



# **Proposed Development at Eastcote Motor Services, High Road, Eastcote Hillingdon Borough**

## **Written Scheme of Investigation for Archaeological Evaluation**

Date:  
By: Callum Allsop  
Client: Rapleys  
Project Code: HRP15  
GLHER ref: 12083

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| <b>Project Code</b>   | <b>HRPM15</b>        |
| <b>GLHER ref</b>      | <b>12083</b>         |
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Figure 1 Location and layout of proposed development

Figure 2 Location of proposed evaluation trenches

## 1. INTRODUCTION

1.1.1 This *Written Scheme of Investigation* (WSI) has been prepared in relation to the proposed development of a new petrol filling station at Eastcote Service Station, High Road, Eastcote, Hillingdon, Greater London (National Grid Reference (NGR) TQ 10403 88487). This WSI has been prepared by Rubicon Heritage Services Ltd. on behalf of Rapleys.

1.1.2 Planning consent for the site has been granted by the London Borough of Hillingdon (Ref: 3689/APP/2015/2851) for the erection of a petrol filling station, shop and canopy, including underground tanks and demolition of the existing petrol station.

1.1.3 The granting of consent is subject to a condition (Condition 4) which relates to archaeology and states:

*No demolition or development shall take place until a stage 1 written scheme of investigation (WSI) has been submitted to and approved by the local planning authority in writing. For land that is included within the 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 the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development shall take place other than in accordance with the agreed stage 2 WSI which shall include:*

*A. The statement of significance and research objectives, the programme and methodology of site 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 until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.*

1.1.4 This WSI has been prepared to address Condition 4 and represents the Stage 1 WSI required for evaluation of the site. If the evaluation of the site identifies archaeological remains requiring further mitigation then a Stage 2 WSI will be prepared and submitted to the local planning authority for approval, acting on the advice of the Greater London Archaeological Advisory Service.

## 2. BACKGROUND

- 2.1.1 The proposed development site is presently in use as a petrol station located between High Road and the River Pinn with open-park areas with trees to the north-east and south-west. The site is located on level ground at c.44 m AOD in the valley of the River Pinn. This river is located adjacent to the north boundary of the site and is c. 3 m below site level.
- 2.1.2 The present land use in the area surrounding the site is urban in character with a mix of residential and commercial buildings with open grass areas and mature trees between High Road and the River Pinn. The site is bounded on the south by High Road, on the east and west by open areas of grass and trees and on the north by the river.
- 2.1.3 The underlying bedrock is indicated as Lambeth Group (formerly known as the Woolwich and Reading Beds) on 1:50,000 BGS mapping (BGS online viewer, viewed April 2016). These are sedimentary rocks comprising clay, silt and sand mudstone which formed 56 to 66 million years ago in the Palaeogene Period. This bedrock is overlain by alluvial deposits of clay, silt, sand and gravel which formed in the Quaternary Period. Boreholes from the site indicate clayey made ground to a depth of 1.1 m overlying superficial deposits of alluvium, comprising gravelly clays, which extended to 4 m depth beyond which the bedrock was encountered (SLR 2010)
- 2.1.4 Desk-Based Archaeological Assessment of the site was prepared for the site in 2015 established the baseline archaeological context of the site and reference should be made to that document for the full archaeological background (RH 2015). In summary, while the site lies within the defined *Archaeological Priority Area* of Eastcote there are no recorded Designated or non-Designated cultural heritage assets within the proposed development area, although there is the potential for sub-surface archaeological remains being present where they have not been destroyed by previous development on the site. There is limited artefactual evidence for activity in the wider area (eg from Ruislip Archaeological Priority Area) in the prehistoric and Roman periods. The settlement of Eastcote itself dates back to at least the mid-13<sup>th</sup> century. During the medieval period the land to the south of Eastcote Road was open fields and to the north of the road was common grazing. The area was part of the Manor of Ruislip and the park pale and ditch (CH01) which enclosed Ruislip Park which was mentioned in the Domesday Survey (1086) as a 'Park for Woodland Beasts' is located in the northwest of the study area approximately 450 m from the proposed development site and is a Scheduled Monument. A number of buildings in Eastcote have origins in this period and are related to settlement and farming in the area and the non-nucleated village of Eastcote is recognised as a hamlet by 1323 AD (CH19) with a focus on High Road. The cartographic evidence from the mid-18<sup>th</sup> century

onwards shows the site as fields between the road and the River Pinn, until the construction of the petrol station in the 20<sup>th</sup> century.

