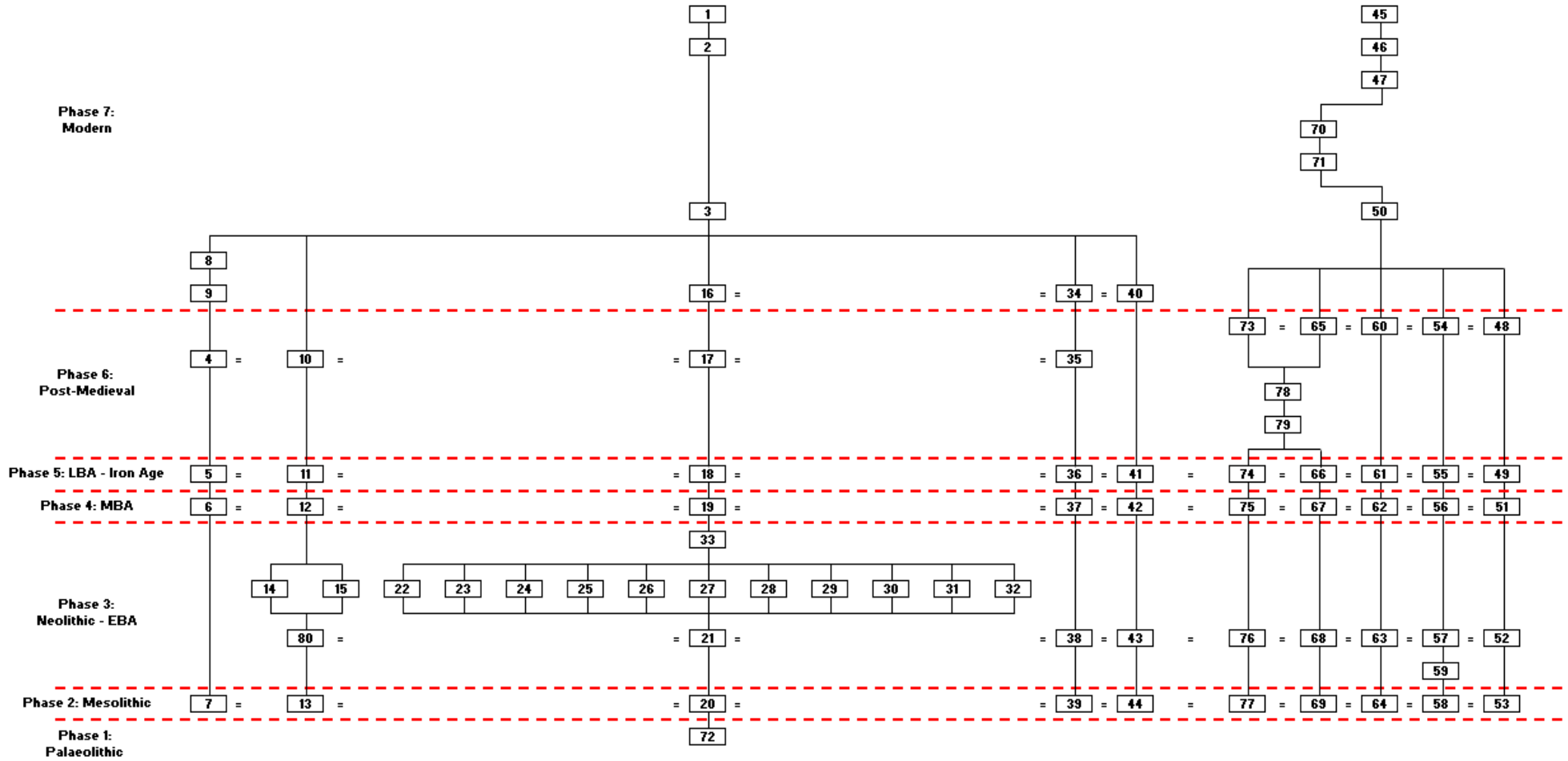
12 APPENDIX 1: CONTEXT INDEX

Site Code	Context No	Location	Plan	Section	Type	Description	Date	Phase	OD Heights	
									Max	Min
OOL17	1	Trench 1	n/a	S1	Layer	Tarmac	Modern	7	0.94	0.73
OOL17	2	Trench 1	n/a	S1	Layer	Hardcore (Type 1 Stone)	Modern	7	0.76	0.60
OOL17	3	Trench 1	n/a	S1	Layer	Brick Rubble	Modern	7	0.09	0.04
OOL17	4	Trench 1A	n/a	S1	Layer	Dk Grey Silty Clay (Made Ground?)	Post-Medieval	6	-0.03	-0.03
OOL17	5	Trench 1A	n/a	S1	Layer	Alluvial grey-green clay	LBA - IA	5	-0.78	-0.78
OOL17	6	Trench 1A	n/a	S1	Layer	Peat	Neolithic - MBA	3/4	-1.06	-1.06
OOL17	7	Trench 1A	n/a	S1	Layer	Alluvial grey-green clay	Mesolithic	2	-2.19	-2.19
OOL17	8	Trench 1A	n/a	S1	Fill	Fill of [9]	Modern	7	-0.06	-0.06
OOL17	9	Trench 1A	n/a	S1	Cut	Cut of drain run	Modern	7	-0.06	-1.04
OOL17	10	Trench 1B	n/a	S1	Layer	Dk Grey Silty Clay (Made Ground?)	Post-Medieval	6	-0.10	-0.10
OOL17	11	Trench 1B	n/a	S1	Layer	Alluvial grey-green clay	LBA – IA	5	-0.77	-0.77
OOL17	12	Trench 1B	n/a	S1	Layer	Peat	MBA	4	-1.09	-1.09
OOL17	13	Trench 1B	n/a	S1	Layer	Alluvial grey-green clay	Mesolithic	2	-2.02	-2.55
OOL17	14	Trench 1B	n/a	S1	Timber	Fallen log (worked?)	Neolithic – EBA	3	-1.68	-1.68
OOL17	15	Trench 1B	n/a	S1	Timber	Fallen log (worked?)	Neolithic – EBA	3	-1.65	-1.65
OOL17	16	Trench 1C	n/a	S1	Layer	Brick/Concrete rubble	Modern	7	-0.06	-0.47
