Archaeological Written Scheme of Investigation

Building P1

King's Cross Central
General Partner Ltd

September 2012

King's Cross

Contacts

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1 Introduction

1.1 Objective of this Written Scheme of Investigation

This Written Scheme of Investigation (WSI) for archaeological investigation on the site of Building P1 at Kings Cross Central has been commissioned from Museum of London Archaeology (hereafter MOLA) by the client, King's Cross Central General Partner Ltd.

The document supports the submission of reserved matters details for Building P1 and related public realm, pursuant to the King's Cross Central (KXC) Outline Planning Permission dated 22 December 2006 (ref. 2004/2307/P).

Volume 2, parts 9 and 10 of the Environmental Statement (ES) submitted with the KXC outline planning application comprise the Cultural Heritage Specialist Report and Archaeology Specialist Report, respectively. Part 10 includes an account of the known archaeological conditions within KXC, and determines archaeological potential. It discusses mitigation objectives incorporated within the development proposals based on anticipated effects.

This document provides the strategy for archaeological investigation and mitigation of the potential effects on Plot P1 and associated public realm, as reported in the ES. It commits to undertaking appropriate specified archaeological works in a manner prescribed by the method statement contained herein. As such, the document fulfils the requirements of Condition 56 of the Outline Planning Permission in so far as it applies to the P1 site.

1.2 Site Context and Development Proposals

The approved KXC scheme comprises the phased, mixed-use development of the former King's Cross Railway Lands to include commercial, cultural, educational and residential uses, together with new public realm and associated infrastructure. In this context, the proposed scheme for Plot P1, seeks to bring forward a co-located primary school and school for the hearing impaired, community facilities and commercial unit and residential apartments within a single building. The proposals also incorporate podium level landscaped areas for residents and a playground at street level for the schools. A new area of public realm is proposed between Plots P1 and P2 to provide vehicular access to the building's basement and the primary school, and pedestrian access to the school and affordable housing entrance. Details of the ground works associated with these proposals are set out in Section 1.5 of this WSI. Figure 1 shows the location of the site in the wider context of the KXC development

The site lies in the northern part of the KXC development. It is bounded to the north by Handyside Street and to the east by Canal Reach and Building T1. To the south is the Regent's Canal, and eventually, the refurbished gas holders (previously located in the southern part of the KXC site). The centre of the site lies at National Grid reference 529950 198930.

As shown on Figure 1, a small area in the south-east corner of the site overlaps with the existing Western Goods Shed. This received Conservation Area Consent for demolition in 2006 (ref. 2004/2321/C). The consent included a condition (Condition 3) requiring the submission of a WSI for building recording prior to demolition works being carried out. That condition has now been discharged pursuant to an approval dated 1 August 2012. (ref. 2012/3149/C). All other relevant conditions attached to the Conservation Area Consent have also been discharged and therefore it is intended to proceed with demolition of the building in autumn 2012.

Plot P1 is a relatively flat site, with existing levels ranging from +25.27m AOD in the west to +26.94m AOD in the east.

1.3 KXC Outline Planning Permission

Condition 56 of the Outline Planning Permission dated 22/12/06 (ref. 2004/2307/P) requires a programme of 'Archaeological Investigation and Mitigation' to be carried out during the implementation of the scheme. Details of Condition 56 are as follows:

> *No development shall take place in relation to each phase of Development as notified under condition 21 until the applicant, their agent or successors in title has secured the implementation of a programme of archaeological work in accordance with a written scheme for investigation which has been submitted by the applicant and approved by the local planning authority.*
>
> *Reason: Important archaeological remains may exist on the site. The requirements of this condition are to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development and to minimise damage to them in accordance with the Environmental Impact Assessment, in accordance with the policy B8 of the London Borough of Camden Replacement Unitary Development Plan 2006.*

This condition was imposed as a means of securing the mitigation measures identified and proposed within the KXC Environmental Impact Assessment and the resulting ES.

Generally for the Central Area of the KXC development (as defined in the Cultural Heritage Specialist Report and Archaeology Specialist Report in the ES), an Archaeological Watching Brief process was determined to be the most appropriate mitigation measure, due to large areas having been just used as railway sidings

This document sets out the strategy to ensure that archaeological objectives are achieved in order to satisfy Condition 56 in respect of groundworks for Building P1 and the associated public realm. The proposed strategy has been formulated following discussion with the client and the English Heritage (GLAAS) Archaeological Advisor to the London Borough of Camden.

1.4 Archaeological Background

1.4.1 Summary History of the Site

The findings of the KXC Environmental Impact assessment and other research indicate that no pre-industrial aged archaeological remains have been found on site. Furthermore, the history of development shows the site to have 'no', or just local, archaeological potential related to all pre-industrial periods.

The character of activity on the site relating to the pre-industrial period can be summarised as follows:

- Wooded landscape in prehistoric times with increasing small scale clearance for farming from the Neolithic period onwards.
- Agricultural landscape from the Roman through to the post-medieval period on the eastern flanking slope of the Fleet Valley.
- Shallow quarrying for weathered clayey soils for brickmaking during the 17th and 18th century

The mid-19th century creation of the Great Northern Railway Goods Depot saw the following activities develop in the northern part of the Kings Cross Central site:

- In the north, the terracing back of the gentle south facing slopes to create a sub-horizontal ground surface.
- In the south, the raising of ground level with spoil from the north end of Kings Cross Central, to complete the level landscape as it approaches the Regent's Canal.
- Construction of an arrangement of buildings servicing the railway industry.
- Construction of a vast network of railway tracks throughout the northern part of the site.