### 3. AIMS

3.1.1 The aims of the archaeological evaluation proposed in this WSI are to:

- establish the presence/absence of archaeological remains that may affect the detail of the redevelopment proposals;
- determine the extent, condition, nature, character, date and significance of any archaeological remains encountered;
- establish the nature of pre-modern activity on the site;
- identify any artefacts relating to the occupation or use of the site;
- provide further information on the archaeology of the site from any archaeological remains encountered;
- inform any potential need for further archaeological mitigation works and assist in their design.

The potential and significance of any archaeological deposits located will be assessed according to the research priorities such as set out in the *English Heritage Research Agenda* (English Heritage 2005) or any more local or thematic research priorities such as *A Research Framework for London's Archaeology* (MoLAS 2003) as necessary.

## 4. METHODOLOGY

- 4.1.1 The proposed archaeological works will comprise the excavation of three evaluation trenches.
- 4.1.2 These works will be undertaken by Rubicon Heritage Services UK Ltd who will ensure that Health & Safety requirements are adhered to. The depth of trenches will be assessed and the requirement for stepping out made by the on-site archaeologist depending on ground conditions. Any extension of trenches will be excavated taking into account the most up to date health and safety requirements, the location of buried services data provided by the client, and on-site constraints.
- 4.1.3 All work will be carried out in accordance with the *Standard and Guidance for Archaeological Field Evaluation* (CIfA 2014), the *Management of Archaeological Projects 2* (English Heritage 1991), the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (English Heritage 2006), and the Greater London Archaeology Advisory Service (GLAAS) *Guidelines for Archaeological Projects in Greater London* (GLAAS April 2015).

### *Evaluation trenches*

- 4.1.4 Three trenches will be excavated (one 10 m x 1.6m and two 7.5 m x 1.6m) will be located as shown on Figure 2. These trenches are being positioned in order to evaluate the archaeological potential of these parts of the site which seem to have been less disturbed by previous activity.
- 4.1.5 Excavation areas will be set out on OS National Grid (NGR) co-ordinates using GPS. The position and size of trenches may be adjusted on site to account for services and other constraints, with the approval of GLAAS. The final 'as dug' areas will be recorded on a general site plan compiled at an appropriate scale.
- 4.1.6 Ground reduction will be undertaken by a 12-14 tonne 360 degree tracked excavator or JCB with a flat-bladed grading bucket, removing any overburden until the first archaeological horizon is exposed. Should modern hardstanding still be present on site a breaker and toothed bucket may be employed to remove this material within the footprint of the trenches. The trench will be excavated to expose the full depth of deposits above the natural geology. Should deeply stratified deposits be encountered they may require modification of approach to satisfy the aims of the project but not compromise the integrity of the remains. This will take place in consultation with GLAAS. Thereafter, any identified deposits will be cleaned manually to define their extent, nature, form and, where possible, date. Following completion of all excavation and recording, the trench will be efficiently backfilled but will not be resurfaced. Backfilling will only take place once the trenches have been monitored and signed off by GLAAS.

