BEAM PARK RIVERSIDE PHASE 2, THAMES AVENUE, LONDON BOROUGH OF BARKING AND DAGENHAM
AN ARCHAEOLOGICAL EVALUATION

SITE CODE: THV17

LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF BARKING AND DAGENHAM

DECEMBER 2017

PRE-CONSTRUCT ARCHAEOLOGY

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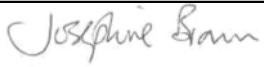
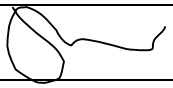
Graphics Checked by:	J Brown		8.12.2017
Project Manager Sign-off:	H Hawkins		8.12.2017

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AN ARCHAEOLOGICAL EVALUATION

SITE CODE:	**THV 17**
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PLANNING APPLICATION NUMBER:	**PRE-APPLICATION**
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CONTENTS

1 ABSTRACT

1.1 This report details the results of an archaeological evaluation on land at Beam Park Riverside (Phase 2), Thames Avenue, London Borough of Barking and Dagenham, RM9 6DE. The evaluation was undertaken by Pre-Construct Archaeology Limited, and was commissioned by RPS / CgMS on behalf of Countryside Properties. The evaluation followed a Phase 1 evaluation on the Phase 1 part of the site, directly to the east of Phase 2.

1.2 Ten trenches were excavated across the site. Natural deposits were noted in nine of the ten trenches excavated. The presence of terrace gravels was noted in two of the ten trenches, which were principally located down the eastern portion of the site. The gravel dropped to the south-west and was not reached in the southernmost trenches, deeper into the Thames floodplain. This was partly due to heavy truncation by modern concrete and partly due to the sudden fall in the terrace gravel towards the Thames, making the gravel too deep to investigate.

1.3 A complex sequence of alluvial and peat deposits was encountered in nine of the trenches excavated. Geo-archaeological trial holes were excavated in the trenches by Quest to investigate these floodplain deposits and to sample and understand the formation of the peat at the edge of the floodplain.

1.4 Prehistoric worked timbers were found in Trench 21, which dated to the Late Neolithic/ Chalcolithic. It is possible that these elements could have formed a simple wooden trackway. Peat deposits sealed and underlay these timbers.

1.5 Further alluvial deposits formed upper layers in all levels of the trenches excavated and were formed from the Roman period onwards. The alluvial deposits were sealed by modern made ground.

1.6 Modern truncation to some degree or another was encountered in all the trenches and this was seen to be most severe down the western side of the site; where reinforced concrete, underground tanks and ground beams from the warehouses of the 20th century Ford Assembly Plant were uncovered.

2 INTRODUCTION

2.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Limited on land at Beam Park Riverside Phase 2, Thames Avenue, Dagenham, RM9 6DE. The site comprised an irregular shaped piece of land with the east-west New Road (A1306) located to the north. The site was bordered to the south by the London, Tilbury and Southend (and HS1) railway. The site was to the west of the north to south flowing Beam River green corridor and was also west of the north-south Thames Avenue (not a public road). The site was centred at NGR TQ 5014 82908 (see Figure 1).

2.2 A number of Phase 2 Site Investigation boreholes had previously been monitored and documented by QUEST and deposit modelling of the site carried out (Quest 2016). The trenches were targeted on the higher ground in the area and also located to investigate potential peat deposits.

2.3 The eastern part of the Phase 2 build area was trenched previously as part of the Phase 1 works, which were located mostly to the east of the Beam River (Edmonds 2017). The trench numbers for Phase 2 therefore commenced at Trench 16 to prevent confusion with Phase 1. The current Phase 2 evaluation trenches were located wholly to the west of Thames Avenue, within the London Borough of Barking and Dagenham (the Beam River forms the borough boundary). Trench 14 was the only previous trench excavated to the west of the Beam. In Trench 14, a large timber was noted at the base of a sondage dug to -0.9m OD at the end of the trench. The timber could not be examined properly due to its location and size. It may have represented a fallen tree, or may have been deliberately placed there. Trench 21 was therefore located to establish if this feature extended outside Trench 14.

2.4 The archaeological evaluation works were carried out between 30th October and 17th November 2017 and were commissioned by RPS / CgMS on behalf of Countryside Properties. The work was undertaken in accordance with an approved Written Scheme of Investigation (Hawkins 2017) and an Archaeological Strategy and Scheme of Resource Management (SARMS) which covered the Phase 1 mitigation and the Phase 2 evaluation trenching (RPS / CgMS 2017). The evaluation work also followed Historic England guidelines (GLAAS 2014).

2.5 Phase 2 is located within a locally designated Archaeology Priority Area.

2.6 The archaeological evaluation was supervised by Matt Edmonds and was project managed by Helen Hawkins, for PCA. The overall project was managed for Countryside Properties by Robert Masefield of RPS / CgMS. 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 Phase 1 and Phase 2 work was allocated the unique site code THV 17.

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

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

3.2 Regional Policy: The London Plan

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

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

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

3.3.1 The relevant local policy is provided by the London Borough of Barking and Dagenham Core Strategy, which was adopted in 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.

REASONED JUSTIFICATION

Archaeological sites of interest and their settings and Ancient Monuments are irreplaceable and, therefore, it is important that policy seeks their protection, enhancement and preservation for the benefit of current and future generations. There are three scheduled Ancient Monuments in Havering, the 14th Century Upminster Hall Barn or Tithe Barn in Hall Lane Upminster, the moated site at Dagnam Park and the Roman Road across Romford golf course.

The archaeological 'hotspots', which are areas that have a greater potential for containing remains, will be shown in the Heritage SPD. They are divided into Archaeological Priority Areas where important archaeology can be expected and Archaeological Priority Zones where there is a potential need for archaeological consideration and consultation with English Heritage. The identification of these areas is as a guide to the existence of or potential for archaeological remains being present and each particular application should be dealt with on a case by case basis.

3.4 Planning Permission

3.4.1 The archaeological evaluation was carried out in advance of outline planning consent for the site, in order to inform the archaeological adviser to the council of the potential for archaeological survival on the site.

3.4.2 However, the evaluation was in accordance with the London Borough of Barking and Dagenham draft conditions for the site as advised by GLAAS, as follows:

Archaeology

69. No demolition or development shall take place in each phase of the development until a stage 1 written scheme of investigation (WSI) has been submitted to and approved in writing by the Local Planning Authority. For land that is included within each WSI, no demolition or development shall take place other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

If heritage assets of archaeological interest are identified by stage 1 then for those parts of each phase which have archaeological interest, a stage 2 WSI shall be submitted to and approved in writing by the Local Planning Authority. 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 investigation and recording 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 for each phase until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

70. No development shall take place in each phase of the development until details of the foundation design and construction method to protect archaeological remains have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

71. No demolition shall take place in each phase until a written scheme of historic building investigation (WSI) has been submitted to and approved in writing by the Local Planning Authority. For buildings that are included within the WSI, no demolition or development shall take place other than in accordance with the agreed WSI, which shall include the statement of significance and research objectives, and:

A. The programme and methodology of historic building investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works and;

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 WSI.

Reason for conditions 69-71: To ensure that archaeological investigation is initiated at an appropriate point in the development process, any areas of archaeological preservation are identified (including historic buildings recording), and appropriately recorded/preserved in accordance with Policy BP3 of the Borough Wide Development Policies DPD (March 2011).

4 EVALUATION OBJECTIVES

4.1 The Written Scheme of Investigation (Hawkins 2017) following the Project Strategy (RPS / CgMS 2017) highlighted the following research objectives:

- Establish whether the Site contains evidence for Mesolithic to early Neolithic riverside camps and if so specific nature of relationship of camps with edge of floodplain location;
- Further inform how the local landscape was used and to what level of intensification in the prehistoric periods;
- Establish as far as practicable, the presence/absence of preserved prehistoric (or later) worked wood or structures within peat via Phase related trenching and if present devise suitable mitigation;
- Further inform how the landscape was used and to what level of intensification in the Romano-British period;
- Inform how the landscape was used and to what level of intensification in the Romano-British period;
- Inform how the landscape was used and to what level of intensification in the Anglo-Saxon period;
- Inform how the landscape was used and to what level of intensification in the medieval period and to identify landscape features that were contemporary with the site;
- To further establish whether the nature of post-medieval agricultural land-use at the site and to relate the evidence to cartographic and historical sources.
- To excavate, record and remove any burials legally;
- To refine the geo-archaeological sub-surface topographical modeling at each phase via borehole assessment and analysis (where appropriate) and via test pits within trenches;
- To further investigate the large piece of wood/tree identified in Trench 14.

5 GEOLOGY AND TOPOGRAPHY

5.1 The geological and topographical background was taken in part from the desk based assessment (RPS 2016) and RPS SARMS (2017).

5.2 The site is located within the former floodplain of the River Thames, 1.25km to the south, on generally level ground. The site is generally flat with varying ground elevations varying between approximately 0.4m above ordnance datum (OD) to 2.4m OD. A decrease in elevation is present between the paint trim assembly site (PTA) and the Beam site. Ground levels rise above the floodplain to the north of the Site. The Beam River tributary and its valley flows north-south through the eastern area of the Phase 2 site.

5.3 The Dagenham Breach is located to the south of the site, and is an area of deliberately flooded marsh. The Gores Brook runs north-south c. 0.5km west of the site.

5.4 The British Geological Survey (BGS Website, 2016) and British Geological Survey Solid & Drift Sheet 257 (BGS 1996) records the solid geology of the majority of the overall (Phases 1-8) site as Lambeth Group (Clay, Silt and Sand) with London Clay Formation (Clay, Silt and Sand) with London Clay Formation (Clay, Silt and Sand) at the extreme north-west end and extreme east end of the site. Superficial deposits of Pleistocene and Holocene date are recorded across the site. Taplow Gravel Formation 'Sand and Gravel. Superficial Deposits formed up to 2 million years ago in the Quaternary Period are present sealing Solid Geology across the site area but outcrop at the surface in the north-eastern area of the Phase 1 area, to the east of the Beam River. The extreme north-west corner of the site area is also mapped with Pleistocene sand and gravels at surface. Alluvium (Clay, Silty, Peaty, Sandy) deposits of the Holocene overlay the sand and gravels for the remainder of the site.

5.5 Specialist geo-archaeological contractor QUEST have provided the detailed deposit model for both the Hybrid application site and the surcharging area (QUEST 2017). Approximately 600 borehole records have been input into their geo archaeological model which has mapped the peat and the alluvium and relates to OD heights. This is amongst the most detailed models so far available for the lower Thames Valley and so makes a good contribution to the regional geo-archaeological knowledge base. Made ground was found to be usually between 1m and 2m+ thick over alluvium which is present over most areas, apart from the higher terrace outcropping immediately below made ground in the north-eastern zone. The terrace edge is older – probably Kempton Park or earlier. The overlaying peat has a similar distribution it is less evident on the higher terrace. The Phase 2 site modelling is due to be updated following extraction of geo-archaeological boreholes in January 2018. However, there is already a high degree of confidence in the deposit sequence after Phase 2. This has been further modified by the test pits within the present evaluation.

5.6 Geo-archaeological trial holes / test-pits were excavated where possible in nine of the trenches investigated. The desk-based deposit model indicates that the Gravel surface beneath Trench 21 rested at around -4m OD but descended steeply, with a Peat surface somewhere between -1 and -1.5m OD. This is broadly consistent with findings of the field investigation, which record the Peat surface at around -1m OD. Similarly, the surface of the Peat in Trenches 17, 19, 22, 24 and 25 was broadly consistent with the model. The surface of the Peat in Trench 16 appeared to be between ca. 0.5 and 1m higher than indicated by the model.

5.7 Thus the model would appear to be a reasonably accurate account of the Peat surface across Phase 2.

5.8 There are variations between the model and actual peat surface heights in the area of Trenches 16 / 21 as they were located at the interface between the floodplains of the River Thames / Beam and terrace edge, thus localised variations in the stratigraphy are to be expected (and as above, the Gravel surface descends steeply in this area). The further modelling proposed will smooth / average out variations in the stratigraphy to a certain degree on any model. Finally, the positioning of the possible trackway could have had a localised impact upon the hydrology of the floodplain, leading to prolonged peat accumulation in this area (Batchelor R pers comm).

6 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The archaeological and historical background is taken from the Desk Based Assessment (RPS / CgMS 2016) and the summary in the Archaeological Strategy and Scheme of Resource Management (RPS / CgMS 2017). Additional historical background information on the development of the Ford Works in Dagenham has been taken from the Historic Building Report (Garwood PCA 2017)

6.1 Prehistoric

Palaeolithic

6.1.1 There are no certain Palaeolithic finds recorded on the GLHER within 1km of the centre of the site. The present Thames floodplain, within which the site is situated, represents the latest phase in gravel terrace deposition sequence. The braided Pleistocene River Thames was a shallower and more dynamic, faster flowing river. Most former land-surfaces within the floodplain have been significantly re-worked since deposition, such that the potential for encountering in-situ 'site' (e.g. kill sites or camp sites) within the gravels is low. Such gravels have potential to contain redeposited flint artefacts such as handaxes and flintworking debitage and, in very rare instances, faunal remains, but the significance of re-deposited finds is generally low in the absence of context.

Mesolithic and Neolithic

6.1.2 The GLHER includes several Mesolithic worked flints from the vicinity of the site including at Walden Avenue c.100m north of the eastern area of the site and c.70m to the north within a pit loosely dated as Mesolithic to Iron Age. The lower levels of peat beneath the date may date to the late Mesolithic.

6.1.3 Despite the advent of farming, the site area was almost certainly still characterised by natural low-lying wetlands of the Thames Valley floor and by the north-south flowing Beam River valley corridor. Thames-side peat deposits continued to be deposited throughout the Neolithic and the Bronze Age as confirmed by geo-archaeological and archaeological work at several locations within the study area. As in the Mesolithic the site probably continued to be characterised by exploitation of natural resources (fishing and fowling). Local finds include the famous 'Dagenham Idol', an anthropomorphic wooden figurine radiocarbon dated to the Late Neolithic period (2459-2110 BC), was discovered in 1922 during the installation of sewer pipes on the edge of the marshes near to Gores Brook, c.750m west of the western end of the overall site.

Bronze Age

6.1.4 Marshland exploitation continued in the Bronze Age. The transition from dry to marginal wetland environments and the importance of accessing the latter may be illustrated via a 1993 evaluation c.1km west of the site at Pooles Lane that located a Middle Bronze Age track constructed of gravel, burnt flint and sand. In terms of possible settlement, a number of investigations beyond the site itself have located indicators. These include 2009 investigation at the Mardyke Estate to the north, where a cremation was located.

6.1.5 The overall archaeological potential of the site for Mesolithic, Neolithic and Bronze Age archaeology was defined as moderate.

Iron Age

6.1.6 It seems likely that there was agricultural and possibly industrial salt production within the wider study area during the Late Bronze Age, Iron Age and Roman period. During these periods settlement related activity and arable land would probably have been concentrated to the north, beyond the marsh land limit. The marsh itself may have been used for grazing. However, it is also possible that former marshy areas, former paleo-channels and in particular the stream corridor itself, may contain isolated water management features such as revetments or bridge supports, or other water related finds (such as small boats). These may be most likely within the preserved River Beam green corridor.

6.1.7 Iron Age archaeological features were identified by an excavation at 105-109 New Road Rainham, c.140m north-east of the site at the Beam Washlands site, along with a Late Iron Age/Early Roman settlement site. Archaeological potential for Iron Age settlement is, however, considered to be Low, although along with residual finds, the former presence of marsh trackways, water-management features and bridge supports of this date associated with alluvial or paleo-channels cut through alluvium cannot be ruled out.

6.2 Romano- British

6.2.1 It is possible that the (apparent) farmsteads identified to the north of the site, suitably positioned above the flood plain, were the main settlements of this area. These include settlement evidence at Beam Washlands and at Lower Road/Walden Avenue (Mardyke Estate), c.400m to the north of the eastern area of the site, where three 'keyhole kilns' for the production of pottery have been investigated. Local Roman-British settlement activity also includes the aforementioned settlement site, cremations and industrial area at Beam Washlands. The Phase 1 excavation (Area 1) also encountered probable clay extraction pits of Roman date along with a presently undated but potentially contemporary waterhole (PCA forthcoming). There is a Low potential for settlement presence within the Phase 2 site which was probably predominantly used as salt marsh grazing. Drainage features (cut into the surface of the alluvial marsh) are perhaps the most likely archaeological features to be present. On this basis it has been considered that there is a Moderate potential for low density Roman archaeological remains of Low (local) importance with a Moderate potential for presence of other waterside activities – e.g. associated with the Beam River and former palaeo-channels (such as isolated water management features such as wooden revetments or bridge piles.

6.3 Saxon and Medieval

6.3.1 The settlement of Dagenham, was first mentioned in a Charter of AD 687 and in 1086 the manor of Dagenham fell within the larger holding of Barking. Dagenham was recorded as Deccanhaam in c.690. Rainham (now with Havering) was a village by AD 811 when referred to, in a charter and in 1086 was known as 'Raineham', 'homestead village of a man called Regna'. However, there is no former Saxon or medieval village cores within close proximity of the site, with the Grade I Listed Church of St Helen and St Giles (dated from c.AD1170) central to the medieval settlement of Rainham well to the east of the site.