Reference to historic plans and maps shows that the Building P1 site was partially covered by railway tracks which passed across the north-west corner and eastern side of the site (see first edition OS map - Figure 2). The historic maps also show several large rectangular structures in the Building P1 submission boundary. However, the structures are not depicted in the same way as the brick buildings on the first edition OS map which are shown with thick walls and are labelled (for example, the offices just to the west of the site) and therefore may represent open-sided sheds or canopies.

Railway functions continued on the site from the mid 19th century through to the period after World War II with some damage sustained by structures as a result of German bombing. The period between the 1960s–1980s marked a decline of the railway for the transportation of goods, resulting in the phased demolition of some of the buildings in the northern part of the KXC site and the removal of most of the railway sidings, including those which covered the Building P1 site. Save for the listed buildings within the Eastern Goods Yard, the Western Goods Shed and the Fish and Coal building, all residual railway related infrastructure was subsequently removed as part of the CTRL works between 2001 and 2003.

1.4.2 Structures/features in the Vicinity of the Proposed Works

Western Goods Shed
The Western Goods Shed was constructed between 1897–1899 on the site of the former coal and stone basin. It is a brick built structure that combined load bearing walls with a steel frame. There is a lower and upper level, whilst offices were built on

the western side and in the roof area above the upper level. There are cast iron columns at the lower level, supporting concrete jack arched ceiling with composite girders. At the upper level the supporting elements are of lighter construction in the form of composite pillars supporting lattice beams and a truss roof. The roof runs from south-west to north-east and there are two gable roof ends at the southern façade, whilst the northern end, added in 1913–15, has a saw roof, running west to east. The building utilises the west wall of the adjacent Western Coal Drop building for its eastern wall, which had been strengthened and heightened for this purpose. The building is functional in appearance and has surviving features from it's industrial past. In parts, the building is in a state of decay in particular at its northern end. The building will be demolished before commencement of works on Building P1.

1.5 Outline of Proposed Groundworks

As noted in Section 1.2, the proposals include a mix of predominantly educational and residential uses within a single building. The development also provides for a single-storey basement across the majority of the site which would accommodate plant and car/cycle parking for the residential units above, and hard landscaping between Buildings P1 and P2. A small strip of temporary landscaping and a vehicle turning area will also be provided to the south of P1.

The required ground works are set out in detail in the submitted Earthworks and Remediation Plan but can be summarised as follows:

- Excavation of trial pits, bore holes and standpipes associated with the geotechnical site investigation (Fig 4 – as originally proposed; Fig 5 – as dug and monitored);
- Removal and stockpiling/disposal of existing surface finishes;
- Basement excavation across the majority of the Building P1 footprint (see Figure 3);
- Installation of piles under the building footprint and the base of the temporary tower crane;
- Minor works associated with earth movements to achieve final site levels in the public realm areas;
- Excavation for the proposed Building P1 to the underside of the ground/basement slabs; and
- Installation of service ducts.

It is the excavation of the basement that is likely to provide the greatest opportunity for archaeologically investigating any surviving historic ground conditions or structural remains.

1.6 Status of Document

This document forms the Written Scheme of Investigation for archaeological investigation and mitigation in respect of the development of Building P1 and associated public realm as required under condition 56 of the KXC Outline Planning Permission. The archaeological objectives set out in Section 2 of this document are based on the anticipated archaeological potential within the area of the proposed works, as assessed at the outline planning stage and set out in the KXC ES.

This document sets out the methodologies which will be followed during the on-site works and during the post-excavation analysis and reporting stages. These will follow the Standards and Code of Practice laid down by the Institute for Archaeologists.

1.7 Museum of London Archaeology

Museum of London Archaeology is a company limited by guarantee registered in England and Wales with company registration number 07751831 and charity registration number 1143574. Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED.

2 Objectives of the archaeological work

2.1 General considerations

2.1.1 Watching brief

The purpose of an archaeological watching brief as defined by the Institute for Archaeologists (IFA, 2008) is to

"record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of Conduct, Code of approved practice for the regulation of contractual arrangements in field archaeology, and other relevant by-laws of the Institute for Archaeologists."

A watching brief is further defined by the Institute for Archaeologists as:

"a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is the possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

This definition and Standard[1] do not include chance observations, which should lead to an appropriate archaeological project being designed and implemented, nor do they apply to monitoring for preservation of remains in situ."

In all cases, a watching brief will be intended:

- *to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works.*

- *to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.*

A watching brief is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The objective of a watching brief will be intended to establish and make available information about the archaeological resource existing on a site.

[1] Institute for Archaeologists (IfA) 2008a. *Standard and Guidance for an Archaeological watching brief*

2.1.2 Excavation

An archaeological excavation as defined by the Institute for Archaeologists (IFA, 2008c) will:

> *examine and record the archaeological resource within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of Conduct, Code of approved practice for the regulation of contractual arrangements in field archaeology, and other relevant by-laws of the IFA. It will result in one or more published accounts and an ordered, accessible archive.*

Excavation is:

> *a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.*

2.2 Site specific objectives and research questions

This statement sets out the methods used and approaches taken in dealing with the archaeological resource of the site. The detailed methodology is set in the context of the methods and approaches which are considered most appropriate for an Archaeological Watching Brief on sites in Greater London, in accordance with the advice contained in the English Heritage (GLAAS), *Archaeological Guidance Papers 1-5* (revised 1998) and English Heritage Centre for Archaeology *Guidelines* where appropriate.

