**METHOD STATEMENT FOR THE GEOARCHAEOLOGICAL INVESTIGATION OF LAND AT THE**

**FORMER POSTAL SORTING OFFICE TWICKENHAM**

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**Brief Description of Work**

1. This methods statement covers the proposed geoarchaeological field investigations at the Former Postal Sorting Office in Twickenham (National Grid Reference: TQ 154 279).
2. 17 geotechnical boreholes have previously been put down across the site (Figure 1). These boreholes indicate a sequence of London Clay overlain by River Terrace Gravels overlain by Alluvium and Made Ground. In boreholes BH2, BH3, BH6 and BH8, between 1.3 and 2.5m of Made Ground directly overlies River Terrace Gravels; these sequences are not considered to be of geoarchaeological interest. Similarly, only a thin horizon (20-40cm) of inorganic alluvium was recorded in boreholes BH4, BH5, BH12 and BH16 between approximately 1.2 and 2.2m BGL. Slightly thicker horizons of inorganic alluvium (50-100cm) were recorded in boreholes BH7, BH9, BH14, BH15 & BH18 between approximately 0.8 and 3.5m BGL. However, two geotechnical boreholes (BH10 and BH11) contain sequences with some geoarchaeological potential. In BH10, the alluvium that separates the River Terrace Gravels from the Made Ground comprises a 60cm thick unit of clayey peat between 1.8 and 2.4m BGL. In BH11, a 70cm thick unit of Peat occurs at greater depth between 4.4 and 5.1m BGL. Indeed, this latter unit may be of pre-Holocene age as it occurs beneath 1.4m of sands, gravels and clays (potentially River Terrace Gravels). None of the other geotechnical boreholes record such deposits at this depth or within the Gravels.
3. Geoarchaeological field investigations are being conducted to provide a detailed record of the sedimentary sequence across the site, and to obtain samples through these deposits for further work (if necessary). Such work might include the assessment and/or analysis of sub-fossil biological remains.
4. As a consequence of the findings from the geotechnical investigations, a programme of geoarchaeological test-pits is proposed to clarify the nature of the sub-surface stratigraphy across the site, and in particular to gain a better understanding of the nature of the clay peat and peat units recorded within the region of BH10 and BH11. The geoarchaeological test-pits have therefore been targeted on these two locations (southern end of Trench 7 and eastern end of Trench 12) with a further two located in Trench 2 and 9 to represent a good spatial distribution of sequences across the site.
5. The test-pits in Trenches 2, 9 and 12 will be excavated down to the surface of the River Terrace Gravels. The test-pit in Trench 7 will be excavated to the maximum depth of the machine arm to investigate the nature of the deeper peat in this area of the site. Sediment will be removed by machine in spits up to 250mm thick and following the interfaces between sedimentary units wherever possible.
6. The excavation of each test-pit will be monitored by an experienced geoarchaeologist, and the sedimentary sequences recorded, noting colour, composition, boundary changes and inclusions. 3-Dimensional co-ordinates for each test-pit will be provided by Archaeology South East. This data will be integrated with the geotechnical records to produce a model of the sub-surface stratigraphy.
7. If significant sequences are encountered in Trenches 2, 9 or 12, the test-pit will be stepped down to a maximum depth of 3.5m to allow geoarchaeological sampling (assuming it is safe to do so). This sampling will include taking continuous sequences of bulk samples and or column samples suitable for future palaeoenvironmental laboratory-based investigation of the sedimentary sequences, sub-fossil biological remains, notably pollen, wood, plant remains, insects, invertebrates (Ostracoda and Mollusca) and micro-vertebrates (small mammals, fish, amphibians, reptiles, birds) and dating (OSL and/or radiocarbon).
8. If significant deposits are encountered in Trench 7, they are likely to be too deep to allow safe access. If this is the case, the <250mm thick spit samples will be collected for the same future palaeoenvironmental laboratory-based investigation as listed above. If it is not possible to collect satisfactory samples using this method, it may be necessary to put down a geoarchaeological borehole, and recommendations will be made for this work to take place at a subsequent stage.
9. Should sediments with the potential to contain *in situ* Palaeolithic material be recorded, the appropriate <250mm thick spits will be inspected/sieved through a 10mm mesh to retrieve artefacts and coarse ecofacts. A record of the estimated proportion of each sedimentary unit sieved will be made. Spoil from each spit will be kept separately to allow correlation of artefacts to spits. Any intact activity areas such as knapping floors, if detectable, will not be excavated or disturbed at this stage. If such remains are encountered test pitting will be stopped and the County Archaeologist will be informed immediately.
10. All collected samples will be labelled with the site name, location, depth and orientation (where applicable), and returned Reading University for cold storage to prevent sample deterioration.
11. A report detailing the results of the geoarchaeological field investigations will be produced. This will include:
12. A preliminary interpretation of the site formation processes and depositional environment. The field-based descriptions will provide important, primary information on the nature of the depositional environment through time. Sand and gravel indicates deposition with a high energy fluvial environment, such as braided river system, during cold climatic conditions. Fine-grained mineral sediment, such as silt or clay indicates deposition within or on the margins of a lake, pond or river. Soil and peat formation indicates the formation of semi-terrestrial or fully terrestrial conditions resulting in the colonisation of vegetation adapted to the specific local conditions.
13. Integration of the new geoarchaeological borehole records and any relevant existing geotechnical and archaeological records to produce a site-wide model of the stratigraphic architecture. The integration of the combined Quest boreholes with the existing geotechnical borehole records and any available BGS Borehole records will allow the creation of a more accurate deposit model for the site. This deposit model will be created using Adobe Illustrator, Rockwork 2006 & ArcGIS, and will assist in the reconstruction of site formation and transformation processes, such as alluvial sedimentation and peat formation.
14. Recommendations will be made for future palaeoenvironmental laboratory-based investigation (assessment and analysis) of the sedimentary sequences, sub-fossil biological remains, notably pollen, wood, plant remains, insects, invertebrates (Ostracoda and Mollusca) and micro-vertebrates (small mammals, fish, amphibians, reptiles, birds) and dating (OSL and/or radiocarbon).

**Figure 1: Detailed site map incorporating the location of the proposed geoarchaeological test-pit, archaeological trenches and previous geotechnical boreholes put down across the Former Postal Sorting Office, Twickenham**