- 4.1.7 All information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record to identify and illustrate individual features. All recording will be by Rubicon Heritage Services standard method and will be undertaken on pro forma record sheets. Rubicon Heritage Services has adopted the Museum of London Recording Manual which is issued to all sites as standard. All contexts, special finds and environmental samples will be given unique numbers. Any waterlogged wood, bone or metallurgical samples taken will also receive unique numbers. Where possible, data will be collected and stored digitally and in a format suitable for long term storage by the Archaeological Data Service (ADS). Primary records will be available for inspection at all times.
- 4.1.8 Archaeological features will be excavated and recorded according to the normal principles of stratigraphic excavation, and each archaeological context will be recorded separately by means of a written description. The stratigraphic relationships of each context will be recorded. Rubicon Heritage Services *pro forma* record sheets will be used throughout. An index will be kept of all record types. All areas stripped will be recorded even if no archaeological deposits have been identified.
- 4.1.9 Sufficient EDM/Total Station survey will be taken to allow all features to be located accurately with relation to the National Grid and Ordnance Datum. Spot heights will be taken on deposits and features and their location recorded on the plan. Individual features will be planned at 1:20 where additional detail is required. Sections and profiles of each feature sampled will be drawn at 1:10 or 1:20, depending on the size of the feature. All plans, sections and profiles will be related to Ordnance Datum, in metres.
- 4.1.10 Cross-sections will be recorded by means of a measured drawing at an appropriate scale. The height of a datum on the drawing will be calculated and recorded. The locations of cross-sections will be recorded either on the site plans, or relative to the site grid. Cut features will be recorded in profile and plan at an appropriate scale and their location accurately identified.
- 4.1.11 All drawn records will be clearly marked with a unique site number, and will be individually identified. The scale of the plan will be recorded. All drawings will be drawn on dimensionally stable media. All plans will be drawn relative to the site grid and at least two grid references marked on each plan.
- 4.1.12 An adequate photographic record of the excavation will be compiled using digital photography. Site photography will be by high resolution (7 megapixel or greater) colour DSLR photography. Photography will include general site shots, shots of each trench, and shots of individual features and groups of features. All photographs will include a suitable

photographic scale and will be recorded on a photographic register detailing as a minimum the subject, feature number, location and direction of each shot.

- 4.1.13 Decisions made on the methods and strategies for sampling features will be based upon the nature and extent of any deposits when and where they are revealed. This will be reviewed once any surviving archaeology is revealed. In accordance with the *Standard and Guidance for Archaeological Field Evaluation* (CIfA 2014), the evaluation has been designed to be minimally intrusive and minimally destructive to archaeological remains. Sample excavation of archaeological deposits will be limited and minimally intrusive, sufficient to achieve the objectives identified above, and at this stage there is no requirement to sample all archaeological features encountered. Where appropriate, excavation will not compromise the integrity of the archaeological record, and will be undertaken in such a way as to allow for the subsequent protection of remains either for conservation or to allow more detailed investigations to be conducted at a later stage of archaeological mitigation.
- 4.1.14 Artefact collection will be carried out in accordance with the finds retrieval policies of the London Archaeological Archive and Research Centre (LAARC), as the LAARC is the primary recipient for all archaeological material in Greater London. All identified finds and artefacts will be retained according to the stated selection, retention and disposal/discard policies appropriate to the material type and date. Discard policies will be agreed in advance with the GLAAS advisor. All artefacts from excavated contexts will be retained, except those from features or deposits of obviously modern date. In such circumstances, sufficient artefacts will be retained in order to elucidate the date and/or function of the feature or deposit. Any earlier residual artefacts of potential archaeological/historical value from modern features will be retained.
- 4.1.15 All retained finds and archaeo-environmental samples are to be treated and conserved in accordance with the English Heritage guidance document *A Strategy for the Care and Investigation of Finds* (English Heritage, 1995) and the UKIC's document *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC, 1990) and to standards agreed in advance with the LAARC. They will be exposed, lifted, processed, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in *General Standards for the Preparation of Archaeological Archives deposited with the Museum of London* (Museum of London, 1998)... Assessment and analysis of finds and archaeo-environmental samples will be undertaken, as necessary.
- 4.1.16 Finds will be treated in the following way:
- All finds, where appropriate, will be retained from each archaeological context excavated;

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- All finds, where appropriate, shall be washed;
- All Pottery, and other finds, where appropriate, shall be marked with the, the site code (ECSE) and context number;
- Finds work will be undertaken in line with the Institute for Archaeologists Guidelines for Finds Work;
- Environmental Sampling will be guided by Environmental Archaeology (English Heritage centre for Archaeological Guidelines, 2001/02).