All research is undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology*, 2002

Any data obtained during the proposed engineering/groundworks will be interpreted alongside other information obtained elsewhere in the northern part of the KXC site to provide a holistic picture of archaeological conditions across the development site.

The archaeological brief seeks to establish where, if at all, archaeological deposits may survive (presence/absence), recording where necessary, and to ensure that the proposed groundworks do not involve the destruction of any archaeological deposits of national significance. In addition, the brief can be used to clarify a number of more general research questions, specifically:

- The level of natural topography;
- Evidence of activity pre-dating the first phase of industrial development in this part of the site and the earliest deposits identified;

- Evidence for mid-19th century site preparation and levelling work associated with the earliest stage of the Goods Yard development;

- Evidence for below-ground remains associated with structures and features shown on historic maps of the goods yard.

3 Watching brief methodology

3.1 General site methodology

3.1.1 Properly arranged, a watching brief will cause minimal disruption to site works and will take place within agreed constraints. Watching briefs are not recommended in circumstances where important or complex archaeological remains are liable to be discovered, resulting in a risk of conflict between the need to record archaeological finds and the need to allow building works to proceed.

3.1.2 Initial location and breaking-out of areas to be monitored in the watching brief will be monitored by MOLA staff.

3.1.3 In areas of archaeological interest the excavation and removal of deposits will proceed according to the reasonable advice and guidance given by the attending archaeologist.

3.1.4 Archaeologists will be allowed reasonable access in relevant areas of groundworks, so that deposits can be examined and recorded.

3.1.5 Trenches may require temporary shoring and groundworks might need to be temporarily re-scheduled in order to provide a safe environment for archaeological recording.

3.1.6 Provision will be made, at the earliest stage of development programming, for specified blocks of time to be made available for unrestricted archaeological access to areas of groundworks.

3.1.7 In addition to the excavation of man-made deposits, some assessment of any exposed 'naturally deposited' levels will be necessary, especially if these are organically preserved and laid down within archaeological timescales; for example alluvial deposits.

3.1.8 If deep cut features are found, such as pits and wells, they may need to be excavated to a greater depth than anticipated in the construction works, provided this is consistent with site safety.

3.1.9 Any finds of human remains will be left *in situ*, covered and protected. If removal is essential it can only take place under appropriate Faculty jurisdiction, Ministry of Justice (Coroner's Division) licence, environmental health regulations, coroner's permission, and if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act 1981 or other local Act.. Prior written notice will also be given to the local planning authority. It will be necessary to ensure that adequate security is provided.

3.1.10 Where archaeological remains are to be preserved *in situ* they will be adequately protected from deterioration. Normally this involves covering or wrapping the deposits and features in a geo-textile such as Terram and sealing this with a layer of sand or other suitable soft materials.

3.1.11 All finds of gold and silver, or other objects definable as 'treasure', will be removed to a safe place and reported to the local Coroner according to the procedures of the Treasure Act 1996 and the Treasure (Designation) Order 2002. 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.

3.1.12 The contractors will inform MOLA at least one week in advance of the start of the proposed groundworks.

3.1.13 A MOLA Site Supervisor will monitor the work and record any archaeological remains revealed in the appropriate manner (plans, sections, field notes and/or pro-forma 'context sheets'). Observations will be transformed onto the Ordnance Survey National Grid Projection and heights measured in metres above Ordnance Datum, by direct measurement from verified Ordnance Survey control points. Any necessary photographic records will be made using digital or conventional media as deemed appropriate. All recording will be carried out to the format and standards detailed in the *Archaeological Site Manual* (MoLAS, 1994).

3.1.14 If significant archaeological deposits survive in any area of the proposed groundworks, the contractors will allow the MOLA archaeologist(s) to record deposits as required.

3.1.15 On completion of the fieldwork a *Watching Brief Report* will be written. Where appropriate, the report will include specialist reports from, for example, Environmental and Finds team members. A short summary of the results of the work will be submitted to the Greater London SMR and NMR (using the appropriate OASIS archaeological report form) and for publication in the appropriate academic journal. It may only be necessary, in fact, for the excavation to be reported in the 'Excavation Round-up' of the *London Archaeologist*. Such summary publication will meet the "minimum standards" set out in Appendix 7 of English Heritage's document *The Management of Archaeological Projects* (1991) and derive from a "phase 2 review" as defined therein.

3.2 Site-specific methodology

3.2.1 The programme of archaeological investigation comprises three principal phases of work.

- Watching brief during geotechnical site investigation works

- Strip and map of areas of dense piling to the extent significant archaeological remains are identified during the geotechnical watching brief and
- Watching brief during basement excavation, pile probing and other groundworks

PHASE1 –Watching Brief During Geotechnical Site Investigation

3.2.2 The first stage in the archaeological evaluation of the site was undertaken during planned geotechnical investigations of the site which were to comprise 28 trial pits, 9 observation trenches and four boreholes (Fig 4). The locations had been primarily driven by geotechnical requirements with an even distribution of test pits over most of the site avoiding existing hard standing.

3.2.3 In addition to the geotechnical pits, ten of the pits were to be extended to 5m long where the proposed test pit locations had coincided with structures shown on the historic OS maps to allow the investigations a provide a better understanding or the underlying archaeology (Fig 4).