OOL17	17	Trench 1C	n/a	S1	Layer	Dk Grey Silty Clay (Made Ground?)	Post-Medieval	6	-0.42	-0.48
OOL17	18	Trench 1C	n/a	S1	Layer	Alluvial grey-green clay	LBA – IA	5	-0.72	-0.75
OOL17	19	Trench 1C	n/a	S1	Layer	Peat	MBA	4	-0.97	-1.02
OOL17	20	Trench 1C	n/a	S1	Layer	Alluvial grey-green clay	Mesolithic	2	-2.24	-2.24
OOL17	21	Trench 1C	21	S1	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.83	-2.11
OOL17	22	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.99	-1.99
OOL17	23	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.99	-1.99
OOL17	24	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-2.00	-2.00
OOL17	25	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.97	-1.97
OOL17	26	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.96	-1.96
OOL17	27	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-2.02	-2.02
OOL17	28	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-2.05	-2.05
OOL17	29	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-2.05	-2.05
OOL17	30	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.95	-1.89
OOL17	31	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-2.05	-2.05
OOL17	32	Trench 1C	21	n/a	Timber	Fallen tree trunk/branch	Neolithic – EBA	3	-1.89	-1.89
OOL17	33	Trench 1C	21	n/a	Timber	Rooting	Neolithic – EBA	3	-1.83	-1.83
OOL17	34	Trench 1D	n/a	S1	Layer	Brick/Concrete rubble	Modern	7	0.00	-0.14