*Environmental Sampling*

- 4.1.17 An appropriate sampling strategy will depend upon the survival and condition of the deposits identified. If necessary the English Heritage Regional Science Advisor and GLAAS Advisor will be consulted for site-specific guidance at the earliest possible opportunity. Samples will be collected for technological, pedological and chronological analysis as appropriate. The collection and processing of environmental samples will be undertaken in accordance with English Heritage guidelines (English Heritage 2011).
- 4.1.18 In the event of substantial cultivation horizons being encountered, particularly those constituting a 'dark earth', monolith and bulk samples will be taken from sealed samples, which will be assessed for pollen and plant macrofossils. It is proposed that the floatation of suitable samples be undertaken off site following completion of the fieldwork.
- 4.1.19 Any bone recovered from stratified deposits will also be subject to assessment; analysis will be limited to material that can provide metrical, ageing or sex information.

*Human Remains*

- 4.1.20 In the event of discovery of any human remains, it is proposed that they will be left in situ, covered and protected until the client, Coroner and the GLAAS Archaeological Advisor acting on behalf of the Local Planning Authority have been informed. Where groundworks will unavoidably disturb them they will be fully recorded, excavated and removed from the site subject to compliance with the relevant Ministry of Justice Licence which will be obtained by the appointed archaeological contractor.
- 4.1.21 Should it be necessary to excavate human remains, all excavation and post-excavation will be in accordance with current legislation, Historic England guidance and the standards set out in ClfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. The final deposition of human remains following analysis will be subject to the requirements of the Ministry of Justice Licence.

*The Treasure Act*

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- 4.1.22 All finds identified in the *Treasure Act* (1996) and the *Treasure (Designation) Order* (2002) as being treasure will be recorded, removed to a safe place and reported to the local Finds Liaison Officer or Coroner according to the procedures relating to the Act. Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.

*Reporting & Archiving*

- 4.1.23 Within four weeks of completion of the onsite works a fieldwork report will be produced covering this element of works and submitted to the client for approval. Following this the report will be submitted for approval to GLAAS, the Archaeological Advisor acting on behalf of the LPA. Immediately following client approval, a hard copy and one in PDF/A format of the report will be sent to the Greater London Historic Environment Record and an OASIS record form completed. In order to fulfil public outreach requirements, a copy of the report will also be submitted to the London Archaeological Archive and Research Centre (the LAARC), the Local Studies Library, and to the Local Archaeological or Historical Society in Hillingdon Borough, if relevant discoveries are made.
- 4.1.24 The preparation of the report will follow the Standard and Guidance published by the Chartered Institute for Archaeologists (CIfA 2014) and will be in accordance with GLAAS standards and so the report will therefore contain, at a minimum, the following:
- Cover page (which must include site name and address, grid reference, site code, type of work, author and project manager, date and revision number, and planning references);
  - Non-technical summary;
  - Introduction;
  - Planning background including relevant references;
  - Relevant historical and archaeological background;
  - Geology and topography of the site;
  - Research aims and objectives;
  - Methodology of site-based and off-site work;
  - Results, including specialist reports where relevant;
  - Plans, sections and photographs as appropriate;
  - Harris Matrix;
  - Assessment of the results against the original expectations;
  - Statement of potential of the archaeology;
  - Conclusions and recommendations for an appropriate mitigation strategy;
  - Publication and dissemination proposals, if relevant at this stage;
  - Archive details, including date of deposition;
  - Bibliography;
  - Acknowledgements;
  - GLSMR/OASIS form.