3.2.4 The geotechnical investigations and archaeological monitoring have now been completed (the as dug location of the test pits are shown on Fig 5). The results of the archaeological monitoring can be summarised as

The test pits revealed infrastructure associated with the Western Goods Yard at King's Cross. A wall foundation running north-east–south-west was recorded in the south-east of the site and is thought to be a retaining wall for a railway siding directly related to the Western Goods Shed, which was constructed in c 1897. Railway tracks were also recorded, the locations of which can be identified on OS maps dating from the 1870s to the 1960s. Across much of the site, a surface of granite setts set into concrete was recorded; this surface is also thought to be associated with the further development of the Western Goods Yard in the late 1890s, but had been resurfaced with tarmac and continued to be utilised until the late 20th century. No archaeology predating the industrial development of King's Cross in the mid19th century was identified and much of the infrastructure on site can be attributed to 1897 onwards. No evidence was found of the buildings visible on the 1895 OS map which predated the construction of the Western Goods Shed, and it is likely that these structures had been truncated away by the concrete and granite sett surface.

3.2.5 The test pit sizes measured from 2.5m to 7m long and were between 0.6m and 1.0m wide and were typically between 3 and 4m deep surpassing archaeological needs but meeting geotechnical requirements. A number of pits were extended to lengths of up to 7m for archaeological purposes. The observation trenches are primarily designed to look for services; they were approximately 1m deep revealing little of archaeological interest.

3.2.6 For each of the pits and trenches a written/drawn and, where necessary, photographic record of at least one section was compiled. Where pits exceeded 1.2m in depth all recording was from outside the pit.

3.2.7 A report has been prepared although there were no archaeological remains of such significance that they require further targeted investigation. The report has also assessed the potential impact of the new development proposals (including any related groundworks) on these areas where archaeology has been identified or where such survival can be reasonably anticipated. The report *Geotechnical watching brief and archaeological evaluation report* (MOLA July 2012) will be issued to English Heritage and archived in accordance with the requirements of this document.

3.2.8 The results of the Phase 1 watching brief will be used to inform the detailed scope of archaeological work required during the Phase 2 and 3 outlined below although due to the limited results of the Phase 1 it is now considered that the Phase 2 will not be required.

PHASE 2: Strip and Map.

3.2.1 Phase 2 of the archaeological strategy has been retained in this document for completeness to outline our original approach to the programme of archaeological work. However, the results of Phase 1 have demonstrated that there will no longer be a requirement for phase 2 to be implemented.

3.2.2 In areas of archaeological survival, as identified in the Phase 1 watching brief report, where proposed pile density is high (eg Fig 4 at intersection of gridlines B, C, D, E and 9, 10, 11) the area will be stripped to the archaeological horizon before commencement of piling (including pile probing). Machine excavation to archaeological levels will be by machine fitted with a ditching bucket under the supervision of an archaeologist.

3.2.3 When machining of the area has been completed, a team of MOLA archaeologists will be mobilised to clean the area using appropriate hand tools and any archaeological remains will be excavated and recorded using standard archaeological procedures as details in section 3.1 above.

3.2.4 Further investigation of archaeological levels will be carried out by hand unless the use of machines is specifically requested by MOLA. Manual recording in the form of measured plans, sections and record sheets will be undertaken.

PHASE 3.1: Watch Brief During Basement Excavation

3.2.5 A watching brief will be maintained during ground reduction for the basement.

3.2.6 If significant archaeological remains are encountered during the excavation works, these will be exposed as far as is practicable within the area of the groundworks. A team of MOLA archaeologists will be mobilised to clean the area using appropriate hand tools and the remains will be excavated and recorded.

3.2.7 Where necessary, a local grid or baselines will be set up and tied into the Ordnance Survey by the MOLA Geomatics team.

3.2.8 Further investigation of archaeological levels will be carried out by hand unless the use of machines is specifically requested by MOLA. Manual recording in the form of measured plans, sections and record sheets will be undertaken.

PHASE 3.2: Watching Brief During Pile Probing and Other Groundwork

3.2.9 Archaeological monitoring of pile probing and general groundworks is unlikely to provide the same quality of archaeological results as Phase 2 strip and map or Phase 3.1 watching brief during ground reduction. However, useful archaeological results can be recovered during such works.

3.2.10 The monitoring archaeologist will maintain a safe distance from any operating machinery but will be allowed reasonable access to the relevant areas of groundworks to allow the examination and recording of any significant structures or deposits of interest.

3.2.11 In areas of archaeological interest, the excavation and removal of deposits will proceed according to the reasonable advice and guidance of the attending archaeologist who will be allowed time and access to record archaeological remains when reasonable and safe to do so.

3.2.12 Any temporary works associated with the excavation and recording activity will be supplied by the Principal Contractor. This includes safety guard rails, access equipment, lighting, duckboards and any shoring/battering required within the excavation areas to provide a safe environment for archaeological work.

4 General methodology

4.1 Recording systems

A unique-number site code (**KGC12**) has been agreed with the Museum of London Archaeological Resource Centre.

The recording systems adopted during the investigations will be fully compatible with those most widely used elsewhere in London, and those required by the Archive Receiving Body, the Museum of London.

The site archive will be so organised as to be compatible with other archaeological archives produced in the Museum of London. It will follow the Museum of London, *General Standards for the preparation of archaeological archives deposited with the Museum of London*, (2009). This requirement for archival compatibility extends to the use of computerised databases.

A 'site plan', based on the Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO), will be prepared.