6.3.2 Archaeological evidence for early Saxon occupation is slight, but a gully and pit were excavated at the Beam Washlands excavation site suggesting some local settlement whilst medieval archaeology is restricted to a figurine and tokens from Lower Mardyke Avenue to the north of the site. It seems likely that the site would have been comprised salt marsh pasture. The archaeological potential for the site for these periods has thus been to be low for settlement and moderate for drainage features.

6.3.3 Whilst a settlement is believed to have existed at Dagenham as early as the 7th century AD, it was not mentioned in the Domesday Book, suggesting that it was then part of the substantial manor of Barking. The parish of Dagenham was in existence by the early 13th century, when reference was made to a church there. The southern part of the parish was dominated by marshland commons, which were mainly used for grazing sheep. The complex pattern of landholding in the marsh, together with the ever-present risk of flooding, discouraged local landowners from developing the marshes for commercial farming during the 17th and 18th centuries.

6.3.4 In the south-western corner of the parish lay the manor of Cockermouth, a free tenement held of Barking Abbey until 1330, when it was granted to the abbey in demesne. The abbey retained Cockermouth until the Dissolution, following which it was leased, then sold, to Sir Anthony Browne. By the mid-19th century, the title to the manor was held by one Thomson Hankey, although it had been greatly reduced in extent during the intervening centuries.

6.4 Post-Medieval and Modern

6.4.1 The manor house of Cockermouth originally stood at the junction of Ripple Road and Chequers Lane, immediately south of the Chequers Inn. This building was demolished in the 19th century

and replaced by Pound House, its name derived from the manorial pound, which occupied part of the yard. Pound House Farm descended with Westbury in Barking until 1879–80, when it was sold to Francis Sterry of Romford. In 1898, Sterry sold the farm to Samuel Williams, the developer of Dagenham Dock and founder of the eponymous shipping firm. The farm was subsequently let to tenants, before being acquired by the London County Council in 1922.

6.4.2 Although it had been proposed to build a dock at Dagenham linked by railway to the existing line at Chadwell Heath as early as 1846, it was not until Samuel Williams (d. 1899) purchased the land in 1887 that development of the dock commenced. During the next few years the foreshore was filled in and raised to the height of the river wall, following which new jetties were built, forming a tidal basin and quay. The acquisition of Pound Farm secured the remaining land on the west side of Chequers Lane, offering the company an opportunity to develop the remainder of the marsh for commercial purposes. In 1903 Samuel Williams & Sons completed a new deep-water jetty, the first concrete structure of its kind on the Thames. Five years later the company built Dagenham Dock station in conjunction with the London, Tilbury and Southern Railway. Having secured permanent access to the railway network, Samuel Williams & Sons set about building the Dagenham Dock estate. Four new factories designed by the firm of Charles Heathcote & Sons were built between 1909 and 1914 for leasing to other firms.

6.4.3 The map regression set out in the DBA (RPS / CgMS 2017) demonstrates that the site remained marshland with some use as agricultural land up to the mid 20th century with construction of the Briggs Motor Bodies and Kelsey-Hayes Wheel Company Works (Ford Stamping Plant) to the west in 1932 (now under demolition). The immediate surroundings have been developed, with residential areas to the north and the Ford Motor Works to the south. The western area of the site itself was occupied the now demolished Ford Assembly Plant c.1963.

6.4.4 The Historic Landscape Classification for the area provided by the GLHER currently identifies the site area and it surroundings as 'Industry' reflecting the remaining hard-standings associated with former Ford Motor Works. As noted above these concrete hard-standings were used for cart storage.

6.5 The Development of the Ford Works at Dagenham, 1923-1931

6.5.1 The history of the Ford Motor Company's business in Britain can be traced back to 1904, when Aubrey Blakiston imported a dozen Model A Fords, which he intended to sell to the public via the newly established Central Motor Car Company. Blakiston resigned from the company in 1906, when he was succeeded by Percival Perry as managing director. Perry (1878-1956) liquidated the firm the following year, when he set up Perry, Thornton & Schreiber Ltd to sell the newly introduced Ford Model N, which the company supplied to customers with British-made coachwork. The firm was the first to introduce the famous Model T to the global market at the 1909 London Olympia motor exhibition. Perry parted company with Thornton and Schreiber the same year, when he was invited by Henry Ford to head the Ford Motor Company's first branch in England.

6.5.2 In 1911 the Ford Motor Company (England) Ltd was established to manufacture Ford cars specifically for the British market, the first Ford company to be set up outside North America. Perry found a disused tramcar factory at the Trafford Park trading estate near Manchester which the company converted into an assembly works for its cars. A local coachbuilder was acquired by the company in 1912 to build vehicle bodies for the British market. By 1914 the Trafford Park factory had been fitted with one of Ford's innovative moving assembly conveyors and was producing chassis at a rate of 21 per hour. During the First World War the factory was used to manufacture modified Model T cars for use by the armed forces, in addition to the production of shell casings. A subsidiary factory was established by the firm at Cork in southern Ireland, intended originally for the manufacture of Fordson agricultural tractors.

6.5.3 Following the end of the First World War, the company began to search for an alternative production site to Trafford Park, which was too small to permit future expansion. Although Perry found and purchased a site at Southampton, which offered the deep-water access demanded by Henry Ford, the scheme did not receive the wholehearted backing of the American company and it was subsequently sold off in the 1920s. Perry resigned from the company's service in

1919, entering into a partnership with Noel Mobbs of the Pytchley Autocar Company to acquire a disused military transport depot at Slough, which they developed as the phenomenally profitable Slough Trading Estate. Knighted for his services during the First World War, Perry retired to the Channel Islands three years later.

6.5.4 During the early 1920s Ford's share of the English market began to decline, as the company suffered from the effects of protectionist legislation such as the 1920 Motor Car Act and the import duties imposed upon components manufactured at the company's Cork factory following the creation of the Irish Free State in 1922. The company's search for a new manufacturing site in mainland Britain intensified, culminating in the discovery in 1923 by Edward Grace (manager of the Cork works) of an area of undeveloped land close to Dagenham Dock station. Although the site was notoriously marshy, comprising areas of rough grazing interspersed with rubbish tips piled high with London's waste, the company purchased 295 acres of land from Samuel Williams & Sons for £150,000 in May 1924. Owing to financial uncertainties brought about by continuing falls in Ford sales in Britain, development of the site was delayed until later that decade.

6.5.5 In 1927 Ford finally ceased production of the Model T after 19 years of continuous production. The launch of the new Model A was accompanied by an in-depth review of the company's European operations conducted by Henry Ford himself. Ford conceived an ambitious plan whereby the British operation would become "a Detroit in miniature, a virtually self-sufficient manufacturing colossus supplying and controlling a chain of 11 European assembly plants". In order to implement what became known as Ford's '1928 plan', Sir Percival Perry was coaxed out of retirement. Perry recruited A.R. (Rowland) Smith from Standard Cars to take charge of Ford Britain's new manufacturing operation. The new Ford Motor Company Ltd was successfully floated in December 1928.

6.5.6 Work on the new Dagenham factory began the following May, when a groundbreaking ceremony was held on the site, attended by Henry Ford's son Edsel and Sir Percival Perry. Sir Charles Heathcote & Sons (architects of Samuel Williams' Dagenham Dock factories) were appointed architects to the scheme, whilst Sir Cyril Kirkpatrick was taken on as consulting engineer. An area of 66 acres was earmarked for the Ford factory itself, construction of which was preceded by a programme of site levelling and stabilisation, which necessitated sinking 22,000 concrete piles in the marshy ground to a depth of up to 80ft. The factory itself was built over a period of two years on concrete rafts laid on top of the piles. Amongst the buildings erected by Ford at Dagenham were a riverside power station, which from 1936 was illuminated at night by a Ford sign visible from 20 miles away, a foundry, coke ovens, gas plants and a blast furnace, together with the largest private wharf on the Thames. By the time that production commenced at Dagenham in the autumn of 1931, the company had spent some £5 million on the works and faced an uncertain future in an economy mired in the depths of the Depression.

6.6 The Briggs Motor Bodies and Kelsey-Hayes Wheel Factories at Chequers Lane, 1930-1954

6.6.1 Having previously made a fortune from the development of the Slough Trading Estate, Sir Percival Perry appreciated the potential profits that might be made from establishing a similar enterprise at Dagenham. The company therefore set about purchasing additional parcels of land adjoining the works, acquiring a total holding of approximately 600 acres by 1932. The first part of the estate to be developed lay on the east side of Chequers Lane, in an extensive plot bordered by the New Road to the north and the London to Tilbury railway line to the south. New roads named Kent Avenue and Norwich Road were laid out across the site in anticipation of the arrival of business tenants. In the event, the only companies to set up factories on the Chequers Lane estate were closely connected with Ford itself, most notably the British subsidiaries of existing North American Ford suppliers the Briggs Manufacturing Company and the Kelsey Hayes Wheel Corporation, both of Detroit. By the late 1930s these companies had been joined by W.J. Reynolds (Motors) Ltd, a main dealer of Ford cars and Fordson commercial vehicles (TNA HO 192/1486).

6.7 Briggs Motor Bodies Co. Ltd

6.7.1 The Briggs Manufacturing Company was formed out of an existing coach building company by Walter Owen Briggs of Detroit in 1909. From the outset the company manufactured interiors for the Model T, following which it concentrated the manufacture of closed coach bodies for Ford. The company was successfully floated in 1924, whilst the following year it manufactured half a million automobile bodies and turned a profit of $11 million, giving shareholders an astonishing 200% dividend. The United Kingdom subsidiary appears to have been established as two separate concerns, a private company called Briggs Motor Bodies and the Briggs Trust Limited, the latter of which held the company's assets (TNA BT 31/37769/303263). In a lease dated 6th June 1932 between the Ford Motor Company and Briggs Motor Bodies for 99 years from 24th June 1931 the former demised the Chequers Lane site (containing an area of approximately 80,433 square yards) to the latter for a rent of £2849 per annum.

6.7.2 On 24th July 1935 the nominal capital of Briggs Motor Bodies was increased from £1,000 to £1 million through the issue of 999,000 ordinary shares of £1 each, and the business was reconstituted as a public company. The company was established with the object of carrying on "the business of designers, builders and manufacturers of motor bodies for use in connection with motor vehicles of any description". The company purchased the undertaking, business and assets of Briggs Trust Ltd in consideration of 599,993 ordinary shares. Whilst the Earl of Granard was appointed Chairman of the new company, the Board was dominated by directors of the American parent company, including Walter Owen Briggs himself, Robert Pierce and William Dean Robinson.

6.7.3 The Briggs Motor Bodies plant manufactured all of the coachwork for Ford's Dagenham works, together with that for the company's eleven European satellites in the early 1930s. The earliest bodies built by the plant comprised ash frames to which steel panels were attached. The pressings were comparatively small, welded together in jig tools that located the body panels by pneumatic pressure. Whilst the method of construction was said to have resulted in stronger bodies than those assembled from larger panels, it meant that the plant was unable to stamp out metal roof panels during the 1930s. Aside from windows and seat trim, which were fitted in the Ford plant, Briggs supplied ready trimmed and painted bodies to the neighbouring works.

6.8 Post-Second World War

6.8.1 Within weeks of the end of fighting in Europe, the Ford plant at Dagenham was gearing up to build cars to meet the anticipated demands of peacetime. Post-war austerity, punitive tax rates on the motor industry, petrol rationing and fuel shortages combined to suppress demand for private cars in the United Kingdom, forcing Ford and other companies to concentrate on export sales. Notwithstanding the gloomy economic outlook, Ford Britain took over the Kelsey Hayes Wheel Company in 1947.

6.8.2 Following the expansion of its manufacturing activities during the Second World War, Briggs Motor Bodies reduced the extent of its operations during the post-war period. By 1948 the workforce had fallen to less than 6,000. In order to maintain the company's finances, Briggs continued to build bodies and components for rival motor manufacturers, including Austin, Rootes, Standard, Leyland and Chrysler. The death of Walter Owen Briggs in 1953 and the threat that Ford's American rival Chrysler would purchase his company provided an opportunity for Ford-Britain's Managing Director, Sir Patrick Hennessy to gain possession of the firm's British holdings. The Detroit parent company approved Sir Patrick's plan, and the British company was sold to Ford-Britain for the very reasonable sum of £3.2 million the same year.

6.9 The Briggs Motor Bodies Works under Ford ownership 1954-2002

6.9.1 The acquisition of Briggs Motor Bodies Ltd by Ford-Britain led to a number of significant changes at the Chequers Lane plant. In 1954 Sir Patrick Hennessy launched an ambitious expansion and modernisation programme at Ford, which was intended to enable Dagenham to build as many as 2,000 vehicles per day. A critical element of the scheme was the remodelling and re-equipping of the Briggs plant (known as the stamping plant). In 1954, the layout, design and construction of a new Paint, Trim and final Assembly (PTA) building on the former 48 acre Ford sports ground on the opposite (east) side of Kent Avenue. The latter is shown on the Ordnance Survey map of 1950.

6.9.2 The new building was a two storey construction that included a facilities block, receiving bay and final assembly section, including body upholstery and fitting known as body trim. The first floor contained the phosphating plant and rinse, new paint shop, the wet sand decks and the drying ovens. The first floor was also linked by means of a large conveyor to the 'Body in white' plant to the west of Kent Avenue. The new PTA occupied an area of 250,000 square feet and was to be totally automated. When finished, the PTA building contained nine miles of conveyor track controlled by 1,200 miles of electric cabling. The north side of the plant comprised the facilities block: for admin staff, canteens, kitchens and medical centre. Ancillary buildings, which housed plant or services, were situated along the north and south sides of the main building, including amongst others the Fire Station, Oil store and pump house, storm water pump house and sewage pump house. The latter was required due to the low level of the site and the need to elevate surface water and sewage by pumping to avoid flooding. To lessen the risk of surface water, the ground levels over the site were raised by c. four feet. The site of the PTA and a number of ancillary buildings are shown on a mid 1950s plan of the site while a later Estate Site Map published around 1970-1 shows the PTA and the Traffic Compound; the latter on land to the east of Thames Avenue.

6.9.3 In November 1960, Ford America announced that it intended to buy up the 45.4% shareholding in Ford-Britain that remained in private hands in order to further integrate its operations and increase marketing effectiveness in both countries. The parent company paid nearly £120 million for the outstanding 17,726,804 shares the following January. The move resulted in a diminution of Dagenham's role at the centre of the company's British operations, accompanied by a process of decentralisation that increased as the decade progressed. The styling, engineering and prototype divisions all migrated from Dagenham to Aveley (Essex) in 1960, while a new manufacturing plant capable of building 1,000 vehicles per day opened at Halewood on Merseyside in October 1963. The headquarters of Ford's operation in Britain, and subsequently Europe, relocated to a purpose-built office complex at Warley in Essex.

6.9.4 As other factories and divisions of Ford elsewhere in Britain and Western Europe took up an increasing share of production during the 1970s, so the importance of Dagenham to the company declined. While engine production continued to be a mainstay of the plant's output, the number of car lines built at the plant fell to one (the Fiesta) in the 1990s. Owing to falling sales and over-capacity in Europe, the company announced in early 2000 that it would axe 1,500 jobs at Dagenham. The same year the company announced that the PTA plant would close in 2002, with the loss of a further 1,900 jobs. As vehicle assembly ceased to be an element of the company's operations at Dagenham, the company invested instead in the construction of a new diesel engine plant, which continues to operate to the present. The PTA plant was demolished in 2004.

7 METHODOLOGY

7.1 The evaluation was undertaken according to a Written Scheme of Investigation (Hawkins 2017) and SARMS (RPS 2017) which was approved in advance by Adam Single, GLAAS, archaeological adviser to the London Borough of Barking and Dagenham. The aim of the work was to define and characterise any archaeological deposits and features, in order to allow an assessment to be made of the archaeological potential of the site, and the impact upon it from the proposed development.

7.2 The evaluation comprised of the excavation of ten trenches. All trenches were laid out with GPS survey equipment and checked with a CAT scanner prior to excavation. The trenches were backfilled with the upcast material and compressed by the machine until the surfaces were level.

7.3 The ten trenches were designed to be stepped once to safely reach the alluvium or peat, to a maximum depth of 2.4m BGL. Sondages below this depth were excavated where necessary.

7.4 The trench dimensions and highest and lowest levels are tabulated below:

Trench Number	Orientation	Length	Width	Depth	Highest level	Lowest level (base of main trench)
16	E-W	27.60m	4.00m	2.32m	1.37m OD	-0.65m OD
17	N-S	27.40m	4.00m	2.00m	1.11m OD	-0.39m OD
18	E-W	30.00m	4.00m	2.00m	1.14m OD	-0.66m OD
19	E-W	28.00m	4.00m	1.98m	1.25m OD	-0.43m OD
20	N-S	27.50m	4.00m	0.40m	1.22m OD	0.82m OD
21	E-W	27.60m	4.00m	2.41m	1.47m OD	-0.94m OD
22	E-W	28.10m	4.00m	1.95m	0.97m OD	-0.48m OD
23	N-S	27.00m	4.00m	2.03m	1.27m OD	-0.66m OD
24	E-W	27.50m	4.00m	2.04m	1.20m OD	-0.64m OD
25	N-S	27.50m	4.00m	2.02m	1.22m OD	-0.60m OD

7.5 All excavations were supervised by the author or an experienced archaeologist and preceded in 100mm spits using a 360 degree tracked machine with a toothless bucket. Modern surface concrete and thick tarmac were broken out with a breaker attached to the 360 digger.