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- 4.1.25 If significant archaeological remains or structural evidence are recorded as part of either the initial archaeological work or any subsequent mitigation, the programme of archaeological work will be guided by a subsequent *Written Scheme of Investigation* which will also include post-fieldwork assessment, and appropriate analysis, publication and archiving.
- 4.1.26 Ceramic reference collections (for pottery, clay tobacco pipes, building material fabric and brick form), housed at the LAARC, will be referred to for descriptive and analytical purposes in order to ensure that terminology is consistent across the region. The British Museum and other local museums may also hold important comparative collections of material and these too will be consulted as appropriate.
- 4.1.27 Contingency will be made to ensure that contracts are in place, and that availability is confirmed, with external specialists to cover all necessary processing, conservation and specialist analysis through assessment and analysis stages of the project. The analysis of the finds and environmental data will be undertaken by appropriate specialists and Rubicon Heritage under the overall direction of the Project Archaeologist. These will include:
- Paul Blinkhorn                      Saxon, medieval and post-medieval pottery
  - Jane Timby                              Roman pottery
  - Emily Edwards                        Prehistoric pottery
  - Nicky Rogers                          Small finds
  - Alison Kyle                            Small Finds
  - Jacqui Somerville                    Lithics
  - Carmelita Troy                        Osteoarchaeologist
  - Scott Timpany                        Archaeobotanist and charcoal specialist
  - Dr Keith Wilkinson                Geoarchaeology
- Further specialist may be required depending on the artefacts/ materials identified.
- 4.1.28 Further contingency will be made for scientific dating of suitable deposits if revealed and in the event that no further mitigation work is undertaken within the Site.
- 4.1.29 The results of the archaeological work will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (English Heritage, 2006a), and compiled in line with ADS digital records
- 4.1.30 The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the CIfA in that organisation's code of conduct (CIfA, 2014b).
- 4.1.31 Publication of the results, at least to a summary level (to a relevant journal) and beyond if justified, will take place in the year following the archaeological fieldwork.

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- 4.1.32 Should no further work be required, then an ordered, indexed, and internally consistent site archive will be prepared and deposited in accordance with *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation* (Archaeological Archives Forum 2007). However should further work beyond the evaluation stage be required it will be guided by subsequent *Written Schemes of Investigation*.
- 4.1.33 The site archive will be deposited with the LAARC within six months of the completion of fieldwork, subject to any additional stages of archaeological mitigation. The complete project archive will be prepared and arrangements for the deposition of the archive on completion of the project will be made in accordance with *Guidelines for the preparation of excavation archives for long-term storage* (UKIC 1990) and the *General Standards for the Preparation of Archaeological Archives Deposited with the Museum of London* (Museum of London, August 2009, updated 2013).

## **5. PROGRAMME & MONITORING**

- 5.1.1 The field team will consist of a maximum of up to 3 staff (1 x Project Leader, 2x Archaeologists). It is expected that fieldwork will take up to 5 days to complete on site.
- 5.1.2 The overall management of the various stages of the project will be Mark Collard MCIfA, who will oversee all phases of the archaeological programme of works, through to its completion. Day to day responsibility however will rest with the Project Leader who will be on-site throughout the project.
- 5.1.3 The GLAAS Archaeological Officer will be notified at least one week prior to commencement of the on-site archaeological works so that an initial site visit can be arranged and subsequent monitoring agreed for the remainder of the works.
- 5.2.4 Rubicon Heritage Services Limited will keep the GLAAS Archaeological Officer informed on the progress of works, including post-excavation works, as necessary.
- 5.2.5 Any variations to the WSI shall be agreed with the GLAAS Archaeological Officer, in writing, prior to them being carried out.

## 6. ADDITIONAL INFORMATION

- 6.1.1 A Risk Assessment and Method Statement for the archaeological evaluation trenching works will be produced and submitted to the client for review prior to the progression of such works.
- 6.1.2 The following statutory provisions and codes of practice will be adhered to where relevant:
- All statutory provisions and by-laws relating to the work in question, especially the *Health and Safety at Work etc. Act 1974*;
  - The Chartered Institute for Archaeologists *Code of Conduct*;
  - The Chartered Institute for Archaeologists *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.

## 7. REFERENCES

CIfA, 2014. *Standards and Guidance for archaeological field evaluation*. Chartered Institute for Archaeologists

GLAAS (Greater London Archaeology Advisory Service) 2015. *Standards for Archaeological Work*. London Region, English Heritage.