Site Code	Context No	Location	Plan	Section	Type	Description	Date	Phase	OD Heights	
									Max	Min
OOL17	35	Trench 1D	n/a	S1	Layer	Dk Grey Silty Clay (Made Ground?)	Post-Medieval	6	-0.33	-0.72
OOL17	36	Trench 1D	n/a	S1	Layer	Alluvial grey-green clay	LBA – IA	5	-0.57	-0.72
OOL17	37	Trench 1D	n/a	S1	Layer	Peat	MBA	4	-0.84	-0.92
OOL17	38	Trench 1D	n/a	S1	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.64	-1.64
OOL17	39	Trench 1D	n/a	S1	Layer	Alluvial grey-green clay	Mesolithic	2	-2.30	-2.42
OOL17	40	Trench 1E	n/a	S1	Layer	Brick/Concrete rubble	Modern	7	-0.17	-0.17
OOL17	41	Trench 1E	n/a	S1	Layer	Alluvial grey-green clay	LBA – IA	5	-0.60	-0.73
OOL17	42	Trench 1E	n/a	S1	Layer	Peat	MBA	4	-0.82	-1.20
OOL17	43	Trench 1E	n/a	S1	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.76	-1.76
OOL17	44	Trench 1E	n/a	S1	Layer	Alluvial grey-green clay	Mesolithic	2	-2.47	-2.47
OOL17	45	Trench 2	n/a	S2	Layer	Reinforced Concrete slab	Modern	7	1.05	0.97
OOL17	46	Trench 2	n/a	S2	Layer	Brick and Gravel hardcore	Modern	7	0.84	0.80
OOL17	47	Trench 2	n/a	S2	Layer	Reinforced Concrete slab	Modern	7	0.59	-0.12
OOL17	48	Trench 2A	n/a	S2	Layer	Dark grey-black gravelly silt	Post-Medieval	6	0.16	0.08
OOL17	49	Trench 2A	n/a	S2	Layer	Alluvial grey-green clay	LBA – IA	5	-0.58	-0.72
OOL17	50	Trench 2	n/a	S2	Layer	Brick rubble hardcore	Modern	7	0.32	-0.40
OOL17	51	Trench 2A	n/a	S2	Layer	Peat	MBA	4	-1.04	-1.05
OOL17	52	Trench 2A	n/a	S2	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.90	-1.90
OOL17	53	Trench 2A	n/a	S2	Layer	Alluvial grey-green clay	Mesolithic	2	-2.29	-2.35
OOL17	54	Trench 2B	n/a	S2	Layer	Dark grey-black gravelly silt	Post-Medieval	6	0.10	-0.04
OOL17	55	Trench 2B	n/a	S2	Layer	Alluvial grey-green clay	LBA – IA	5	-0.52	-0.66
OOL17	56	Trench 2B	n/a	S2	Layer	Peat	MBA	4	-0.82	-0.96
OOL17	57	Trench 2B	n/a	S2	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.66	-1.66
OOL17	58	Trench 2B	59/58	S2	Layer	Alluvial grey-green clay	Mesolithic	2	-2.27	-2.27
OOL17	59	Trench 2B	59/58	S2	Timber	Possible worked timber post	Neolithic – EBA	3	-2.49	-3.00
OOL17	60	Trench 2C	n/a	S2	Layer	Dark grey-black gravelly silt	Post-Medieval	6	-0.11	-0.18
OOL17	61	Trench 2C	n/a	S2	Layer	Alluvial grey-green clay	LBA – IA	5	-0.62	-0.68
OOL17	62	Trench 2C	n/a	S2	Layer	Peat	MBA	4	-0.91	-0.95
OOL17	63	Trench 2C	n/a	S2	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.85	-1.85
OOL17	64	Trench 2C	n/a	S2	Layer	Alluvial grey-green clay	Mesolithic	2	-2.36	-2.40
OOL17	65	Trench 2D	n/a	S2	Layer	Dark grey-black gravelly silt	Post-Medieval	6	-0.14	-0.31
OOL17	66	Trench 2D	n/a	S2	Layer	Alluvial grey-green clay	LBA – IA	5	-0.70	-0.71
OOL17	67	Trench 2D	n/a	S2	Layer	Peat	MBA	4	-1.03	-1.08
OOL17	68	Trench 2D	n/a	S2	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.98	-1.98
OOL17	69	Trench 2D	n/a	S2	Layer	Alluvial grey-green clay	Mesolithic	2	-2.47	-2.47
OOL17	70	Trench 2D	n/a	S2	Fill	Fill of [71]	Modern	7	-0.12	-0.12
OOL17	71	Trench 2D	n/a	S2	Cut	Cut of drain run	Modern	7	-0.12	-0.82

Site Code	Context No	Location	Plan	Section	Type	Description	Date	Phase	OD Heights	
									Max	Min
OOL17	72	Trench 1C	n/a	S1	Layer	Natural Gravel	Palaeolithic	1	-4.66	-4.66
OOL17	73	Trench 2E	n/a	S2	Layer	Dark grey-black gravelly silt	Post-Medieval	6	0.40	0.33
OOL17	74	Trench 2E	n/a	S2	Layer	Alluvial grey-green clay	LBA – IA	5	-0.76	-0.76
OOL17	75	Trench 2E	n/a	S2	Layer	Peat	MBA	4	-1.02	-1.70
OOL17	76	Trench 2E	n/a	S2	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.92	-1.92
OOL17	77	Trench 2E	n/a	S2	Layer	Alluvial grey-green clay	Mesolithic	2	-2.51	-2.51
OOL17	78	Trench 2E	n/a	S2	Fill	Fill of [79]	Post-Medieval	6	-0.76	-0.76
OOL17	79	Trench 2E	n/a	S2	Cut	Cut of drain run (ceramic pipe)	Post-Medieval	6	-0.76	-1.70
OOL17	80	Trench 1B	n/a	S1	Layer	Peat with higher timber content	Neolithic – EBA	3	-1.65	-1.80

13 APPENDIX 2: SITE MATRIX



14 APPENDIX 3: WOODWORK ASSESSMENT

Brief notes following a site visit to an evaluation trench on the projected line of the Hays Storage Depot Bronze Age stoney causeway, Dagenham ; Site code OOL 17

DM Goodburn Ba Phd Archaeological Woodwork Specialist

11/4/2017

14.1 **Previous archaeological findings and the main motivation for the evaluation ahead of construction**

14.1.1 The evaluation trench lies in a very low lying part of east London just east of Dagenham Dock Rail station, on the ancient flood plain of the Thames. Previous excavations in the general area have revealed important later prehistoric, mainly Bronze Age, wooden structures such as trackways, platforms and also portable objects like the Dagenham Idol. These were preserved by water logging in deep peats and alluvium. Unusually adjacent to the area of evaluation trenching, an artificial, north south causeway of stoney materials, including burnt flint was found in the 1990's. The evaluation trench relevant here has been set out to cross the projected line of that causeway. It is approximately at the centre point of a trench line totalling c20 m eventually, being excavated in 4 x 2m box-shored trenches. The original causeway was found at c. -1.7m OD and was c. 4m wide, with a depth of stoney material of c. 0.27m and a traced length of over 23m (Divers unpublished report 1996....).