7.6 Trenches were CAT scanned after each spit through made ground was removed in order to

check for buried services which were not marked on the service plan.

7.7 All open trenches were secured with secured Heras fence panels to prevent unauthorised access.

7.8 The trenches were cleaned by hand, recorded and photographed. Recording of the deposits was accomplished using the Single Context Recording Method on proforma context and planning sheets. Contexts were numbered and are shown in this report within squared brackets. Plans were drawn at a scale of 1:20 and 1:50 and sections at a scale of 1:10 and 1:20.

7.9 The proposal follows CIFA guidelines, and the methodologies set out in Historic England (GLAAS) Guidance Papers for standards and practices in archaeological fieldwork watching briefs and assessments and evaluation.

7.10 A small programme of geo-archaeological work was also included and tied into the evaluation work carried out. Nine of the ten trenches had an extra sondage/trial hole excavated by machine using a narrow toothless bucket. This work was supervised by the author with a geo-archaeologist from QUEST in attendance for six of these (16, 17, 19, 22, 24 & 25). The sondage was excavated through the alluvium in the base of the trench until natural drift geology was encountered or water ingress made it dangerous/difficult to continue. These sondages/trial holes were recorded and back-filled straight away with up-cast material.

7.11 The geo-archaeological trial holes carried out in collaboration with QUEST plus the additional trial holes without QUEST in attendance are summarised in the table below:

Trench Number	Orientation	Length (Metres)	Width (Metres)	Depth (Metres)	Highest level m OD (top of trial-hole)	Lowest level m OD (bottom of trial-hole)	Level on top of Peat m OD
16	E-W	2.00	0.75	2.34	-0.59	-2.93	-0.63
17	N-S	2.50	0.75	4.20	-0.29	-4.49	-1.89
18	E-W	2.00	0.75	1.45	-0.51	-1.96	-1.76
19	E-W	2.00	0.75	3.30	-0.39	-3.69	-2.57
21	E-W	2.00	0.75	1.20	-0.75	-1.95	-1.05
22	E-W	2.25	0.75	3.70	-0.33	-4.03	-1.33
23	N-S	2.50	0.75	3.60	-0.57	-4.17	-1.27
24	E-W	2.00	0.75	3.07	-0.43	--3.50	-1.40
25	N-S	2.00	0.75	2.50	-0.36	-3.16	-1.18

8 ARCHAEOLOGICAL SEQUENCE, BY TRENCH

8.1 Seven phases of activity were noted during the evaluation:

- Phase 1 represented the natural gravel
- Phase 2 represented the lower alluvial sequence
- Phase 3 represented the early peat sequence
- Phase 4 represented a period of possible prehistoric activity
- Phase 5 represented a later peat sequence
- Phase 6 represented the upper alluvial sequence
- Phase 7 represented the sequence of possible post-medieval flood deposits
- Modern

8.2 **Trench 16** (Section 46, Figure 12, Plan Figure 3)

Phase 1

8.2.1 The earliest deposit encountered in this trench was [155] a layer of light grey sandy gravel. The layer was recorded in a geo-archaeological trial hole at -2.89m OD. It was interpreted as the local drift geology which is the Shepperton Gravel formation.

Phase 2

8.2.2 Sealing the gravel in this trench was layer [145] a firm mid to light greyish brown clay with occasional lenses of sand. This layer was interpreted as natural alluvium and represented the lower alluvial sequence on this site. The layer was recorded from -2.33m OD to -0.63m OD in a geo-archaeological trial hole at the eastern end of the trench it was 2.00m thick. Similar deposits were encountered on the south side of the Thames (Erith) and contained Late Mesolithic flintwork.

Phase 3

8.2.3 Sealing the natural lower alluvium was a layer of peat [144] which was organically rich with identifiable natural wood remains. The layer was encountered at -0.63m OD and was 1.70m thick it was recorded in a geo-archaeological trial hole at the eastern end of the trench.

8.2.4 Peat [152] was also encountered at the western end of the trench at -1.19m OD and was 0.40m thick. Similar deposits encountered elsewhere within the Thames floodplain usually date from the early Neolithic and Bronze Age.

Phase 6

8.2.5 Sealing the organic peat deposit was a layer of alluvial clay [111] which was greenish grey in colour. It was recorded at 0.17m OD and was 0.45m thick. Such deposits usually date to the Late Bronze Age and Iron Age (though later deposits of alluvium also occur).

Phase 7

8.2.6 Associated with layer [111] was a very badly degraded piece of wood [113] it is possible that it was a timber post but it did not appear to be worked and was not associated with any other timbers. It may have been an isolated piece of natural wood potentially pushed down from higher up in the sequence. The wood was recorded at -0.64m OD.

8.2.7 Sealing [113] was a variation in the alluvium [112] comprising firm dark brownish grey clay. This layer was encountered at -0.49m OD and was roughly 1.00m thick.

Modern

8.2.8 Sealing the natural deposits were various layers of modern made-ground up to 1.10m thick

which in turn were covered by a layer of modern tarmac which was 0.10m in thickness. The current ground level on the surface of the tarmac was 1.41m OD.

Plate 1: Trench 16 looking east

8.3 **Trench 17** (Section 47 Figure 12, Plan Figure 4)

Phase 3

8.3.1 The earliest deposit encountered in this trench was an organic rich layer [146] interpreted as natural peat. The deposit was a soft dark brown clayey silt layer with a high organic content with some identifiable fragments of wood. Its upper level was recorded at -1.89m OD and it was 2.20m thick. This deposit was observed in a geo-archaeological trial hole in the middle of the trench.

Phase 6

8.3.2 Sealing the peat deposit was a layer [114] of firm to compact blueish grey clay with occasional sub-angular stones which was encountered from -0.29m OD and was 0.25m thick. The layer was interpreted as being part of the natural upper alluvial sequence.

Modern

8.3.3 Sealing the alluvium were layers of modern made-ground which were 1.20m in thickness and encountered at 1.01m OD which was the current ground level. This trench was also heavily truncated by modern activity with both the southern and northern end showing the remains of a concrete structure with metal reinforcing in places round the edges of the concrete. This structure was back-filled with brick rubble, presumably when it was demolished, and then capped with thick reinforced concrete.

Plate 2: Trench 17 looking south

8.4 **Trench 18** (Section 41 Figure 12, Plan Figure 5)

Phase 3

8.4.1 An organic rich layer of peat [151] was the earliest deposit recorded in this trench. It was encountered from -1.76m OD to -0.11m OD in a geo-archaeological trial hole at the eastern

end of the trench. This layer had to be recorded rapidly due to the ingress of water in the trench.

Phase 6

8.4.2 The peat was capped by a layer of firm mid to dark blueish grey clay [126] and was interpreted as being part of the upper alluvial sequence. The layer was encountered at -0.11m OD and was 0.40m thick.

Modern

8.4.3 The alluvium was sealed with layers of modern-made-ground 1.05m in thickness which was covered by 0.25m thick reinforced concrete. Ground level was 1.19m OD

Plate 3: Trench 18 looking east

8.5 **Trench 19** (Section 48, Figure 12, Plan Figure 5)

Phase 3

8.5.1 A layer of peat [147] was the earliest deposit encountered in this trench. The layer comprised a soft dark brown peaty deposit with a slight clay content and organic inclusions; including large

fragments of wood. It was encountered at -2.57m OD and was 3.00m thick in the geo-archaeological trial hole.

Phase 6

8.5.2 The peat was capped by a thick layer of alluvium [123] which was a firm bluish grey clay and was encountered at 0.33m OD. The layer was 0.70m thick.

Modern

8.5.3 The trench was heavily truncated at both the eastern and western end by a modern concrete structure. This structure had been demolished and backfilled with brick and concrete rubble over 1.00m thick. The rubble was capped with reinforced concrete which made up the current ground surface. Layers of modern made-ground covered the rest of the trench and were 1.50m thick. These layers were sealed by tarmac which was 0.10m thick and made up the current ground level at 1.23m OD.

8.6 **Trench 20**

Modern

8.6.1 Modern intrusions were the only features encountered in this trench. A reinforced concrete beam was encountered down the full eastern length of the trench. The beam was sitting on a thick concrete slab that was approximately 1.20m below current ground level at the base of the trench. Concrete and brick rubble covered the concrete base and filled this demolished structure. Amongst the brick rubble was trapped ground water which had become stagnant and had a strong unpleasant odour. Due to the nature and spread of the concrete as well as the presence of a large amount of stagnant water this trench was eventually abandoned / infilled after consultation with GLAAS.

8.7 **Trench 21** (Section 49, Figure 7)

Phase 2

8.7.1 The earliest deposit identified in this trench was a layer of organic alluvium [119] seen at the base of the sondage. The layer was a firm plastic silver grey clay with frequent fragments of natural wood. It was recorded from -1.08m OD to -1.18m OD and was interpreted as being part of the lower alluvial sequence its thickness was unknown as it continued beyond the base of the trench.

Phase 3

8.7.2 Sealing the lower alluvium [119] at the eastern end of the trench was a layer [139] of firm grey orange brown organic clay peat with fragments of wood. It was recorded between -1.18m OD and -1.36m OD and was 0.23m thick.

8.7.3 A layer [153] of organic deposits associated with the lower peat sequence was recorded in the western end of the trench in a second geo-archaeological trial hole. It was encountered from -1.05m OD to -1.25m OD. The thickness of the layer was unknown as it continued beyond the base of the trench.

Phase 4

8.7.4 Above layer [119] to the west of the trench was a NW to SE aligned flat piece of horizontal timber [127]. It was over c.400mm wide and was recorded at -1.07m OD. Initially interpreted as a plank / baseplate on closer inspection it appeared to be a mix of bark and very decayed oak timber with no clear humanly worked features (see Appendix 4).

8.7.5 Also above layer [119], towards the middle of the trench, was timber [128], a horizontal north-south aligned oak log c.200mm in diameter. This log was recorded at -1.18m OD. The southern end of the log had a blunt axe cut point. The tip of the log had been lost but there were clear signs of working. It was interpreted as a collapsed post, thought to be worked with a metal axe rather than a stone one, so broadly dated to the Bronze Age (Appendix 4).

8.7.6 Covering timber [128] at the southern end were several small fragments of worked wood [129]. These fragments were lying horizontally at various orientations across [128] and of various sizes; the largest being 0.80m in length and 0.20m in width. They were recorded at -1.18m OD.

8.7.7 A single piece of wood [130] was also found above layer [119]. It was lying horizontally with a north-south orientation and potential axe marks. It was difficult to interpret what this piece of wood was for at this stage as it did not seem to relate directly to any of the other timber features. The timber was recorded at -1.00m OD. A radiocarbon date was obtained from one of the wood fragments [129}. At the 95% confidence level the four date ranges provided indicate a date range of 2861-2497 cal BC. Prehistoric confidence sub range (64.3%) suggests the date as most likely to fall within the 2706-2566 cal BC range. This could suggest a date in the late Neolithic on the cusp of the 'Chalcolithic' period of the early Bronze Age when copper (the first metal) is used in Britain for the first time. The conventional date for the start of the Chalcolithic is c. 2500 BC so the use of metal at Beam Park could be a very early example if confirmed.

8.7.8 Above layer [139] towards the eastern end of the trench was a group of moderately decayed 'roundwood' timber pieces [131], [132], [133] and [134] mainly orientated NE-SW. They were recorded between -1.11m OD and -1.16m OD. This collection of 'roundwood' was initially interpreted as fragments from a collapsed structure but on closer inspection and expert advice they were interpreted as being natural pieces as there were no clear cut mark or other humanly worked features. The main element of this group was timber [132] which appeared to be a double stemmed fragment of a yew tree with roots attached at the northern end (Appendix 4).

8.7.9 Cutting through layer [139] at the far eastern end of the trench were the remains of a decayed post [135]. The post was located in an extremely waterlogged part of the trench and was only recorded in plan. The post measured 0.10m x 0.08m and was recorded at -1.33m OD.

8.7.10 Sealing timber [128] and [129] was a layer of clay [121] forming a small bank it. This layer was a firm plastic light brownish grey clay and was recorded at -1.07m OD. The feature was 0.77m wide and had a height of 0.25m. It was difficult to understand how it was formed as only a relatively small part was visible. The feature could be a natural flood deposit forming over a collapsed wooden structure such as the timber post [128], or perhaps the deliberate packing of clay round the lower part of a timber structure (see Section 49 and plan on Figure 7).

8.7.11 Cutting the clay bank [121] at the southern end was a rectangular stake hole [122]. The stake hole had steep vertical sides and a flat base. The stake hole was 0.11m in length, 0.08m wide and 0.16m deep and was recorded at -0.96m OD. It had no fill and appeared to be a void; presumably the wooden stake driven into it had partially rotted away.

8.7.12 Also cutting [121] was a stake hole [141] which was sub-circular in plan with vertical sides and a flat base. The stake hole was relatively small being 0.07m in diameter and 0.17m in depth. Its fill [140] was friable yellowish grey brown with fragments of highly degraded wood. The fill was interpreted as a rotted / degraded stake. This feature was recorded at -0.88m OD.

8.7.13 Cutting clay bank [121] at its northern end was the cut of a stake hole [143]. The stake hole was roughly circular with vertical sides and a flat base. The cut had a diameter of 0.10m and was recorded at 1.03m OD. There was no fill present which suggests it originally contained a wooden stake which had completely rotted away.

8.7.14 Above peat layer [110] to the west of the trench were two fragments of timber [118] which would have been part of the same piece. The timber was a squared piece with several features that could be interpreted as relating to fixtures. The western end seemed to be squared to a point and in the middle of the timber there seemed to be what could be the remains of a hole for a mortise joint. This fragment of timber did not seem to be directly associated with the surrounding timber elements, but it was in many ways too degraded to tell its original function.

8.7.15 Against the clay bank [121] a small accumulation of small wooden fragments had been deposited [120]. They had dimensions of 0.31m in length, 0.28m width and were recorded at -1.00m OD. Possible interpretations proposed are that it the feature was a natural accumulation against the bank or remains of natural elements such as brushwood being used in the construction of a trackway.

Phase 5

8.7.16 Sealing the majority of the timber remains and the clay bank were several layers of peat, [137] / [138] and overlain by [110]. They comprised firm friable dark brownish grey black slightly clayey organic peat; rich in organic material with a high concentration of wood fragments and occasional small angular stones. The upper peat layers were approximately 0.25m in thickness in total and were recorded at levels between -0.82m OD and -1.05m OD.

8.7.17 Directly above peat layer [110] towards the middle of the trench was a layer [136] of firm pale brownish grey clayey peat. The layer was 0.10m thick and was recorded between -0.83m OD and -0.93m OD.

Phase 6

8.7.18 Overlaying peat layer [110] was a layer [109] of firm greenish bluish grey clay. It was encountered at -0.44m OD and was 0.40m thick. This layer was interpreted as natural alluvium.

Phase 7

8.7.19 Sealing the upper alluvium was a layer [108] of firm yellowish brown sandy clay. The layer was recorded at 0.09m OD and was 0.50m thick. The layer seemed to represent a period of later flooding. Dating is problematic as no finds were identified in this deposit.

Plate 4: Trench 21 Timber [118]

Plate 5: cut end of timber [128]

Plate 6: timbers in Trench 21

8.8 **Trench 22** (Section 50, Figures 8 and 12)

Phase 2

8.8.1 The earliest deposit in this trench was layer [156] a firm mid to light greyish brown clay with occasional lenses of sand. This layer was interpreted as natural alluvium and represented the lower alluvial sequence on this site. The layer was recorded at -3.11m OD and was 1.00m thick. It was recorded in a geo-archaeological trial hole at the eastern end of the trench.

Phase 3

8.8.2 Natural peat deposits [148] were seen in the base of a geo-archaeological trial pit at the eastern end of the trench, above the natural alluvium. They were encountered at -1.33m OD and were 1.78m thick.

Phase 6

8.8.3 Sealing the peat was a layer of alluvium [115] which comprised a soft bluish grey clay. This layer was encountered in the base of the main trench at 0.17m OD and was 0.60m thick.

Modern

8.8.4 Layers of made-ground and modern-levelling deposits 0.65m thick sealed the natural alluvium. These layers were in turn capped by modern tarmac which was 0.10m thick and made up the current ground level at 0.89m OD.

Plate 7: Trench 22 looking east

8.9 **Trench 23** (Section , Figure , Plan Figure)

Phase 3

8.9.1 Natural peat deposits [149] were seen in a geo-archaeological sondage in the southern end of the trench. This deposit was seen at –1.27m OD and were 2.40m thick.

Phase 6

8.9.2 Capping the peat was a thick layer of firm mid to dark bluish grey clay alluvium [116]. The layer was encountered in the base of the main trench at -0.03m OD and was 0.55m thick.