RH (Rubicon Heritage) 2015. *Desk Based Archaeological Assessment for a proposed development at Eastcote Service Station, Hillingdon, Greater London*, Rubicon Heritage unpublished client report

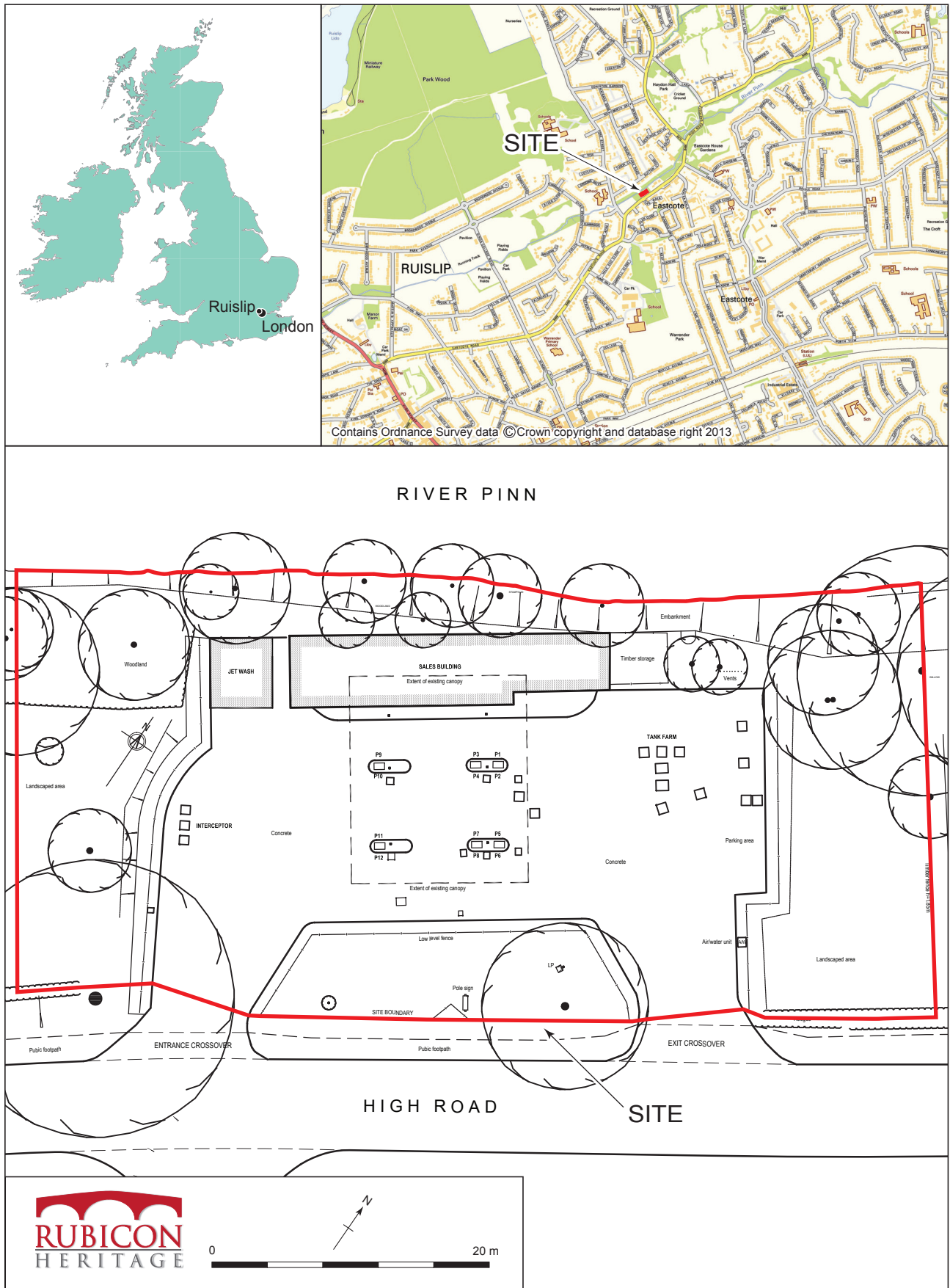


Figure 1 - Proposed development at High Road, Pinner, Eastcote:  
Site location and existing layout (after client drawing).