Plans and sections will be drawn on polyester based drawing film at a scale of 1:10 or 1:20. 'Single context planning' is preferred on deeply stratified sites.

4.2 Survey (Geomatics)

MOLA Surveying Standards: Standards of *precision* and accuracy are derived from the accepted standards of accuracy as used by chartered surveyors and defined by the Royal Institution of Chartered Surveyors. The implementation and maintenance of survey standards within MOLA is the responsibility of the Geomatics Manager and the Geomatics team. MOLA Geomatics is responsible for the capture and processing of all survey data, both on and off-site.

Establishment and maintenance of Grids: Planned archaeological data will be recorded with reference to a horizontal MOLA site grid or to baselines, and a vertical temporary Ordnance Datum OD point, implemented and maintained by the Geomatics team. The Site Supervisor(s) will be responsible for relating all planned records to these.

Tying in to National Grid: Sites where significant archaeological remains are uncovered will be tied in to the Ordnance Survey National Grid (OSGB36) by GPS or by establishing or tying-in to existing OS control networks. Tying site grids to features identified on OS mapping will only be used for sites without significant archaeological remains and where no qualitatively preferable survey solution is possible.

Survey Data: collection to archive: Survey data is collected using total stations and differential GPS receivers. . Survey data is processed using the following software: LGO, SCC, SDRMap, TGO, GeoSite, AutoCAD, ArcGIS and Oracle.

4.3 Photographic records

The overall site record will include photographs made using, as appropriate, high end digital, 35mm, medium and large format cameras. The photographic record will illustrate all significant phases, structures, important stratigraphic and structural relationships, and individual items of interest, including artefacts.

All site photographs, except 'working shots', will include a photographic scale of appropriate size.

When film is used, originals will be archivally processed and stored, contact prints will be produced and mounted on contact cards. Cards will be returned to the site supervisors for annotation during the excavation programme. Colour transparencies will be mounted and stored in archival conditions.

A computerised index will be compiled, relating image number, site photograph number, context numbers, excavation area, and other relevant information.

At the request of the client a file of site photographs may be produced and copied digitally to DVD or similar for them.

4.4 Treatment of finds and samples

It is unlikely that there will be many finds or samples removed from the site. Treatment, analysis and subsequent handling of all finds and samples will be carried out by MOLA Specialists.

Where necessary, the strategy for sampling archaeological and environmental deposits and structures (which can include soils, timbers, animal bone and human burials) will be developed by MOLA in accordance with English Heritage and IFA guidelines. Advice will be sought from the LPA Archaeological Advisor and the Regional Archaeological Science Advisor throughout the project, as appropriate. Subsequent on-site work and analysis of the processed samples and remains will be undertaken by MOLA Specialists.

Any organic samples will be subject to appropriate specialist analysis. There may be a requirement to submit timbers to dendrochronological analysis and to process some samples to provide C14 dating. Other forms of specialist analysis may also be appropriate.

The finds retrieval policies of the Museum of London will be adopted. All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of the curatorial departments of the Museum of London.

All finds and samples will be treated in a proper manner and to standards agreed in advance with the Museum of London. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the United Kingdom Institute for *Conservation's Conservation Guidelines No. 2* and the Museum of London's *Standards for the Preparation of Finds to be permanently retained by the Museum of London*. Metal objects will be x-rayed and appropriate objects then selected for conservation.

The programme of ceramic dating and analysis will be undertaken by MOLA Specialists.

Before commencing site works, MOLA will confirm in writing to the Local Authority that arrangements are in hand to cover all necessary processing, conservation and specialist analysis and storage of finds and samples.

4.5 Ownership of finds

Whereas ownership of any finds on the site lies with the landowner, it is necessary that the landowner gives the necessary approvals, licences and permissions to donate the finds to the Museum of London, to enable that body to carry out its obligations to curate the finds, in perpetuity, as part of the archaeological Archive from this site.

These approvals, licences and permissions shall be *either* confirmed in the Agreement and Contract regulating the archaeological works and/*or* confirmed by the completion of the relevant Deed of Transfer form (draft appended).

The client (or their agent) will make arrangements for the signing of the Deed of Transfer Form by the client or, if the landowner is different to the client, by the landowner.

Notwithstanding the above, subsequent arrangements may be made if required between the landowner and/or the client and the Museum for the conservation, display, provision of access to or loan of selected finds in or near their original location.

4.6 Reports and archives

The integrity of the site archive will be maintained. All finds and records will properly be curated by a single organisation, and be available for public consultation. The finds from excavations provide an immensely valuable research archive, but the bulk of the material is of little or no financial worth.

Appropriate guidance set out in the Museums and Galleries Commission's *Standards in the Museum Care of Archaeological Collections* (1992), and the Society of Museum Archaeologists' draft *Selection, Retention and Dispersal of Archaeological Collections* (1992), will be followed in all circumstances.

The minimum acceptable standard for the site archive is defined in the *Management of Archaeological Projects* (1991) Section 5.4 and Appendix 3, and discussed in detail in the Museum of London, *General Standards for the preparation of archaeological archives deposited with the Museum of London*, (2009). The archive will include all materials recovered (or the comprehensive record of such materials as referred to above) and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent before transfer to the Museum. It will also contain a site matrix (if generated), a site summary and brief written observations on the artefactual and environmental data. Copyright of the written archive will be vested in the Museum.