Modern

8.9.3 Layers of made-ground and modern levelling deposits 0.80m thick sealed the natural alluvium. In addition, modern drainage truncated deposits in this trench particularly at the northern end. This included a linear drain and a deep brick-lined man hole. A layer of tarmac and concrete 0.30m thick covered the trench and formed the current ground surface at 1.12m OD.

Plate 8: Trench 23 looking north

8.10 **Trench 24** (Section 52, Figures 10 and 12)

Phase 1

8.10.1 The earliest deposit encountered in Trench 24 was a layer [158] of loose light grey sandy gravel with frequent small to medium angular stones. It was recorded in a geo-archaeological sondage at -3.50m OD. The full thickness of the layer was unknown as it continued beyond the depth of the trench.

Phase 2

8.10.2 Sealing the gravel was a layer of lower alluvium [157]. The layer was recorded in a geo-archaeological sondage at -3.20m OD and was 0.10m thick.

Phase 3

8.10.3 Sealing the lower alluvium in this trench was a layer of peat [150]. The layer was recorded in a

geo-archaeological sondage at -1.40m OD and was 1.80m thick.

Phase 6

8.10.4 Sealing the peat was a layer of upper alluvium [125] which was a soft dark bluish grey clay. The top of this layer was recorded at -0.30m OD and was 1.30m thick.

Phase 7

8.10.5 Sealing alluvial layer [125] was a slightly different kind of alluvial deposit [124]. It was a loose mid to light greyish brown clay with frequent stones and gravel inclusions. The layer was encountered at 1.22m OD and was 0.52m thick.

Modern

8.10.6 The later alluvium was covered by a series of dumped deposits 1.20m thick which formed the modern made-ground. These dumps were capped with concrete and tarmac 0.20m in thickness, and the top was at 1.20m OD which was the height of the current ground level.

Plate 9: Trench 24 looking west

8.11 **Trench 25** (Section 53, Figures 11 and 12)

Phase 3

8.11.1 The earliest deposit recorded in this trench was an organic layer of peat [154]. The layer was

2.00m in thickness and had a highest level of -1.18m OD.

Phase 6

8.11.2 Sealing the organic peat deposit was a layer of alluvium [142]. The layer was firm orangey grey clay with a thickness of 0.80m thick and the top of the deposit was recorded at 0.35m OD.

Modern

8.11.3 Layers of made-ground and modern levelling deposits up to 1.60m thick sealed the alluvium. These layers were covered by a layer of tarmac 0.10m thick at 1.22m OD which was the current ground level.

9 RESEARCH OBJECTIVES AND CONCLUSIONS

9.1 General Discussion

9.1.1 The evaluation identified seven broad phases of deposits and activity.

Phase 1 – Natural Gravels

9.1.2 The underlying gravel geology was found in two of the geo-archaeological sondages in the trenches and was consistent with the expected Shepperton Gravels. The gravel was found to survive at heights ranging from -2.89m OD in the north to -3.50m OD in the south. Though there was the potential for Palaeolithic artefacts on the site, no archaeological finds of this date were encountered.

Phase 2 – Lower Alluvial Sequence

9.1.3 A sequence of lower alluvial deposits was encountered in three of the geo-archaeological sondages in the trenches. The deposits were found at levels ranging from -2.33m OD to -3.20m OD, which followed the natural fall to the south.

9.1.4 This lower alluvial unit represented the extensive early alluvial inundation of the area through flooding. Dating this deposit is problematic but it is likely that it was part of the early flooding of the area, possibly during the late Mesolithic period. The dating is based on comparisons with similar dated deposits at an excavation in Erith on the A2016 'Bronze Age Way' (Bennell 1998).

Phase 3 – Early Peat Sequence

9.1.5 A sequence of organic peat deposits was encountered in nine of the ten trenches excavated. Mostly seen in the geo-archaeological trial holes, the peat thickness varied from 0.23m in Trench 21 to 3.00m in Trench 19. The peat deposits provided evidence of the natural environment of the site. Dating the peat can be difficult given the changing nature of how the peat forms. Based on similar deposits nearby that have been dated using C14, it is likely that the peat encountered at these lower levels probably started to form during the Late Mesolithic to Early Neolithic period and continued to form until at least the late Neolithic to Chalcolithic period.

Phase 4 – Prehistoric Activity

9.1.6 Marshland exploitation seemed to be a key aspect of prehistoric life and this usage continued into the late Neolithic period. The wood identified in Trench 21 during this evaluation seems to be linked to this period and this is indicated by the tool marks and the stratigraphy, as well as the associated radiocarbon date which suggest the late Neolithic or Chalcolithic period.. The trench was deliberately placed to the south of Trench 14 to establish whether the substantial timber found there continued south. Wood remains were encountered, but in a different form (possible clay bank over a substantial horizontal post and other wooden items). If the wood was deliberately laid it is considered to potentially relate to a 'trackway' or other linear structure formed from various components rather than a 'fallen tree'. The possible trackway is interesting in that it seems to potentially incorporate both natural and worked pieces of timber. This mixture of different elements makes it challenging to interpret but there are other examples of these kinds of structures such as the Bronze Age example at Bramcote Grove (Rackham & Thomas et al. 1996) in Southwark and a rare early Neolithic example on the Thames Floodplain at Belmarsh (Hart, 2015). The position of the wood in the upper 0.50m of peat is paralleled at Bronze Age Way (Erith) where a 'hurdle' form track was dated to the Middle Bronze Age (Bennell, 1998). However, the radiocarbon date for Beam Park suggests this material may have been deposited around 1,000 years earlier posing interesting questions about the chronology of the marsh formation and use.

Phase 5 – Later Peat Sequence

9.1.7 The timber identified during the evaluation in Trench 21 was sealed by a later peat layer. Based on the stratigraphy this would suggest that this layer formed during the Bronze Age or later.

Phase 6 – Upper Alluvium

9.1.8 Deposits from the upper alluvial sequence were encountered in all the trenches excavated. There was no direct dating of the layers forming the overall unit, but it is believed that the material was deposited over a broad length of time up to the late medieval/ early post-medieval period. This deposit would suggest frequent flooding, from potentially the Late Bronze Age, which would have restricted human exploitation in this area and would maybe go some way to explaining why there is no evidence of human activity from a broad range of later periods.

Phase 7 Post-Medieval Flood Deposits

9.1.9 There were some variations in the clay like deposits sealing the upper alluvial sequence. These were interpreted as more recent flood deposits most likely formed during the post-medieval period. Overbank flooding from the River Beam is another likely source of flood deposits other than the Thames. Some of these deposits were relatively thin as a result of truncation from later ground consolidation.

Modern

9.1.10 The western side of the site had the most extensive impact from modern truncation, with the remains of demolished concrete structures being visible throughout the trenches excavated in this portion of the site (See Figure 14).

9.1.11 Modern activity through post-depositional impacts was visible across the rest of the site and was encountered in all the trenches to some degree or another. This took the form of buried services (French drains) or the landscaping and deliberate dumping of material to consolidate the ground before the laying of tarmac and in some places reinforced concrete.

9.2 Research Objectives

9.2.1 The WSI for the evaluation identified the following research objectives (as set out in the Archaeology Strategy and SARM):

9.2.2 Establish whether the Site contains evidence for Mesolithic to early Neolithic riverside camps and if so the specific nature of relationship of camps with the edge of floodplain location;

9.2.3 The site contained no evidence of Mesolithic or early Neolithic settlement activity. In particular sediment samples from the lower alluvium did not contain artefacts (such as burnt or worked flint).

9.2.4 Further inform how the local landscape was used and to what level of intensification in the prehistoric periods;

9.2.5 The site did contain evidence for some prehistoric activity. The worked timber in Trench 21 has been dated to the Late Neolithic to earliest (Chalcolithic) Bronze Age (based on C14 dates) and is thought to show evidence of the remains of a timber trackway. The deposits encountered would suggest that the landscape was marginal in this part of the site, between the drier ground to the north and the marsh to the south. Access to the wetter marshier environment to the south was important for hunting, fishing and other activities during this period and a trackway would have helped facilitate this. The level of intensification is hard to judge from such a small window into such a large landscape but the glimpses we do have demonstrated there were some attempts to access and exploit the landscape.

9.2.6 Establish as far as practicable, the presence/absence of preserved prehistoric (or later) worked wood or structures within peat via Phase related trenching and if present devise suitable mitigation;

9.2.7 The presence of worked wood thought to be of Late Neolithic/Chalcolithic date has suggested that there is the potential for a timber trackway preserved in the peat. Examples of trackways in other locations along the Thames Floodplain (at sites such as Bridge Road, Rainham, Movers Lane, London Road, Tesco Barking and Beckton to the west) have demonstrated that a trackway is a possibility in this location and that the construction can vary widely. 'In

constructional terms, Neolithic and Bronze Age trackways in Britain and Ireland utilised a wide range of materials, including brushwood, roundwood, coppiced poles, unconverted logs, and split timbers, in almost every conceivable combination to achieve their primary purpose: to facilitate access across soft or boggy ground. These include simple paths of brushwood, the trackway could have been constructed without recourse to transverses, such as the Early Bronze Age trackway excavated at Bramcote Grove, which consisted of little more a line of cleft oak logs laid directly on the peat' (Hart 2015, Rackham & Thomas et al. 1996, Sidell, Cotton et al 2002).

9.2.8 Further inform how the landscape was used and to what level of intensification in the Romano-British period;

9.2.9 The potential for Roman features was low and that turned out to be the case with no evidence of Roman activity found during this phase of works. Roman activity (clay extraction pits and a water hole) encountered on the north-eastern margins during the Phase 1 excavation did not spread this far and that landscape was probably too wet for such activity. There was no evidence for the presence of drainage ditches or other waterside activities in this phase of work.

9.2.10 Inform how the landscape was used and to what level of intensification in the Anglo-Saxon period;

9.2.11 There was no evidence of Anglo-Saxon activity during this phase of works. The potential for features from this period was expected to be low and the work carried out did not change this view. The various alluvial and flood deposits could be attributed to this period but without any dating evidence within the clay it is difficult to make that assumption.

9.2.12 To further inform how the landscape was used and to what level of intensification in the medieval period and to identify landscape features that maybe contemporary with that site;

9.2.13 During this investigation no medieval activity or landscape features were encountered. Flood deposits that could have been formed during seasonal storms within the medieval period were encountered but the lack of dating evidence makes it hard to link it directly.

9.2.14 To further establish whether the nature of post-medieval agricultural land-use at the site and to relate evidence to cartographic and historical sources;

9.2.15 Early cartographic sources have shown the land was a marsh right up until the late 18th century. Eventually the land was managed and drained sufficiently enough to be exploited for some form of agriculture. Although there was no direct evidence for early post-medieval agricultural activity there were some dump deposits from the last post-medieval period when the land was being reclaimed for industrial use. This activity seems to have removed any agricultural soils that might have helped us understand the agricultural land-use during this period.

To excavate, record and remove any human burials legally;

9.2.16 There were no human remains found during this evaluation.

9.2.17 To refine the geo-archaeological sub-surface topographical modelling at each Phase via borehole assessment and analysis (where appropriate) and via test pits within trenches;

9.2.18 Geo-archaeological trial holes / test-pits were excavated where possible in nine of the trenches investigated. The desk-based deposit model indicates that the Gravel surface beneath Trench 21 rested at around -4m OD but descended steeply, with a Peat surface somewhere between -1 and -1.5m OD. This is broadly consistent with findings of the field investigation, which record the Peat surface at around -1m OD. Similarly, the surface of the Peat in Trenches 17, 19, 22, 24 and 25 was broadly consistent with the model. The surface of the Peat in Trench 16 appeared to be between ca. 0.5 and 1m higher than indicated by the model.

9.2.19 Thus the model would appear to be a reasonably accurate account of the Peat surface across Phase 2.

9.2.20 There are variations between the model and actual peat surface heights in the area of Trenches 16 / 21 as they were located at the interface between the floodplains of the River Thames /

Beam and terrace edge, thus localised variations in the stratigraphy are to be expected (and as above, the Gravel surface descends steeply in this area). The further modelling proposed will smooth / average out variations in the stratigraphy to a certain degree on any model. Finally, the positioning of the possible trackway could have had a localised impact upon the hydrology of the floodplain, leading to prolonged peat accumulation in this area (Batchelor R pers comm).

9.2.21 To further investigate the large piece of wood/tree identified in Trench 14;

9.2.22 The location of Trench 21 immediately to the south of Trench 14 was to help investigate this piece of wood further. Although the nature of the additional timbers found in Trench 21 were slightly different it did seem to line up directly with this wood. The north-south alignment of timbers would give weight to the possibility that the structure was a prehistoric trackway in this part of the site.

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11.1.1 Pre-Construct Archaeology would like to thank RPS / CgMS for commissioning and funding this investigation on behalf of Countryside Properties.

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11.1.3 The author would like to thank Chloe Sinclair, Sote Angeleski, Dan Britton and Mauro Puddu for their work on site. Thanks are given to Richard Archer and Guy Seddon for the surveying, Ray Murphy and Hayley Baxter for the illustrations and Kate Turner for her advice on the Geo-archaeological sampling.

11.1.4 Special thanks are given to Helen Hawkins for her project management and the editing of this report.

APPENDIX 1: CONTEXT INDEX

Site Code	Context No.	Trench	Plan	Section	Type	Description	Highest Level	Dimensions (N-S)	Dimensions (E-W)	Thickness/Depth	Phase
THV17	108	21	Tr. 21	36, 42	Layer	Flood Deposit	0.09m OD	2.30m	27.60m	0.50m	7
THV17	109	21	Tr. 21	36, 42	Layer	Alluvium	-0.44m OD	2.30m	27.60m	0.40m	6
THV17	110	21	Tr. 21, 110	42	Layer	Peat	-0.82m OD	2.30m	16.00m	0.23m	5
THV17	111	16	Tr. 16	35, 46	Layer	Alluvium	0.17m OD	2.25m	21.50m	0.45m	7
THV17	112	16	Tr. 16	N/A	Layer	Alluvium	-0.49m OD	2.28m	3.35m	Unknown	6
THV17	113	16	Tr. 16	N/A	Timber	Post	-0.64m OD	0.20m	0.20m	Unknown	7
THV17	114	17	Tr. 17	37, 47	Layer	Alluvium	-0.29m OD	27.40m	4.00m	0.25m	6
THV17	115	22	Tr. 22	38	Layer	Alluvium	0.17m OD	3.60m	28.00m	0.60m	6
THV17	116	23	Tr. 23	39	Layer	Alluvium	-0.03m OD	27.00m	4.00m	0.55m	6
THV17	117	21	Tr. 21	N/A	Layer	Peat	-0.82m OD	2.30m	16.00m	0.23m	?