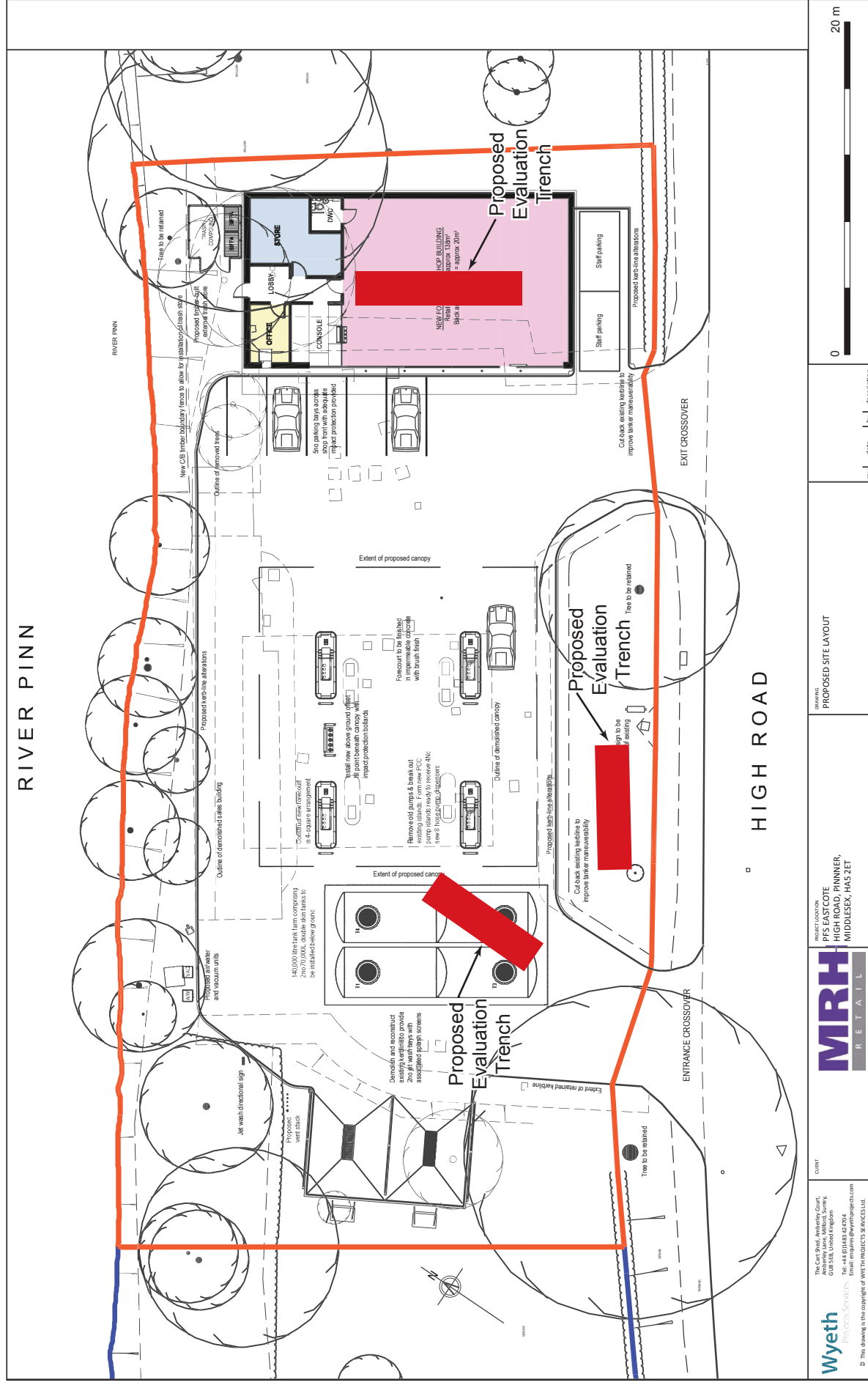


Figure 2 - Proposed site layout (after client drawing) showing proposed evaluation trenches.