14.2 **The main reason for the site visit**

14.2.1 The PCA team on-site had found no trace of the stoney causeway at c. -1.7m OD on its projected line and had excavated down to c. -2.0m OD (CR Pers com.) at this location relatively large timbers appeared and were considered possibly, humanly worked. This initiated the visit from this writer who has worked on and off-site with waterlogged later prehistoric woodwork found in the general region since the late 1980's (Stafford with Goodburn and Bates 2012 A13 report is the most extensive publication relevant here.....).

14.3 **Known natural accumulations of wood, fallen trees, branches and tree stumps and root systems around c. 4,000 years old in the flood plain deposits of the area**

14.3.1 Besides humanly worked roundwood and occasionally timber structures known from the peat/alluvial sequence of the flood plain, the deposits are also well known to contain bands of preserved tree stumps, naturally fallen trees and branches and root masses from prehistoric fen carr woodland. The development of wet woodland on the flood plain occurred during slightly dryer phases only to be ended by rises in the water table. These rises in water table gradually killed the established trees which eventually fell over to be preserved in the increasingly wet peat. The deposits containing oak and yew fallen trees have been dated in the region to before 2,000 BC whilst the carr woodland, mainly of alder, has a wider date range. Experience on a number of sites has shown that the upper faces of the mains

stems of naturally felled trees often decayed leaving the bottom face much better preserved often with the bark attached. Additionally large, naturally cast, branches have also been found buried vertically in soft peats and alluvium such that they initially resemble 'posts' or piles on excavation. The practical difficulties of distinguishing vertical roots from small stakes are also considerable..... in sum it can be initially very difficult to distinguish worked from naturally deposited wood in these late prehistoric peat deposits.

14.4 **The waterlogged wood in the trench section open on the 11/4/2017 at site OOL 17**

14.4.1 The PCA site team had cleaned the exposure of woody material found at c. -2.0m OD thoroughly and drained the excess water allowing it to be closely examined. Viewed from the top of the trench the largest darkest timbers initially looked like they might have been plank-like timbers of dark wood, possibly oak. However, on descent into the trench and a little further cleaning of sample areas, it was clear that the very dark timbers were not oak (Probably rather stained Alder...?). No cut marks or other traces of human working such as socket joints, could be seen. In the SE corner one of the larger timbers set at a slightly lower level, had all its bark intact. Surrounding and growing through some of the timbers were later, slightly stake-like roots of a paler coloured wood. The fallen trees may have made a slight rise in the wetland surface ideal for colonisation by fen carr trees such as Alder, or willows.

14.4.2 In sum, this appears to be a natural deposit of carr woodland trees and branches with later roots growing down into it, as such it is not a humanly made structure. The archaeological value is for local, later prehistoric landscape reconstruction. The fallen trees were once upright living features of the local landscape the like of which do not survive on typical 'dry' archaeological sites.

14.4.3 It was suggested that a levelled plan of the major tree stems be completed and levelled with samples taken of the larger stems for checking the wood species (the plan was largely already completed). As C Reade said excavation was due to proceed lower by c. 0.5m it was suggested that artefactual material could be found during that process and a clear eye should be kept out for that purpose, focussing on possible cut ends of timbers and smaller roundwood. The same is also true for the other trenches in the area that could easily contain later prehistoric or much more recent historic woodwork preserved in the deposits.

15 APPENDIX 4: PLATES



Plate 1: Trench 1A North Facing Section (Facing South)



Plate 2: Trench 1B, Timbers [14] and [15], facing west



Plate 3: Trench 1B North Facing Section, facing south



Plate 4: Trench 1C North Facing Section at start of peat deposit [19], facing south