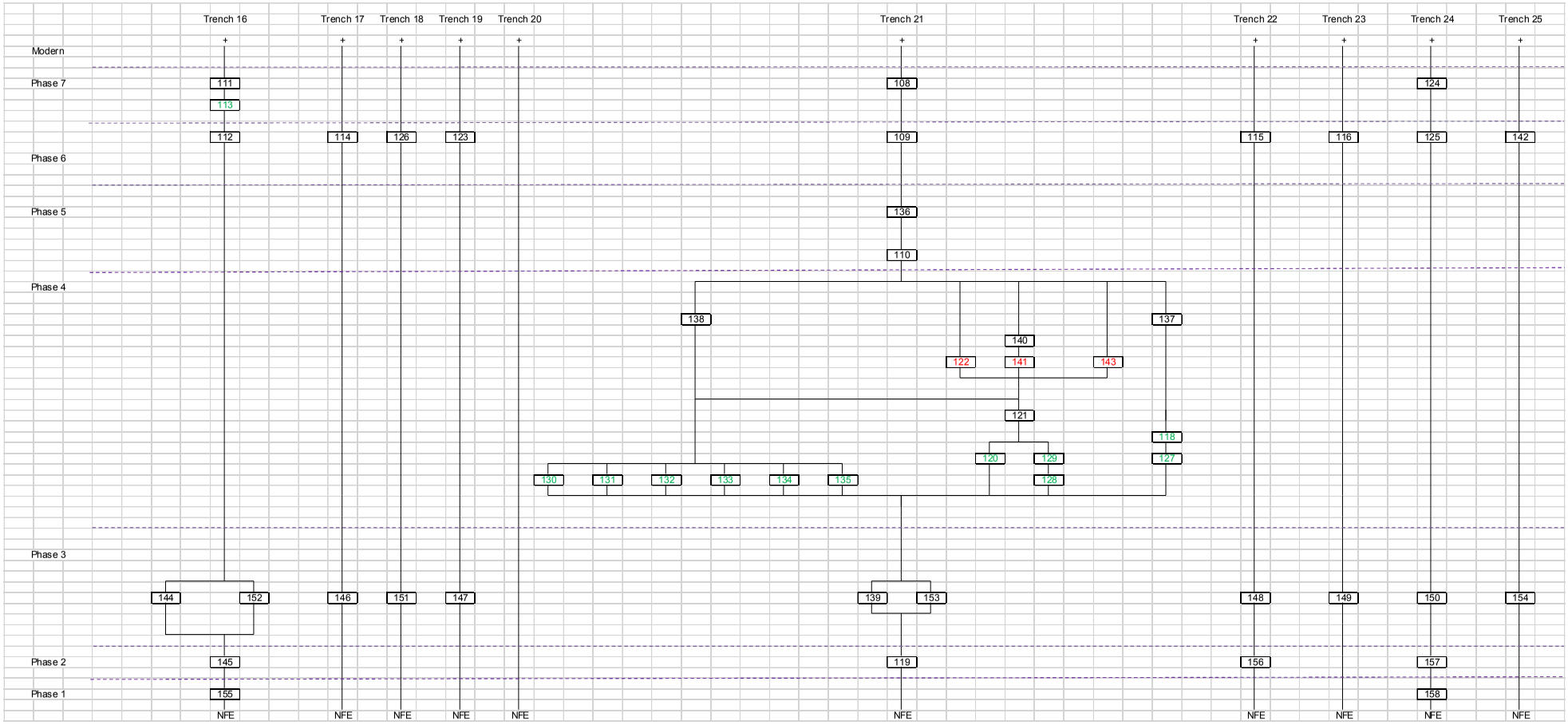
THV17	118	21	110	N/A	Timber	Worked Timber	-0.90m OD	0.10m	0.40m	0.10m	4
THV17	119	21	119,121	42	Layer	Alluvium	-1.08m OD	1.00m	2.50m	Unknown	2
THV17	120	21	121	N/A	Timber	Wood?	-1.00m OD	0.31m	0.28m	Unknown	4
THV17	121	21	121	42	Deposit	Modified Bank	-1.07m OD	0.90m	0.77m	0.25m	4
THV17	122	21	119,121	N/A	Cut	Cut for Stake	-0.96m OD	0.11m	0.08m	0.16m	4
THV17	123	19	Tr. 19	45	Layer	Alluvium	0.33m OD	2.90m	5.80m	0.70m	6
THV17	124	24	Tr. 24	40	Layer	Clay / Gravel	0.22m OD	4.00m	27.00m	0.52m	7
THV17	125	24	Tr. 24	40	Layer	Alluvium	-0.30m OD	4.00m	27.00m	0.30m	6
THV17	126	18	Tr. 18	41	Layer	Alluvium	-0.11m OD	4.00m	18.00m	0.40m	6
THV17	127	21	119	42	Timber	Plank	-1.07m OD	1.00m	0.70m	0.05m	4
THV17	128	21	119	N/A	Timber	Post	-1.18m OD	0.80m	0.20m	Unknown	4

THV17	129	21	119	N/A	Timber	Scattered Wood	-1.18m OD	0.80m	0.20m	Unknown	4
THV17	130	21	119	N/A	Timber	Worked Wood	-1.00m OD	0.33m	0.07m	0.10m	4
THV17	131	21	119	N/A	Timber	Worked Wood	-1.14m OD	0.36m	0.06m	Unknown	4
THV17	132	21	119	42	Timber	Worked Wood	-1.11m OD	0.86m	0.19m	0.05m	4
THV17	133	21	119	N/A	Timber	Worked Wood	-1.16m OD	0.49m	0.04m	Unknown	4
THV17	134	21	119	42	Timber	Worked Wood	-1.15m OD	0.74m	0.15m	0.03m	4
THV17	135	21	119	N/A	Timber	Worked Wood	-1.33m OD	0.10m	0.08m	Unknown	4
THV17	136	21	N/A	42	Layer	Layer of Peat	-0.83m OD	0.80m	1.20m	0.10m	5
THV17	137	21	N/A	42	Layer	Peat	-0.82m OD	0.80m	2.20m	0.06m	5
THV17	138	21	119	42	Layer	Peat	-0.94m OD	0.80m	2.17m	0.23m	5
THV17	139	21	119	42	Layer	Peat	-1.18m OD	0.80m	1.55m	0.23m	3

THV17	140	21	N/A	42	Fill	Fill of P/Hole	-0.88m OD	0.07m	0.07m	0.17m	4
THV17	141	21	N/A	42	Cut	C/O Post-Hole	-0.88m OD	0.07m	0.07m	0.17m	4
THV17	142	25	Tr. 25	44	Layer	Alluvium	0.35m OD	27.50m	4.00m	0.80m	6
THV17	143	21	121	N/A	Cut	C/O Post-Hole	-1.03m OD	0.10m	0.10m	0.20m	4
THV17	144	16	N/A	46	Layer	Peat (QUEST)	-0.63m OD	Unknown	Unknown	1.70m	3
THV17	145	16	Tr. 16	46	Layer	Lower Alluvium (QUEST)	-2.33m OD	Unknown	Unknown	2.00m	2
THV17	146	17	Tr.17	47	Layer	Peat (QUEST)	-1.89m OD	Unknown	Unknown	2.20m	3
THV17	147	19	Tr. 19	48	Layer	Peat (QUEST)	-2.57m OD	Unknown	Unknown	3.00m	3
THV17	148	22	N/A	N/A	Layer	Peat (QUEST)	-1.33m OD	Unknown	Unknown	Unknown	3
THV17	149	23	Tr. 23	51	Layer	Peat (QUEST)	-1.27m OD	Unknown	Unknown	2.40m	3
THV17	150	24	N/A	52	Layer	Peat (QUEST)	-1.40m OD	Unknown	Unknown	1.80m	3

THV17	151	18	Tr. 18	41	Layer	Peat (PCA)	-1.76m OD	Unknown	Unknown	Unknown	3
THV17	152	16	N/A	N/A	Layer	Peat (PCA)	-1.19m OD	Unknown	Unknown	Unknown	3
THV17	153	21	Tr. 21	49	Layer	Peat (PCA)	-1.05m OD	Unknown	Unknown	Unknown	3
THV17	154	25	Tr. 25	53	Layer	Peat (PCA)	-1.42m OD	Unknown	Unknown	Unknown	3
THV17	155	16	Tr. 16	46	Layer	Gravel	-2.89m OD	Unknown	Unknown	Unknown	1
THV17	156	22	Tr. 22	50	Layer	Lower Alluvium	-3.11m OD	Unknown	Unknown	1.00m	2
THV17	157	24	N/A	52	Layer	Lower Alluvium	-3.20m OD	Unknown	Unknown	0.10m	2
THV17	158	24	Tr. 24	52	Layer	Gravel	-3.50m OD	Unknown	Unknown	Unknown	1

APPENDIX 2: SITE MATRIX



APPENDIX 3: OASIS REPORT FORM

OASIS ID: preconst1-302862

Project details

Project name	Beam Park Riverside (Phase 2)
Short description of the project	This report details the results of an archaeological evaluation on land at Beam Park Riverside (Phase 2), Thames Avenue, London Borough of Barking and Dagenham, RM9 6DE. Ten trenches were excavated across the site. Natural deposits were noted in nine of the ten trenches excavated. The presence of terrace gravels was noted in two of the ten trenches This gravel dropped to the south-west and was not reached in the southern most trenches on the edge of the Thames floodplain. A complex sequence of alluvial and peat deposits were encountered in nine of the trenches excavated. Geo-archaeological trial holes were located to investigate the floodplain deposits to sample and understand the formation of the peat at the edge of the floodplain. Prehistoric timbers probably dating to the Bronze Age were found in Trench 21. It is possible that these elements could have formed a simple wooden trackway. Further peat deposits sealed these timbers. Alluvial deposits formed upper layers in all levels of the trenches excavated and were formed from the Roman period onwards. Flood deposits thought to have formed in the medieval/post-medieval period were encountered in several trenches. Modern truncation to some degree or another was encountered in all of the trenches and this was seen to be most severe down the western side of the site; where reinforced concrete and ground beams from the warehouses of the 20th century Ford works were uncovered.
Project dates	Start: 03-10-2017 End: 17-11-2017
Previous/future work	Yes / Yes
Any associated project reference codes	THV17 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Vacant Land 3 - Despoiled land (contaminated derelict and ?brownfield? sites)
Monument type	TIMBER Bronze Age
Monument type	LAYERS Bronze Age
Monument type	LAYERS Medieval

Monument type	LAYERS Post Medieval
Significant Finds	WOOD Bronze Age (probable)
Methods & techniques	'"Sample Trenches"'
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	Planning condition
Position in the planning process	Pre-application

Project location

Country	England
Site location	GREATER LONDON BARKING AND DAGENHAM DAGENHAM Beam Park Riverside (Phase 2)
Postcode	RM9 6DE
Study area	29 Hectares
Site coordinates	TQ 5014 8290 51.52452166869 0.164490758941 51 31 28 N 000 09 52 E Point
Height OD / Depth	Min: -4.49m Max: 1.47m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	RPS Planning
Project design originator	Rob Masefield
Project director/manager	Helen Hawkins

Project supervisor	Matt Edmonds
Type of sponsor/funding body	House Builder
Name of sponsor/funding body	Countryside Properties

Project archives

Physical Archive recipient	LAARC
Physical Archive ID	THV17
Physical Contents	"Environmental","Wood"
Digital Archive recipient	LAARC
Digital Archive ID	THV17
Digital Contents	"none"
Digital Media available	"Database","Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC
Paper Archive ID	THV17
Paper Contents	"none"
Paper Media available	"Context sheet","Diary","Drawing","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)

Title	Beam Park Riverside (Phase 2): An Archaelogical Evaluation
Author(s)/Editor(s)	Edmonds, M
Date	2017
Issuer or publisher	PCA
Place of issue or publication	London

APPENDIX 4: WOOD REPORT

Initial notes on prehistoric waterlogged wood seen at Dagenham;

PCA Evaluation Trench THV 17, Tr 21

PCA Supervisor Matt Edmonds

Project Manager H Hawkins

DM Goodburn BA Phd, Archaeological Woodwork Specialist MOLA, Pm 17/11/2017

Background

This writer was asked to visit this trench of the THY 17 Pre-Construct evaluation project at Dagenham to advise on the nature of the waterlogged wood found. The wood was believed to possibly be part of a late prehistoric trackway running N-S from slightly higher land to the north into the wetlands of the Thames flood plain to the south. The general region of the northern Thames flood plain in east London, is well known to contain late prehistoric waterlogged wooden structures such as trackways and 'platforms' as well as portable woodwork such as the Dagenham Idol found close by to the west. Virtually all of this has been found to span the Bronze Age, with just a very small amount of Neolithic and Iron Age material. This writer has been involved the vast majority of the excavation projects concerned and there is a corpus of records of late prehistoric woodwork held in local archives and much has been published.

The key regional study here, which PCA were involved in the field work of, is 'Landscape and Prehistory of the East London Wetlands', By L Stafford, D, Goodburn and M, Bates (It was centred on sites along the A13 route, pub 2012 , Oxford Archaeology Monograph 17). It should also be noted that much naturally fallen and in situ drowned prehistoric woodland has also been found in the region of Neolithic and Bronze Age date. Prehistoric beaver dams are also known from three sites relatively close by, and these have been confused with humanly made structures initially.

Trench 21 and key issues concerning the waterlogged wood found

Matt Edmonds provided background information and took me through the sequence of deposits found , from recent made ground with a remarkably low surface at +c. +1.0m OD, through clay silt alluvium to the upper part of the peat at c. -1.5m OD. C. 0.25m below the top of the peat a small group of varied pieces of waterlogged woodwork were visible. Key questions were 'Is there definitely any worked material?' and 'What might be needed to complete the recording at this stage?' and 'What might be the function of any structural woodwork revealed?' and finally views on likely date range. If worked material was clearly found it was likely to lead to the excavation of an enlarged trench with the lifting of the worked material for detailed recording and sampling. But at this stage the first broad layer of assorted wood had been cleaned in plan. The sondage in the centre of the step sided trench was c. 1m wide by 7m long so the extent of the exposure of the material was limited with many ends, where cut marks etc might be found, lying beyond the trench edges. Numerous other evaluation trenches had been excavated across the large site straddling Thames Avenue, and none had revealed wood with evidence of human working. However, the E-W trench just to the north had revealed a solitary N-S log crossing the trench, but this could be either the central part of a worked timber or just a naturally fallen tree with a slightly decay flattened upper face....

Summary of what was visible in E-W Trench 21 am 17/11/2017

Once eyes were accustomed to the shade of the trench, on a very bright sunny day, several pieces of horizontal waterlogged wood were visible some decayed and some moderately well preserved. None of the material was clearly part of a coherent trackway , though the exposure was of a limited area. However, a little further cleaning of key spots suggested by ME showed that there was at least one substantial worked timber with two smaller worked fragments adjacent along side twig, root and bark material and several larger branches and a small fallen tree.

From east to west

1/ A group of moderately decayed roundwood mainly orientated c. NE-SW, including one small, double stemmed tree (almost certainly of yew) with roots attached to the north. This material lay horizontal c. 0.35m below the top of the peat. Close examination did not reveal any clear cut marks or other humanly worked features.

2/ To the west, c. 2m from the east end of the sondage, a group of small twigs and bark fragments were found overlying a NE-SW aligned horizontal log, c. 200mm in diameter. The SW end of this log had a blunt axe cut point. Thought the best preserved axe facets lay facing sideways or down they appeared to be smooth and metal axe cut. The very tip of the log had been lost but under the blunt point was a soft void that might just possibly have been a disturbed 'post hole'? It is quite possible that this timber was originally vertical and had fallen or been pulled over in antiquity. However, cross cutting a log with an axe automatically produces a blunt point so this may just have been a cross cut log dragged to the location? The log appeared to be of oak but it was hard to be sure in the light. Here it is just possible the Bramcote Green MBA log trackway found in Bermondsey might be a parallel? There a series of cross cut oak logs were laid end to end with a line of alder stakes spaced down one side as hand holds. This material in Tr 21 was c. 250mm below the surface of the peat which included some clay and silt at this point.

On top of the SW end of the log two other small fragments of what appeared to be worked yew were also found.

Vertically set clearly worked posts or piles are not very common in London region wetland archaeology but have been found as piles in pairs in two broadly MBA bridges, and an isolated ash post was found next to the LBA Atlas Wharf platform, (Unpublished Isle of Dogs..).

3/ C. 1m to the west a NW to SE aligned apparent 'timber' was found over c.400mm wide. This resembles a very decayed plank laid horizontally but after a little further cleaning appeared to be a mix of bark and very decayed oak timber with no clear humanly worked features.

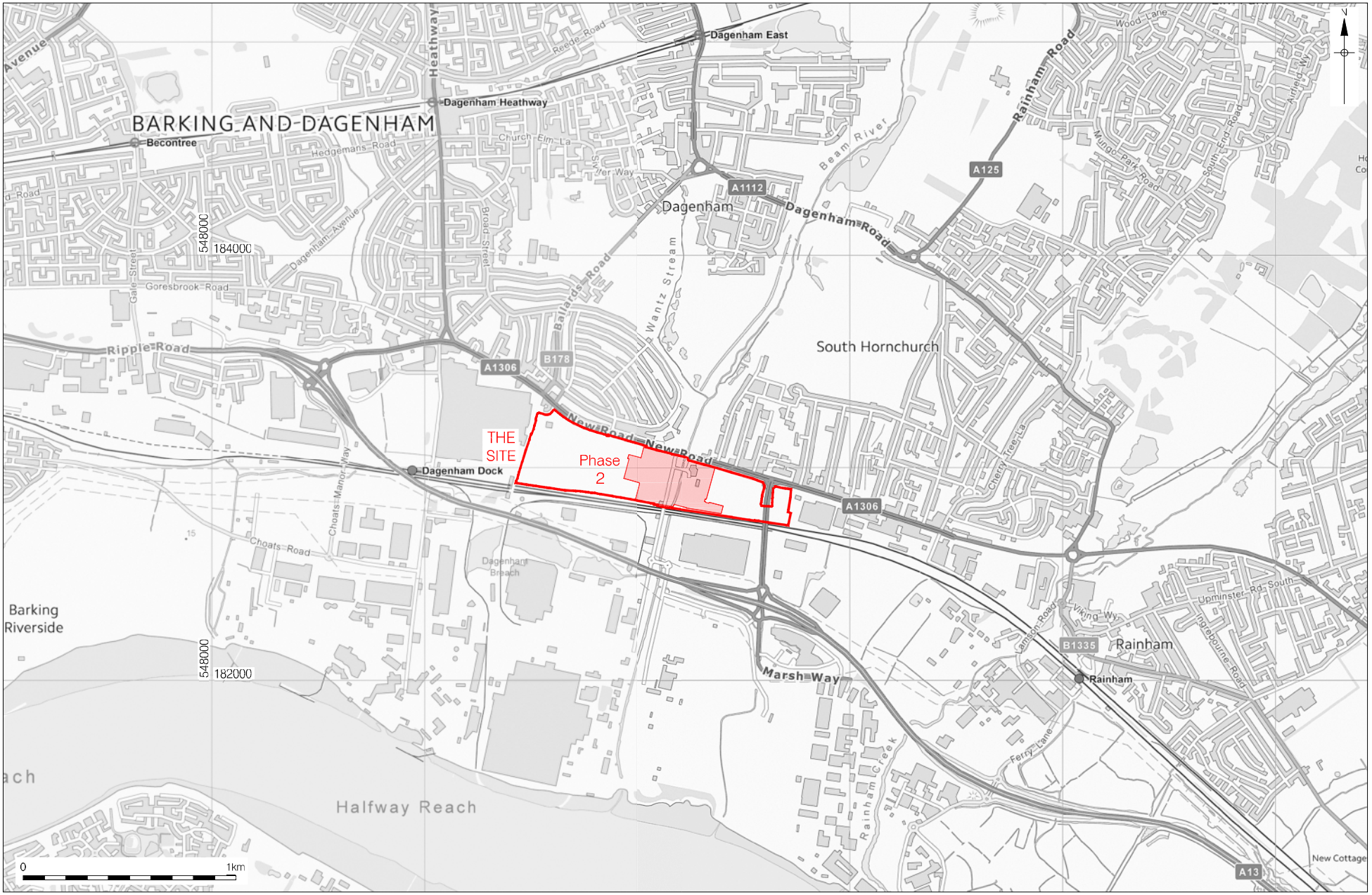
No vertically set timbers or roundwood stakes etc were visible in the sondage. A very broad dating from the stratigraphy and tool marks, of 'Bronze Age' is indicated for the worked material, but more evidence is clearly needed.