The Museum of London's guidance on the needs of digital storage and archival compatibility will be sought and followed.
United Kingdom Institute for Conservation *Guidelines for the preparation of excavation archives for long term storage* (1990), and the Museum of London, *General Standards for the preparation of archaeological archives deposited with the Museum of London*, (2009) will be followed.

Pursuant to these agreements the archive will be presented to the archive officer or relevant curator of the Museum within 12 months of the completion of fieldwork (unless alternative arrangements have been agreed in writing with the local planning authority).

After the completion of the fieldwork a period of off site analysis of the records and photographs will be undertaken, along with a programme of documentary archive research top an appropriate level. The findings from the fieldwork and the archive research will be given in detail in the subsequent report, to be issued eight weeks after the completion of the site work, which will then be issued to the client. It is proposed that the results of the building survey are included in the Eastern Coal Drop building report; a stand-alone report will be produced for the watching brief element of the work.

A short summary of the results of the work will be submitted to the Greater London SMR and NAR (using the appropriate archaeological report forms), and for publication in the 'Excavation Round-up' of the London Archaeologist.

It is possible that there will be a requirement by the Local Planning Authority's designated representative/advisor that the results of the survey are to be made available to the academic world in two ways.

First, by means of basic database completion; MOL Archaeology stores details of all sites it excavates in a digital form, to permit inclusion of the site data in any future academic researches into the development of London.

Second, by means of publication in either a dedicated site-based monograph report (produced by MOL Archaeology), or in one of the relevant national or period-based archaeological journals, and/or as a site summary in the London Archaeologist, within one year (or as near as possible subject to availability of space in appropriate journal) of the completion of work on site.

It is likely that the local planning authority and / or English Heritage will require the results of this work, and the results of any analysis arising from this phase of work, to be integrated into a publication combined with other development plots at Kings Cross Central.

5 Timetable of works, staffing and attendances

5.1 Timetable and staffing

The timing and overall duration of the archaeological watching brief on the groundworks will be determined by the contractor's programme and the nature and extent of any surviving remains. It is envisaged that one archaeologist will monitor the groundworks, with up to three more coming in to assist with any recording work if required. Other archaeological specialists may be called in if necessary.

5.2 Attendances

For watching briefs, the degree of contractor attendance required by MOLA tends to be minimal as archaeologists are in fact attending the on-site works. However, some provision for welfare and working conditions will need to be anticipated. Some or all of the following attendances may be required.

- Shoring in all excavations which exceed 1.20 metres in depth, installed in accordance with Safety Regulations and maintained throughout the occupancy of the area in question.
- Safety guard-rails and suitable access points into the site and areas of excavation, away from any site traffic and machinery.
- Ladders into all areas of excavation when the excavated depth requires such access.
- If ground-water is encountered in the trenches, adequate pumps will be required to remove it in order to complete the excavations.
- A suitable security system to operate overnight, weekends and holidays.
- If necessary, an appropriate number of tungsten halogen lamps (500W minimum) with 110-volt transformer, adequate cabling, and power supply.
- Labourers to assist in the removal of spoil from deeper areas of excavation.

6 Funding

The developer has already agreed to fund the Phase 1 archaeological watching brief and the costs for this work have been agreed in a separate document. The resources for the Phase 2 and Phase 3 archaeological works will be agreed when the detailed scope of works has been defined following completion of the Phase 1 watching brief and confirmation of the construction design and methodology.

7 Welfare, Health & Safety Method Statement

A Welfare, Health & Safety Method Statement has been prepared by MOLA to accompany this Written Scheme of Investigation but will be printed out and supplied separately as appropriate.