Plate 5: Trench 1C Working Shot, facing south



Plate 6: Trench 1C Timber Horizon and Peat Layer [21], facing south



Plate 7: Trench 1C Rooting [33] and Timber [30] Detail, facing west



Plate 8: Trench 1C Timber Detail, facing east



Plate 9: Trench 1C Full North Facing Section, facing south



Plate 10: Trench 1D North Facing Section, facing south



Plate 11: Trench 1E North Facing Section, facing south



Plate 12: Trench 1 Location, facing west



Plate 13: Trench 2 Location, facing north-east



Plate 14: Trench 2A South Facing Section, facing north



Plate 15: Trench 2B South Facing Section, facing north



Plate 16: Working Shot of Shoring Box, facing west



Plate 17: Trench 2B Timber [59] in Layer [58], facing north



Plate 18: Trench 2B Timber [59] in Layer [58], facing north



Plate 19: Trench 2C South Facing Section, facing north



Plate 20: Trench 2D South Facing Section, facing north



Plate 21: Trench 2E South Facing Section, facing north

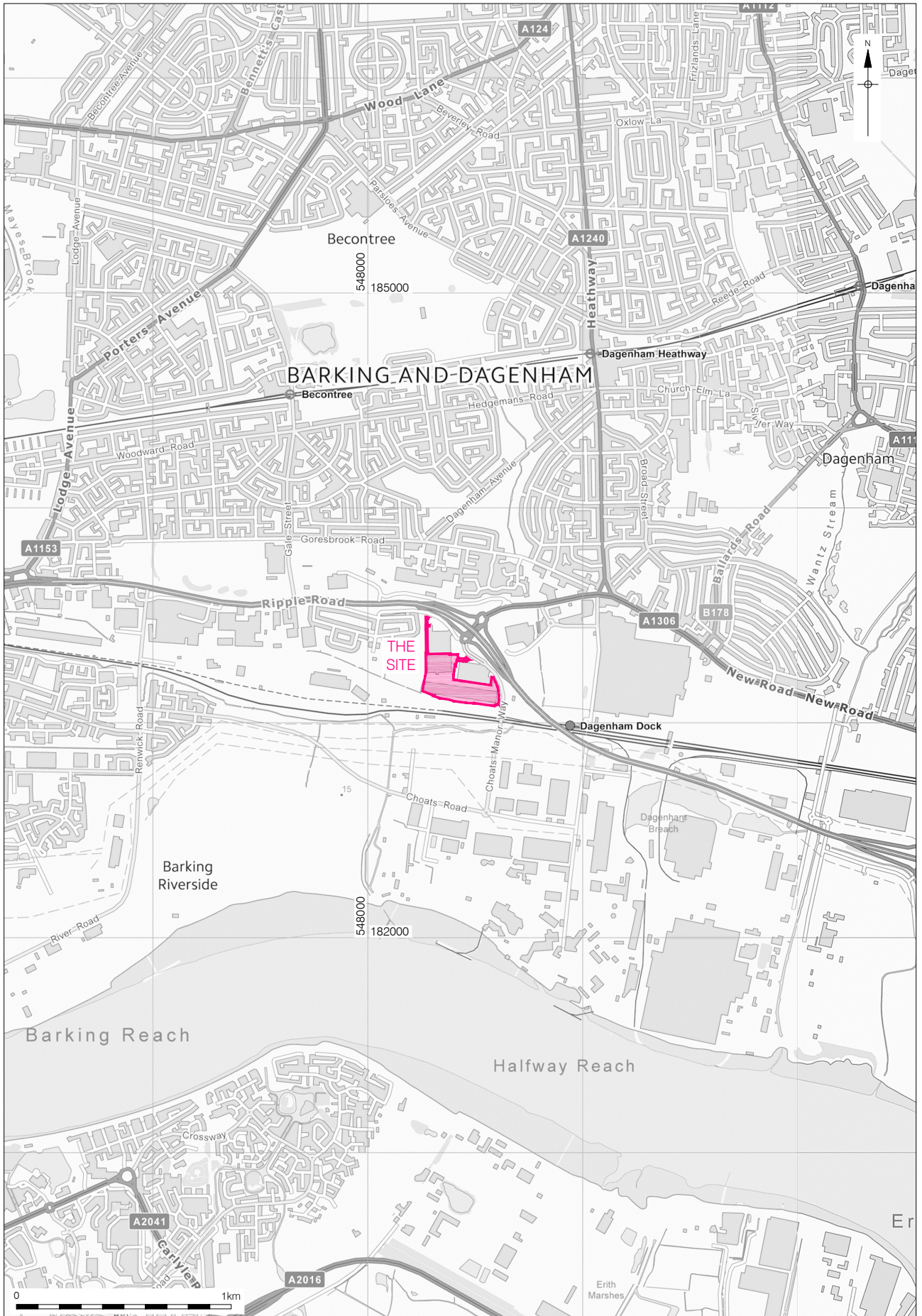


Plate 22: Trench 2E East Facing Section, facing west

16 APPENDIX 5: OASIS FORM

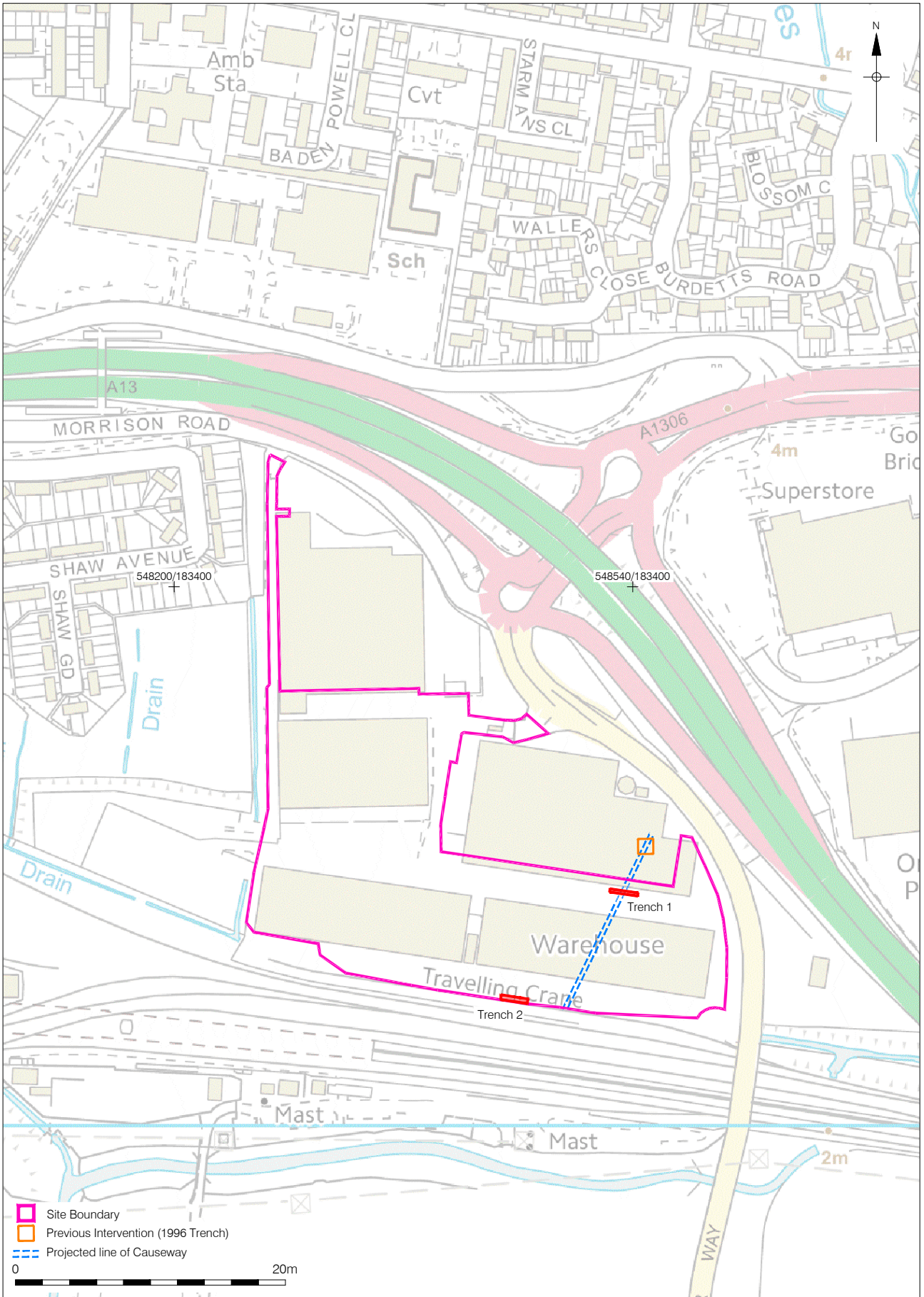
OASIS ID: preconst1-284742	
Project details	
Project name	Goresbrook Park, Dagenham, Greater London
Short description of the project	An evaluation was conducted at the Eddie Stobart Depot, Goresbrook Park, in the London Borough of Barking and Dagenham. A Bronze Age causeway was recorded during excavations at the Hays Storage Depot in 1993 and the primary intention of the current evaluation was to assess if this gravel and sand track continued southwards into the study area as projected. No evidence for the causeway or associated human activity was recorded during the evaluation. The resultant record is primarily significant for landscape reconstruction of the later prehistoric periods.
Project dates	Start: 27-03-2017 End: 03-05-2017
Previous/future work	No / Not known
Any associated project reference codes	OOL17 - Sitecode