It was suggested by me that although we could not see a clear 'trackway' there was worked wood, principally the pointed oak log (Poss post?).

Suggestions for minor additional recording and targeted minor sampling prior to the planned backfilling by the end of the day

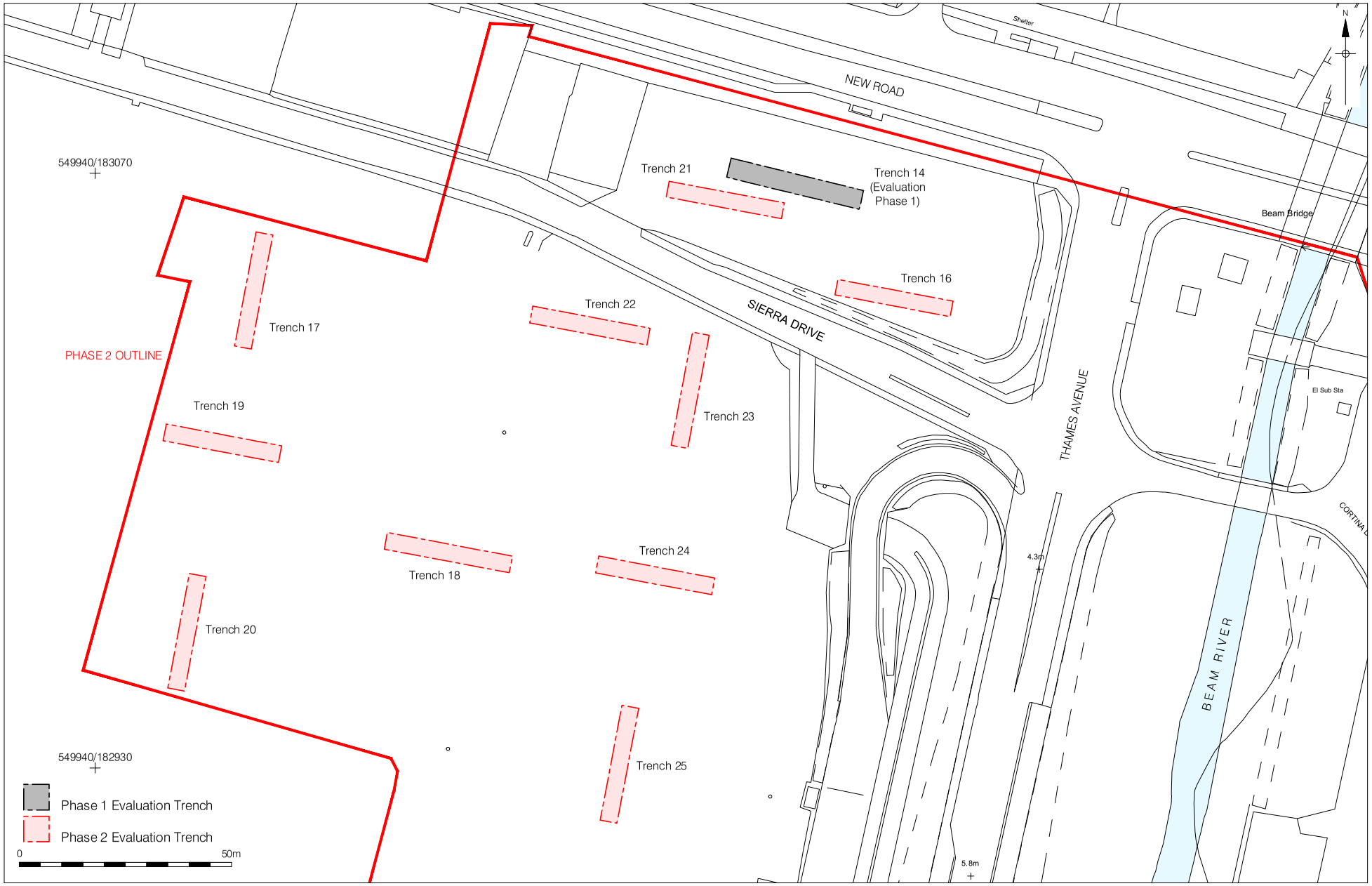
Following the small amount of further cleaning the axe cut SW end of the log in the centre of the exposure was far more visible so it was suggested that further general and close up photos be made with a cm scale, (done by ME) and the existing plans be slightly amended.

It was also suggested that limited very small samples be taken for Sp ID checking and possible C14 use just about the size of a small match box, of the larger items, such as the small double stemmed and tree and the pointed log.