8 Bibliography

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Figure 1: Site location

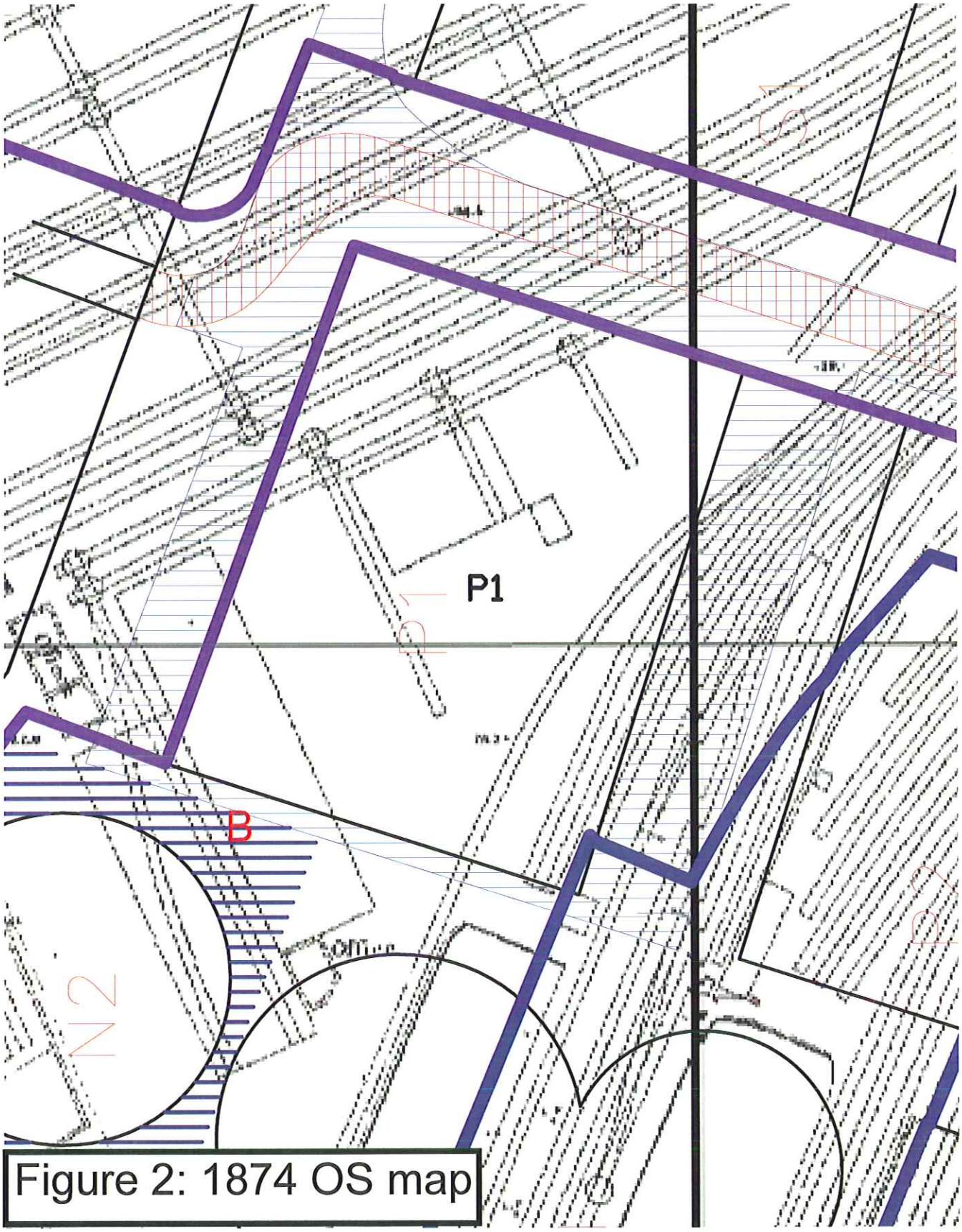
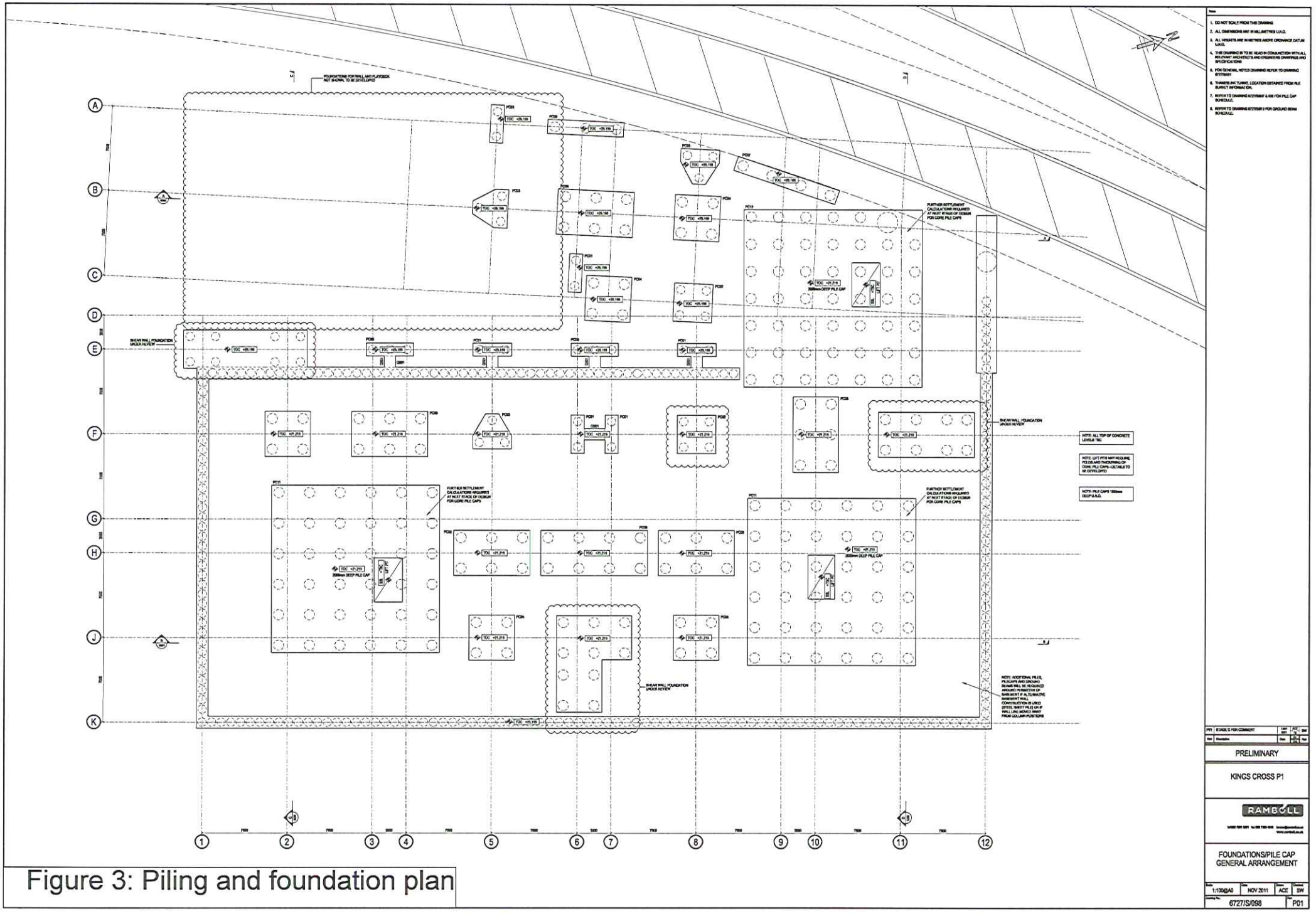