Any associated project reference codes	16/01475/FUL - Planning Application No.
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 4 - Storage and warehousing
Monument type	SUBMERGED LANDSCAPE Bronze Age
Significant Finds	NONE None
Methods & techniques	"Targeted Trenches"
Development type	Car park (flat)
Development type	Large commercial warehouses
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)
Project location	
Country	England
Site location	GREATER LONDON BARKING AND DAGENHAM DAGENHAM Goresbrook Park
Postcode	RM9 6RS
Study area	5.3 Hectares
Site coordinates	TQ 48432 83233 51.527966794075 0.140026310543 51 31 40 N 000 08 24 E Point
Height OD / Depth	Min: -4.66m Max: -4.66m
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	Christina Reade
Type of sponsor/funding body	Client
Name of sponsor/funding body	LMP Dagenham Ltd
Project archives	
Physical Archive recipient	LAARC
Physical Contents	"Wood"
Digital Archive recipient	LAARC
Digital Contents	"none"
Digital Media available	"Images raster / digital photography","Images vector"
Paper Archive recipient	LAARC
Paper Contents	"none"
Paper Media available	"Context sheet","Notebook - Excavation',' Research',' General Notes","Plan","Section","Unpublished Text"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Goresbrook Park, Dagenham, London: An Archaeological Evaluation
Author(s)/Editor(s)	Reade, C
Date	2017
Issuer or publisher	Pre-Construct Archaeology Ltd
Place of issue or publication	London
Description	Grey Literature report
Project bibliography 2	
Publication type	Grey literature (unpublished document/manuscript)
Title	Goresbrook Park, Dagenham, London: Written Scheme of Investigation for an Archaeological Evaluation
Author(s)/Editor(s)	Mayo, C.
Date	2017
Issuer or publisher	Pre-Construct Archaeology
Place of issue or publication	London
Description	Grey Literature WSI
Entered by	
Entered by	Christina Reade (creade@pre-construct.com)
Entered on	11 May 2017