04/12/17 RM/HB

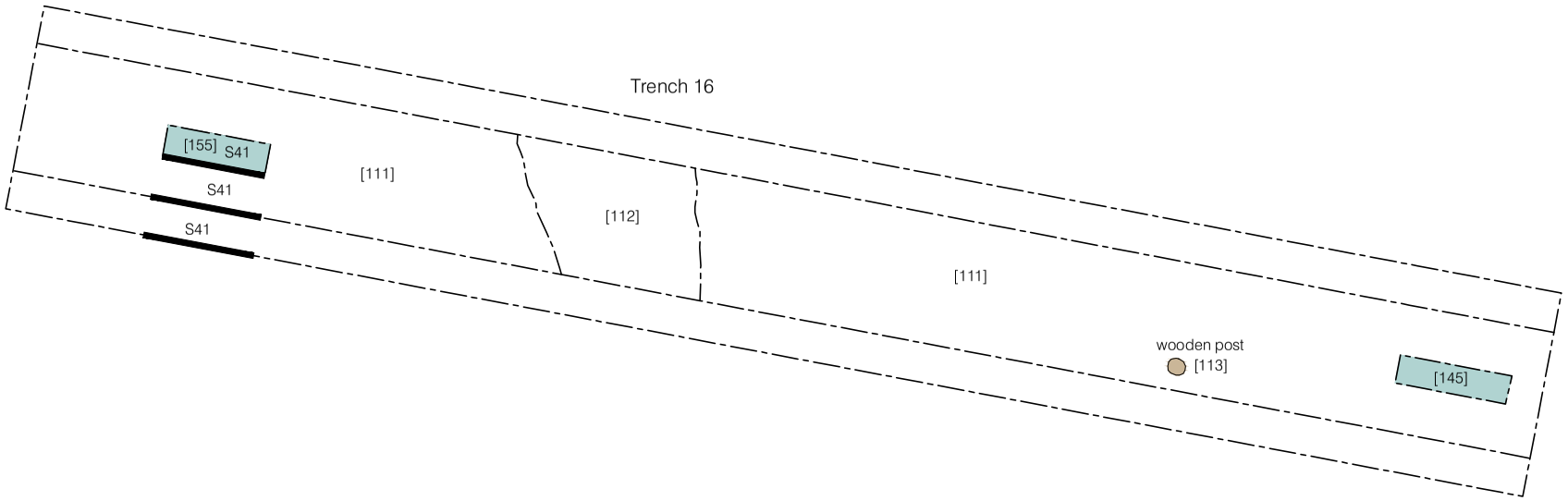
Figure 1
Site Location
1:25,000 at A4



Based on Survey data supplied by the client, 2017

04/12/17 RM/HB

Figure 2
Trench Location Plan
1:1,250 at A4



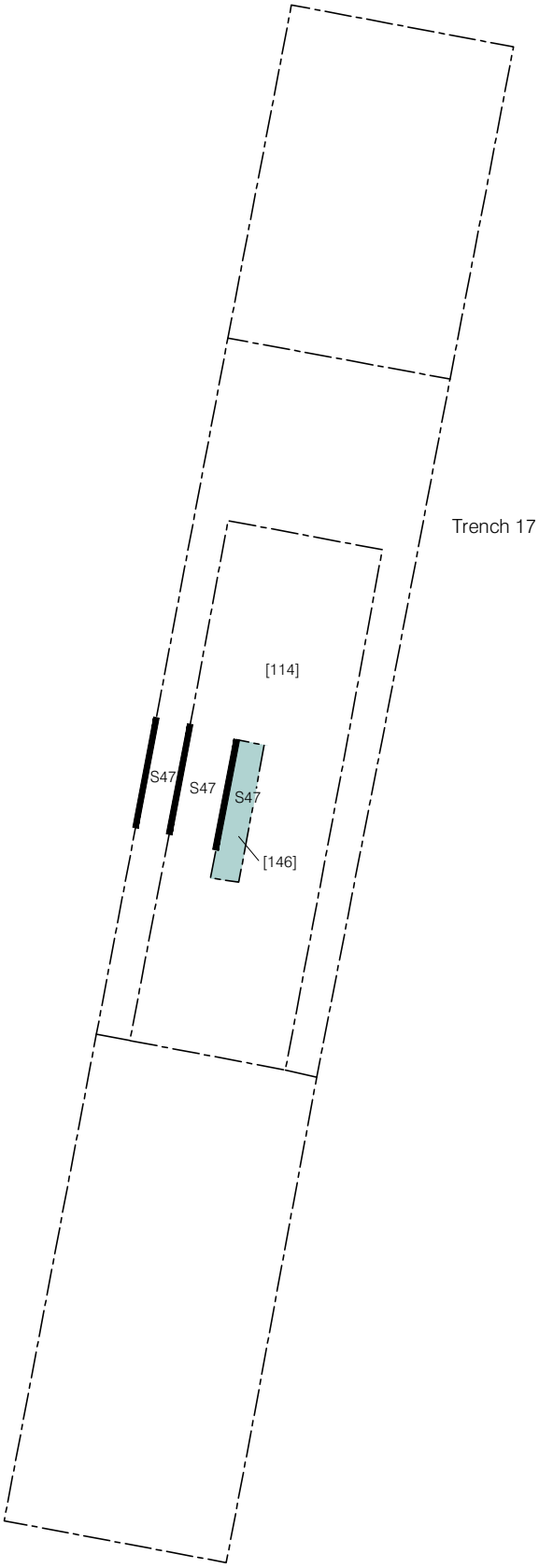
Archaeological Feature

Geoarchaeological Slot

0 5m

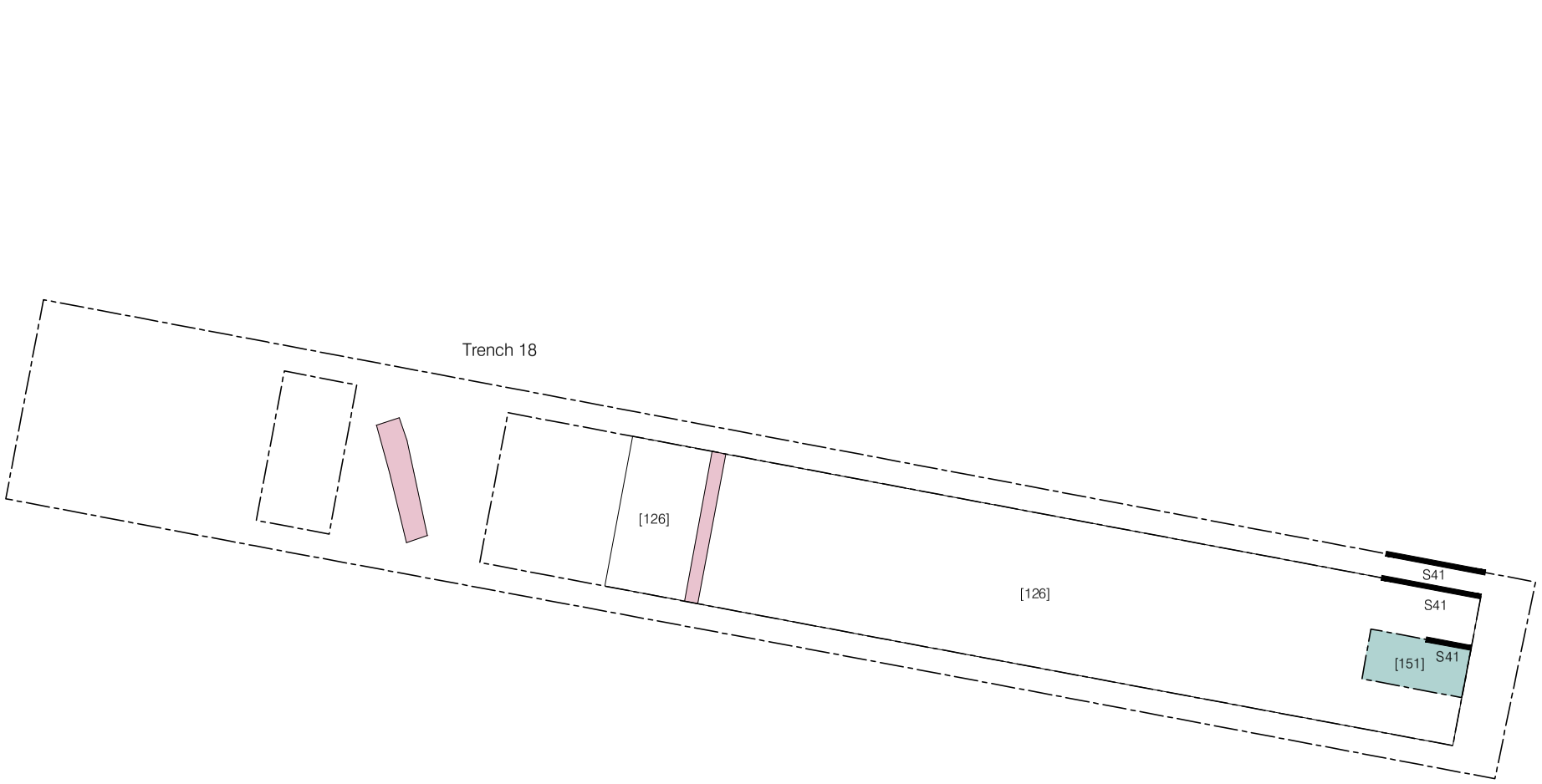
04/12/17 RM/HB

Figure 3
Plan of Trench 16
1:125 at A4



04/12/17 RM/HB

Figure 4
Plan of Trench 17
1:125 at A4



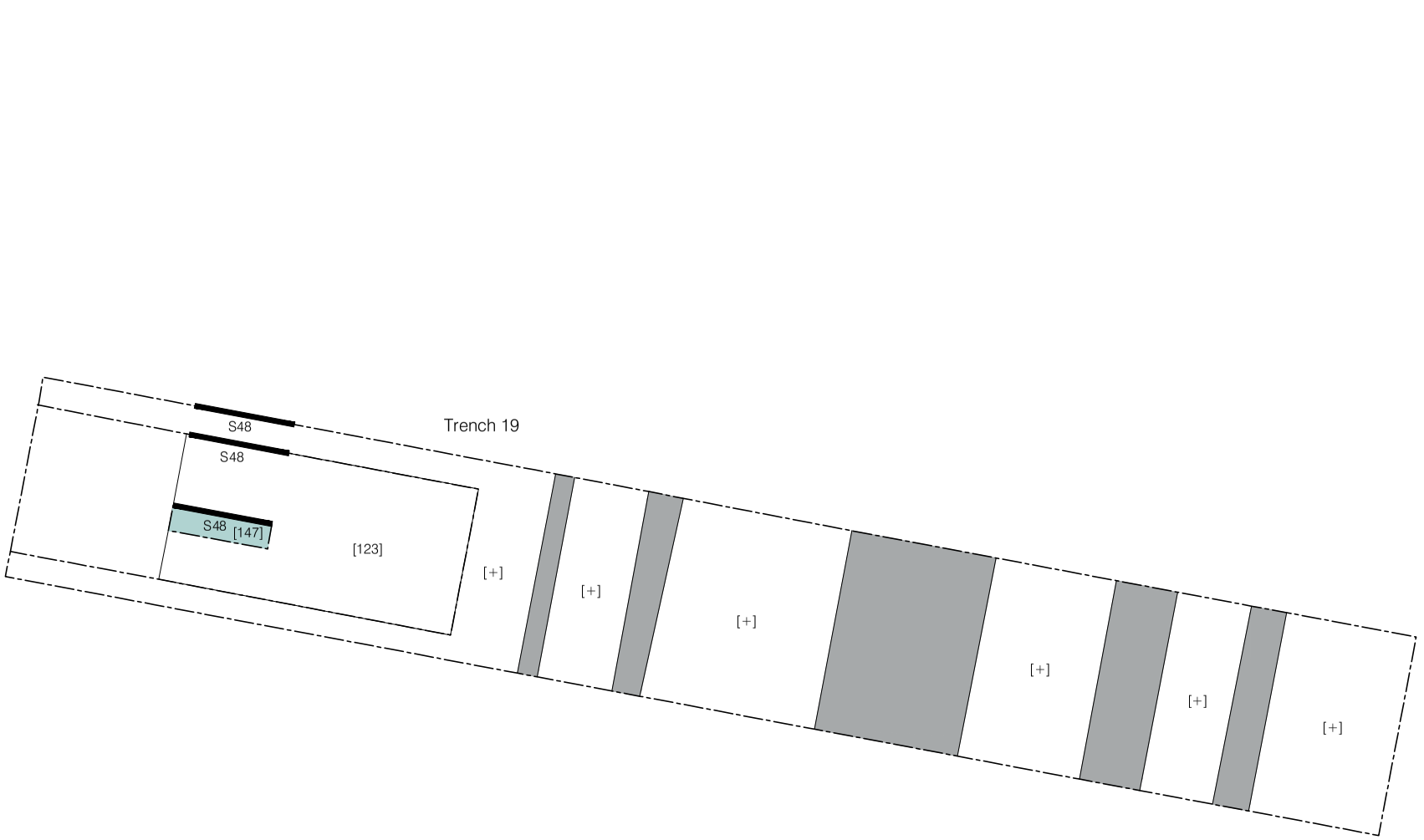
Modern Feature

Geoarchaeological Slot

0 5m

04/12/17 RM/HB

Figure 5
Plan of Trench 18
1:125 at A4



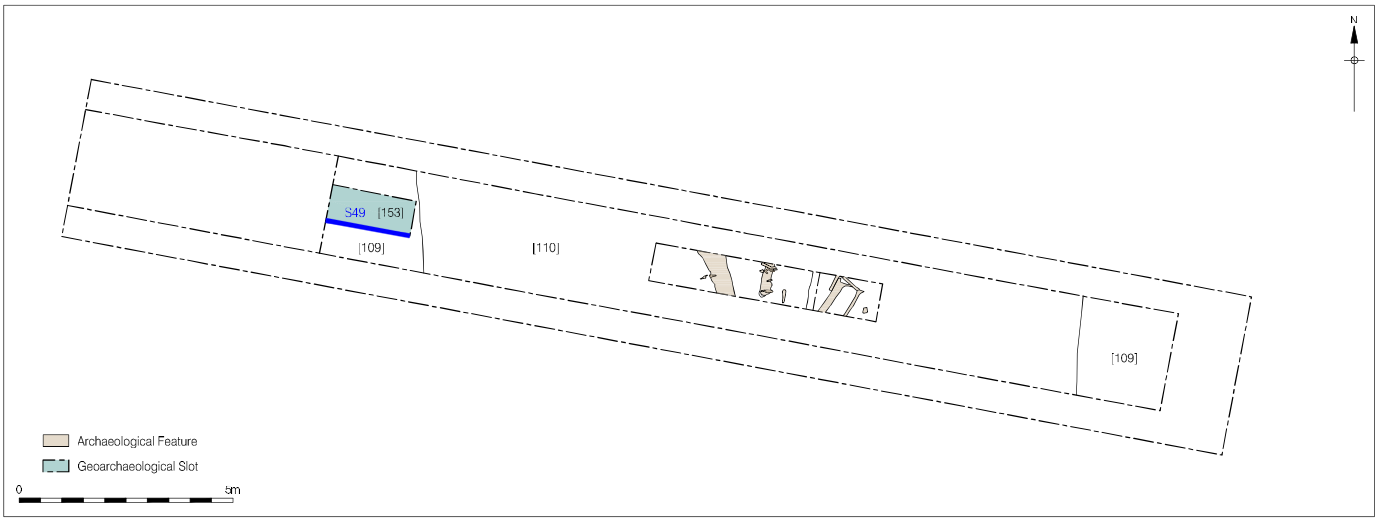
Concrete

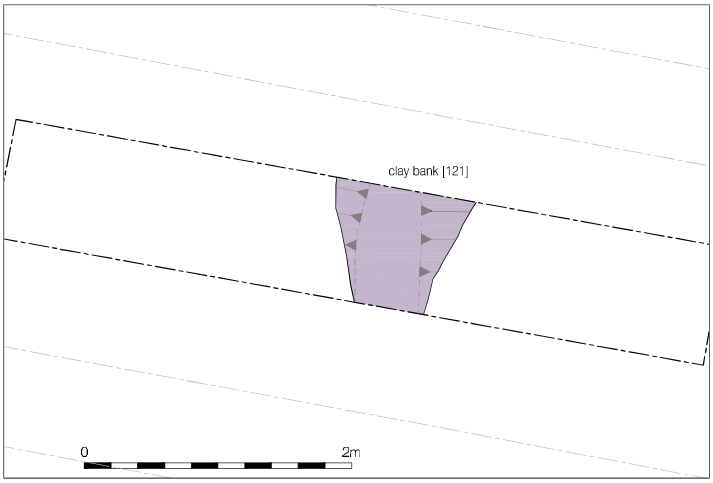
Geoarchaeological Slot

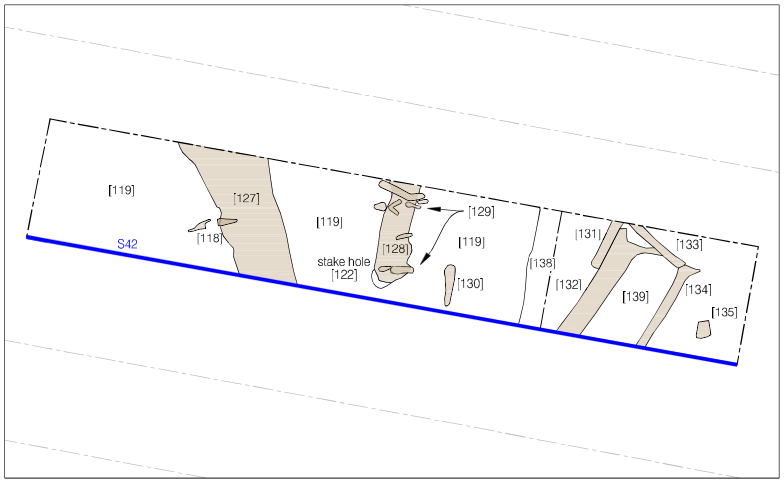
0 5m

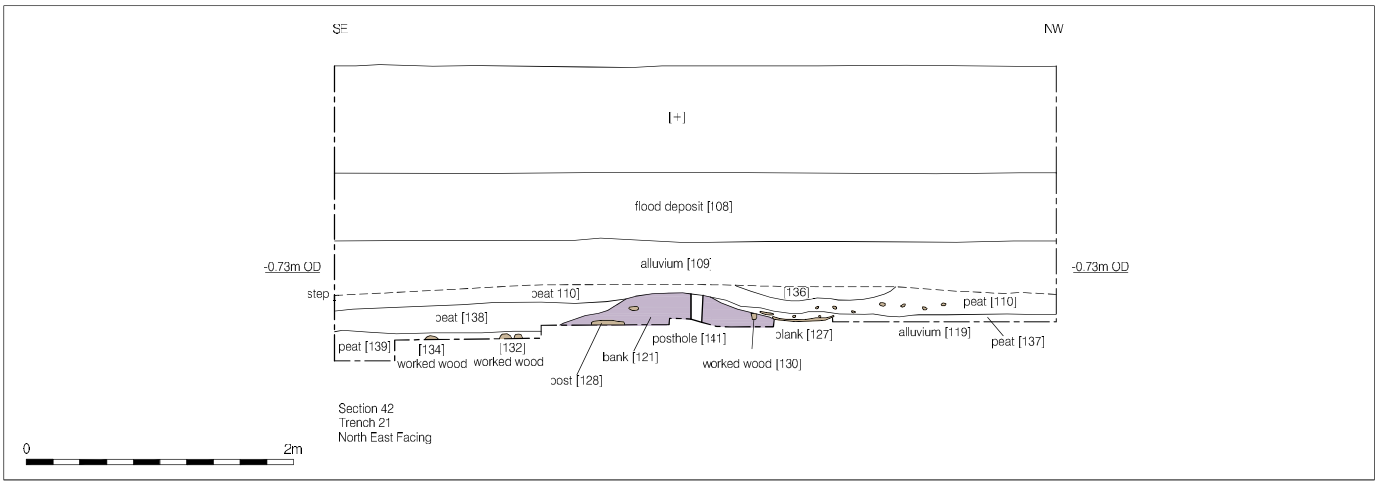
04/12/17 RM/HB

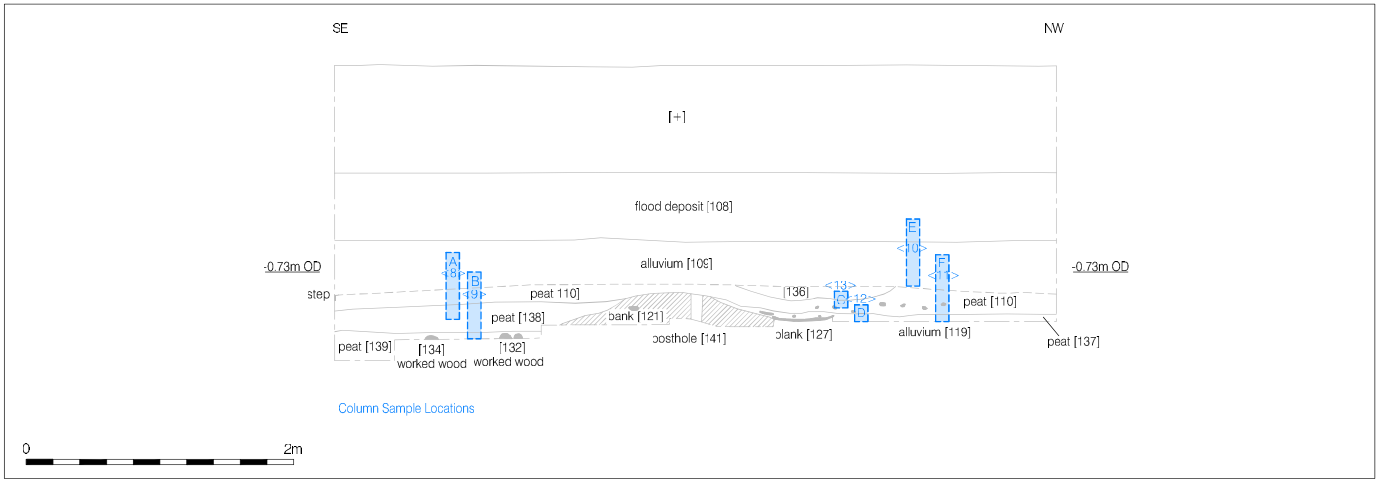
Figure 6
Plan of Trench 19
1:125 at A4





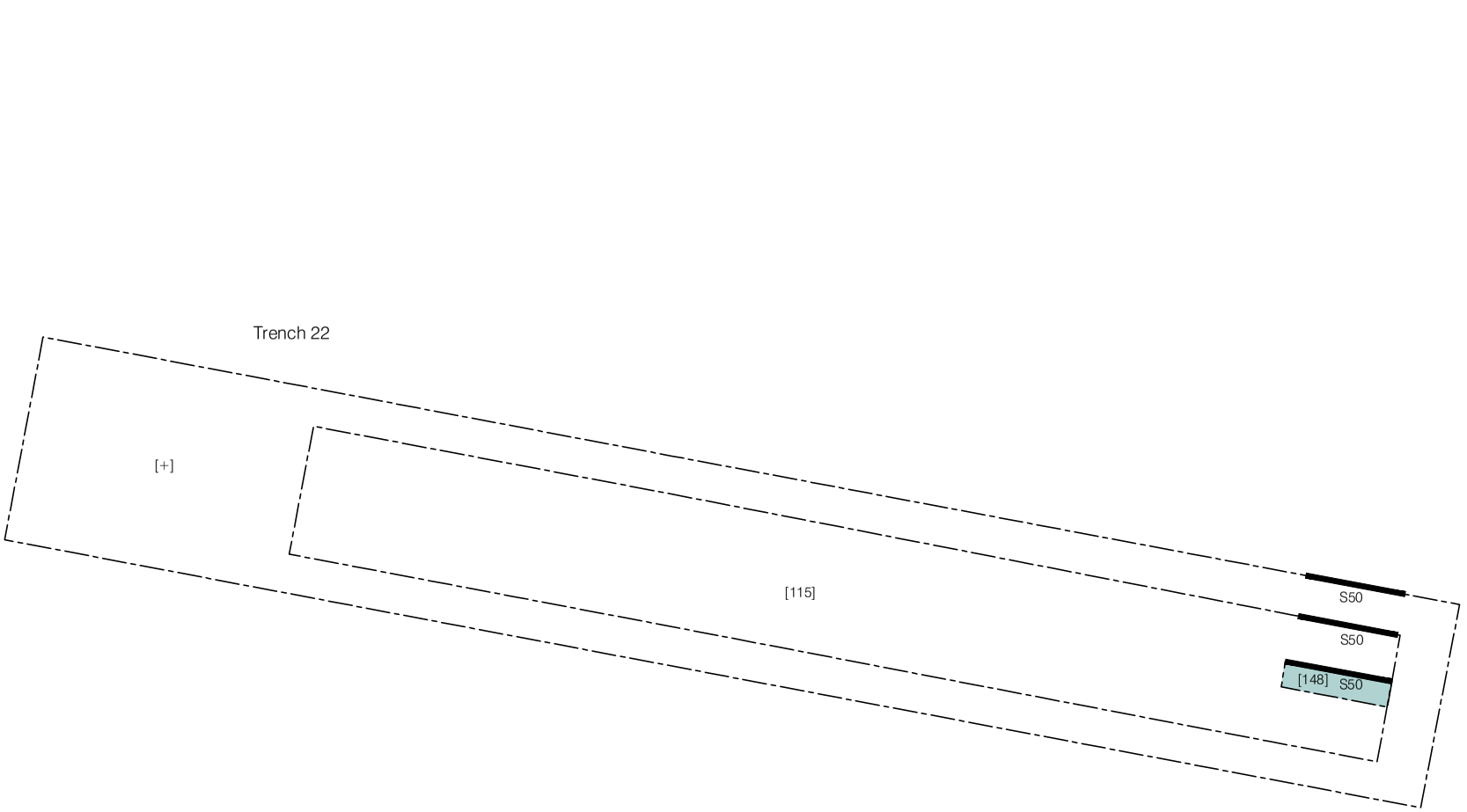






04/12/17 RM/HB

Figure 7
Plan of Trench 21 & Section 42
1:125 & 40 at A3

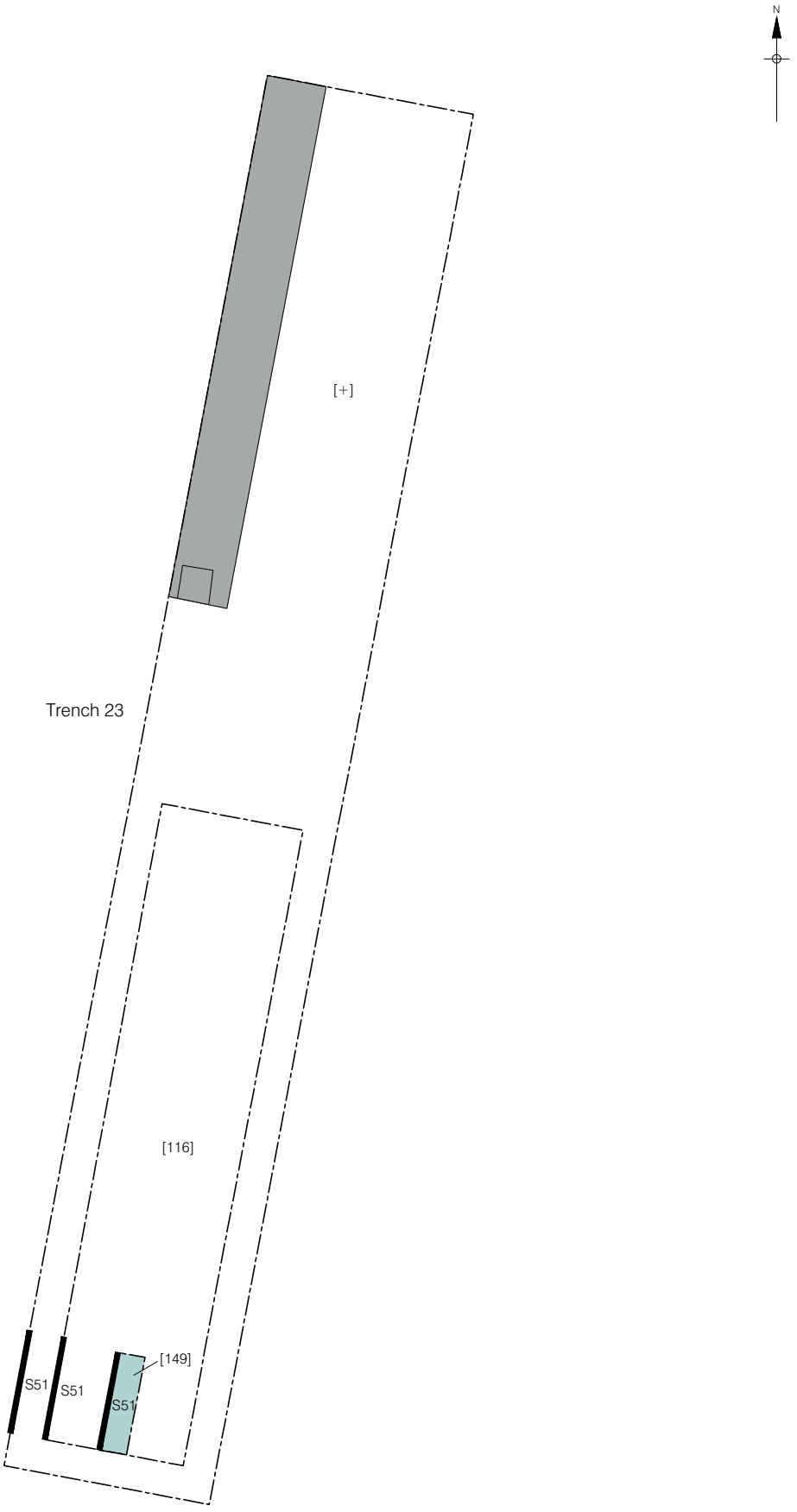


Geoarchaeological Slot

0 5m

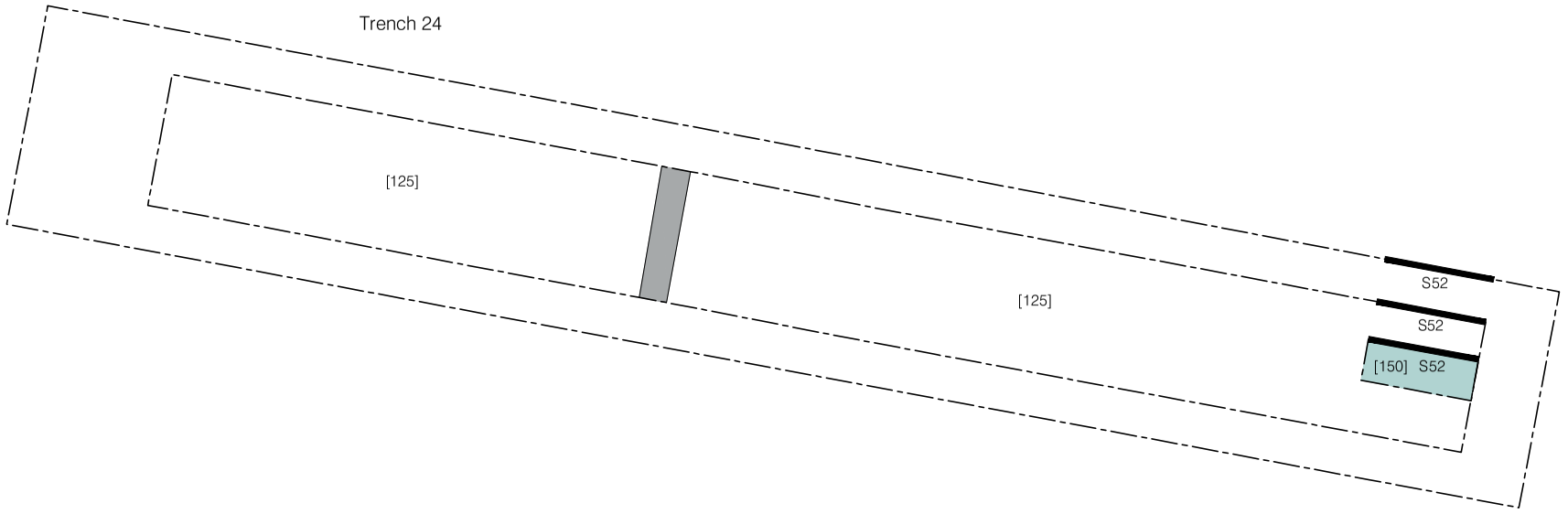
04/12/17 RM/HB

Figure 8
Plan of Trench 22
1:125 at A4



04/12/17 RM/HB

Figure 9
Plan of Trench 23
1:125 at A4



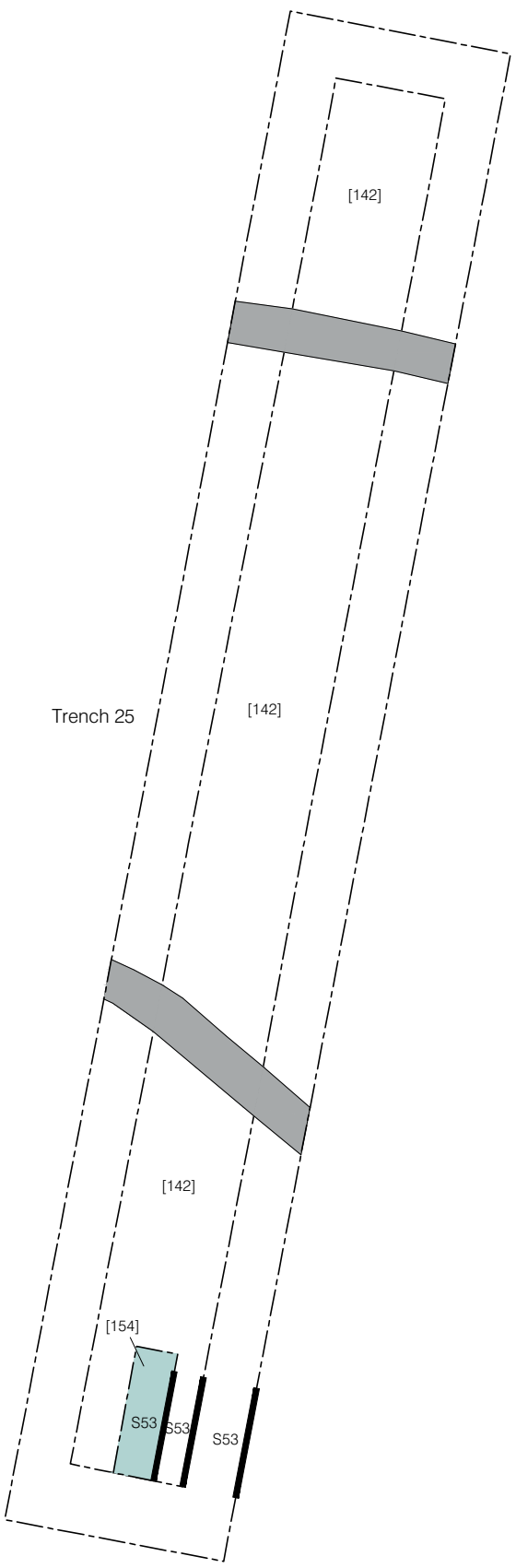
Concrete

Geoarchaeological Slot

0 5m

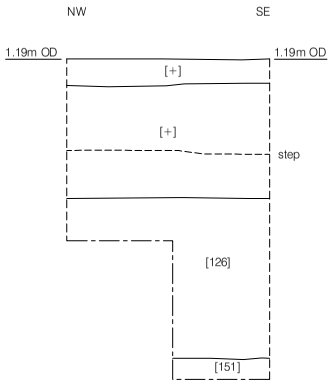
04/12/17 RM/HB

Figure 10
Plan of Trench 24
1:125 at A4

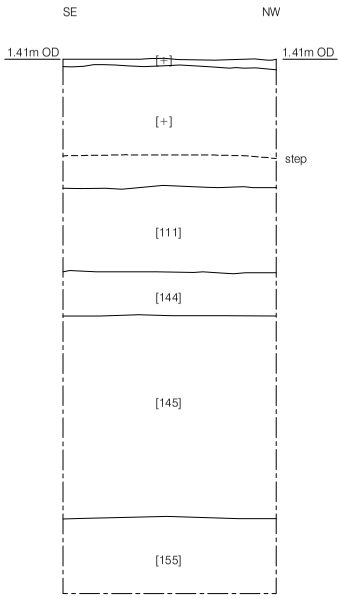


04/12/17 RM/HB

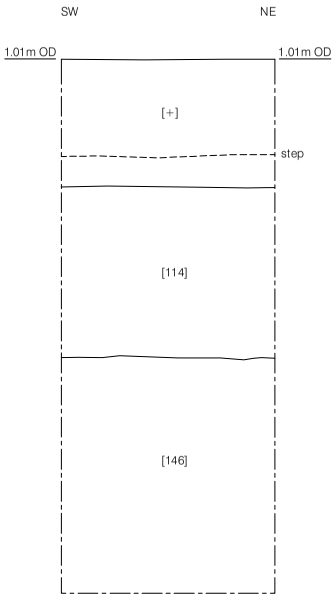
Figure 11
Plan of Trench 25
1:125 at A4



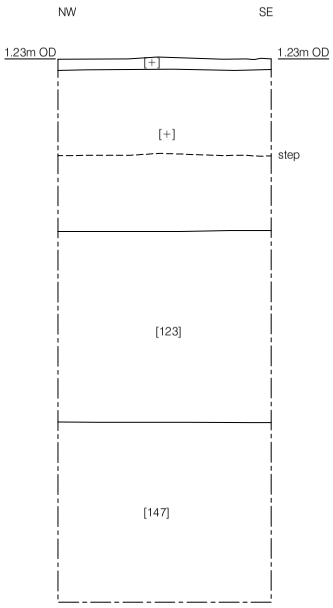
Section 41
Trench 18
South West Facing



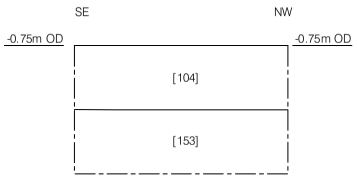
Section 46
Trench 16
North East Facing



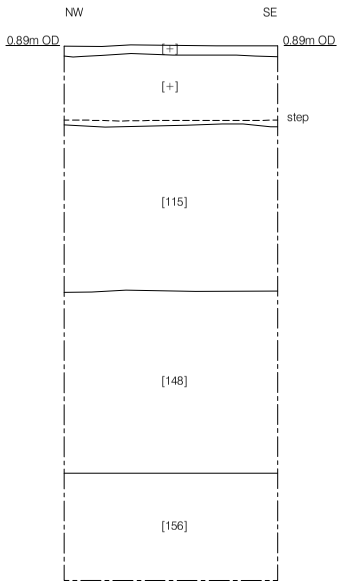
Section 47
Trench 17
South East Facing



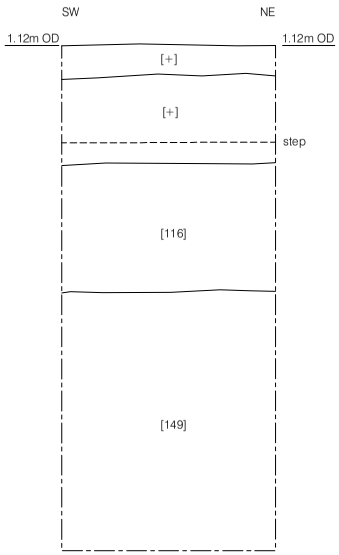
Section 48
Trench 19
South West Facing



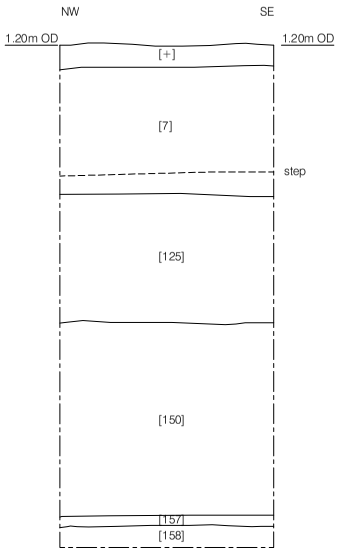
Section 49
Trench 21
North East Facing



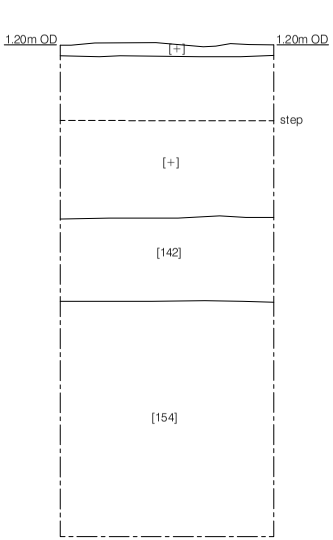
Section 50
Trench 22
South West Facing



Section 51
Trench 23
South East Facing



Section 52
Trench 24
South West Facing

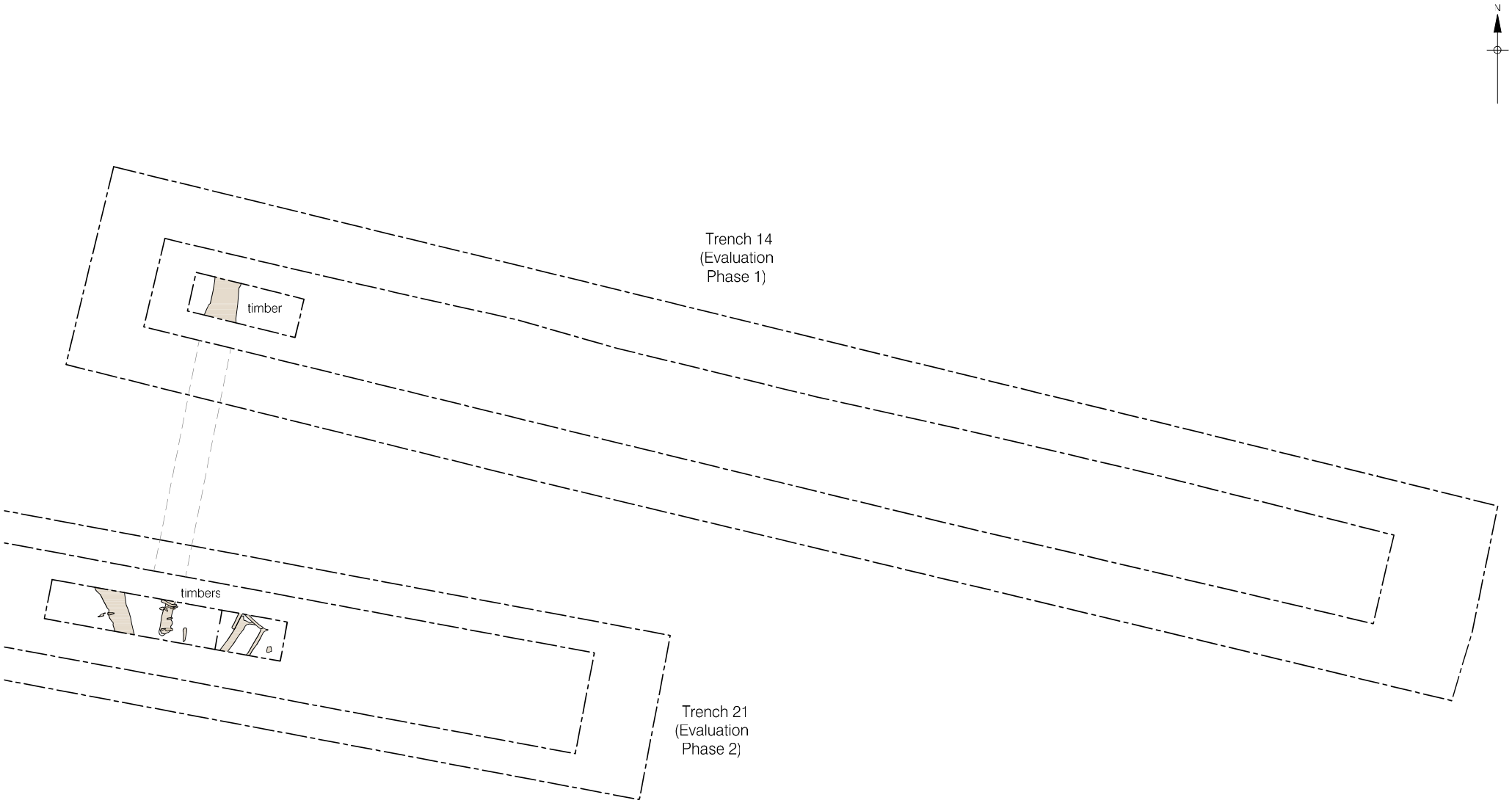


Section 53
Trench 25
North West Facing

0 2m

04/12/17 RM/HB

Figure 12
Sections 41 & 46-53
1:50 at A3



04/12/17 RM/HB

Figure 13
Plan of Trench 14 (Evaluation Phase 1)
showing timber in relation to Trench 21 timbers (Evaluation Phase 2)
1:125 at A4

Based on Survey data supplied by the client, 2017

15/12/17 RM/HB

Figure 14
Evaluation Trenches Overlain on PTA Site Plan c.1956-57
1:1,250 at A4

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