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Figure 1
 Site Location
 1:25,000 at A4



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Figure 2
Trench Location
1:4,000 at A4

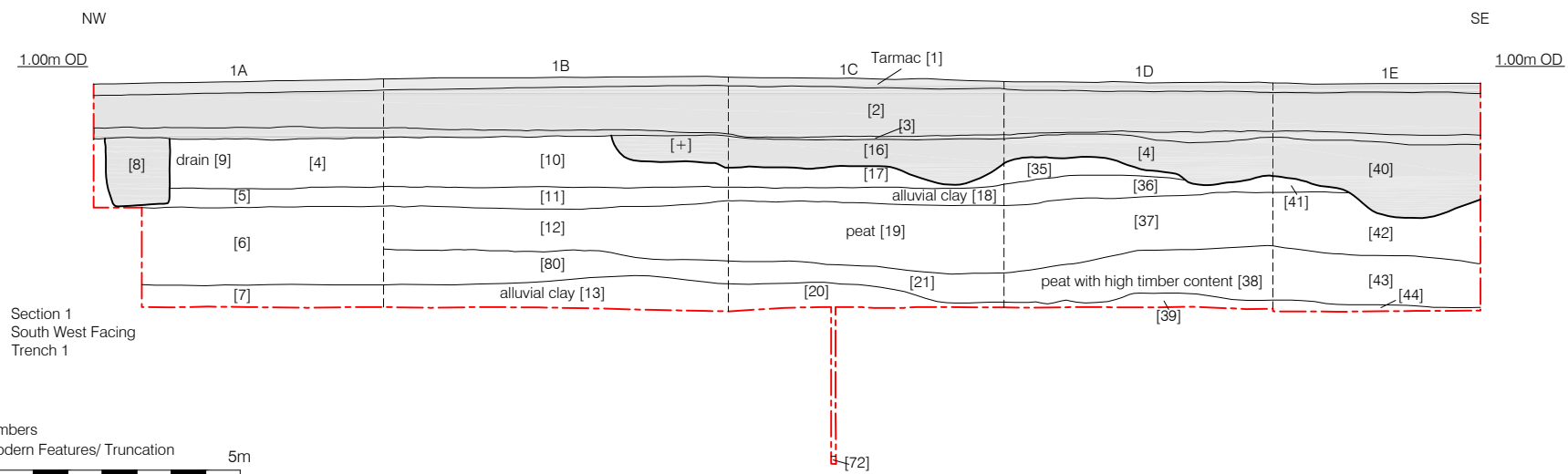
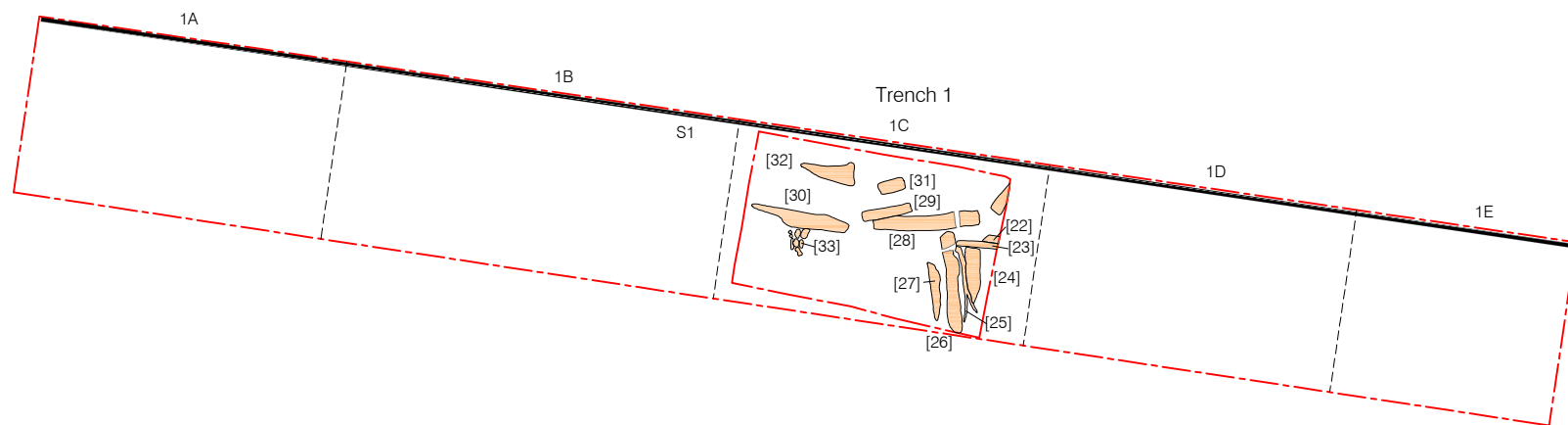
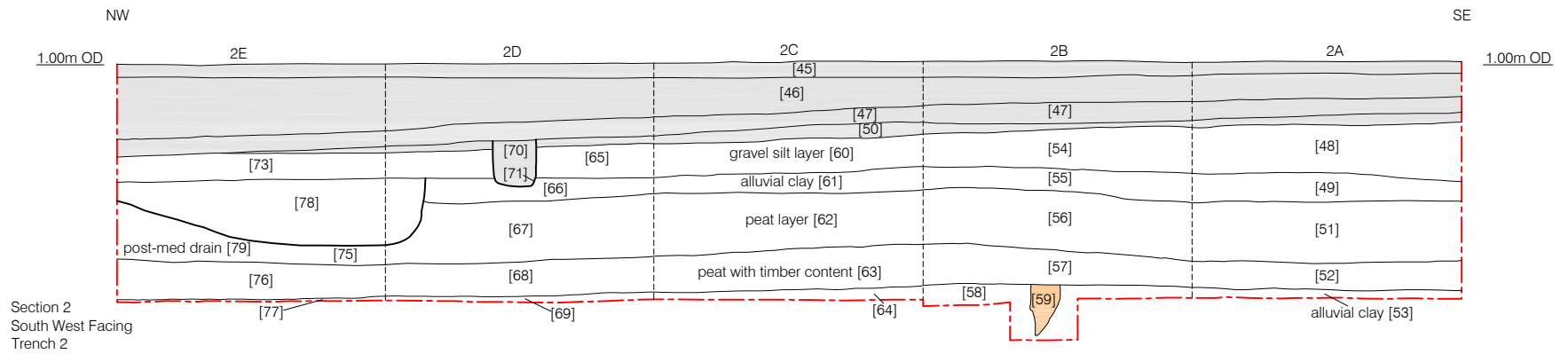
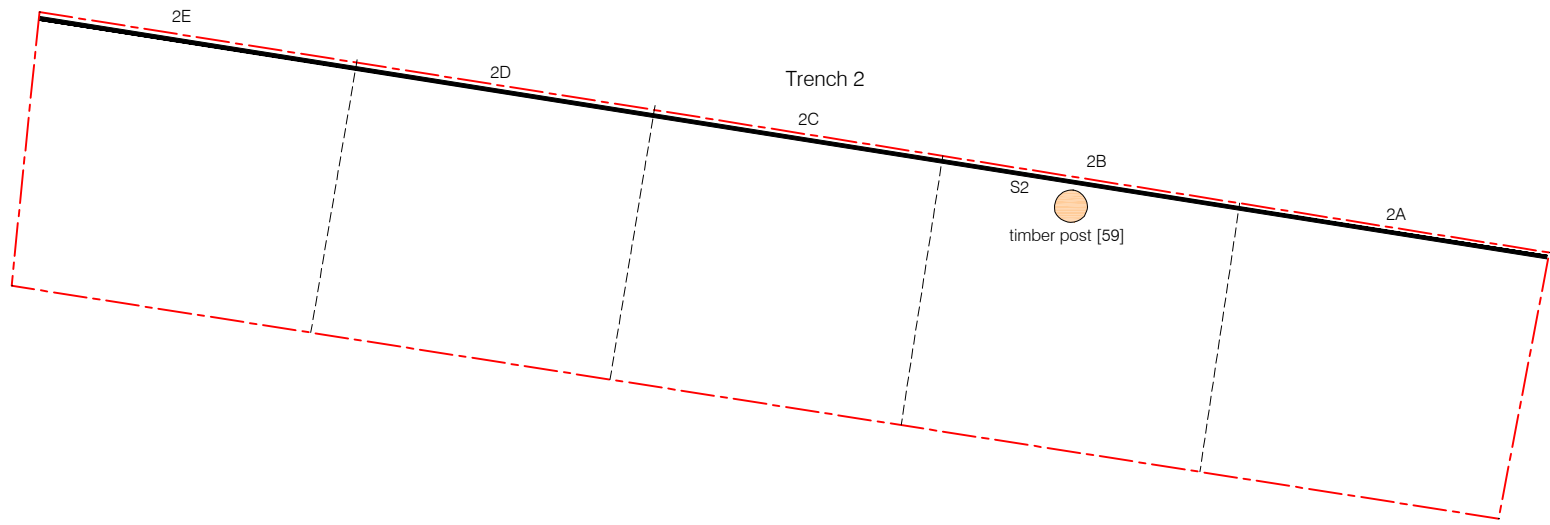
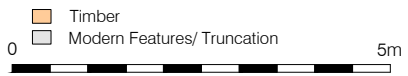


Figure 3
Plan of Trench 1 and Section
1:100 at A4



Section 2
South West Facing
Trench 2



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Figure 4
Trench 2 and Section
1:100 at A4

PCA

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