Figure 2: 1874 OS map



1. DO NOT SCALE FROM THIS DRAWING
2. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
3. ALL HEIGHTS ARE IN METRES ABOVE ORDNANCE DATUM U.N.O.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS
5. FOR GENERAL NOTES DRAWING REFER TO DRAWING 6727/S/001
6. THAMES INK TUNNEL LOCATION OBTAINED FROM RLE SURVEY INFORMATION.
7. REFER TO DRAWING 6727/S/097 & 099 FOR PILE CAP SCHEDULE.
8. REFER TO DRAWING 6727/S/015 FOR GROUND BEAM SCHEDULE.

Rev	Description	Date	Drn	Chk	Appd
P01	STAGE D FOR COMMENT	13/11/2011	ACC	SW	

PRELIMINARY

KINGS CROSS P1

RAMBOLL

FOUNDATIONS/PILE CAP GENERAL ARRANGEMENT

Scale	Date	Drawn	Checked
1:100@A0	NOV 2011	ACC	SW

Drawing No. 6727/S/098 Rev P01

Figure 3: Piling and foundation plan

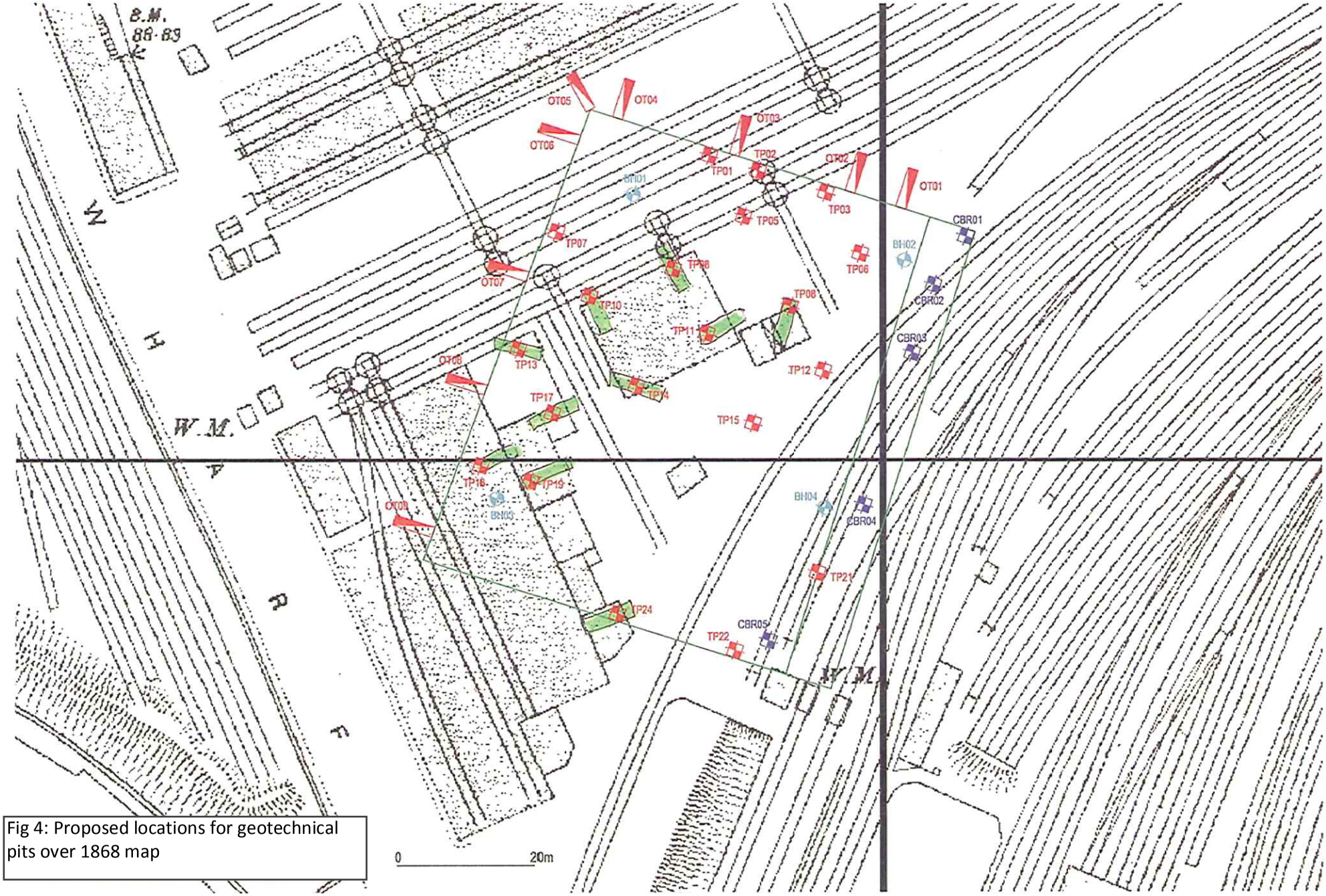


Fig 4: Proposed locations for geotechnical pits over 1868 map

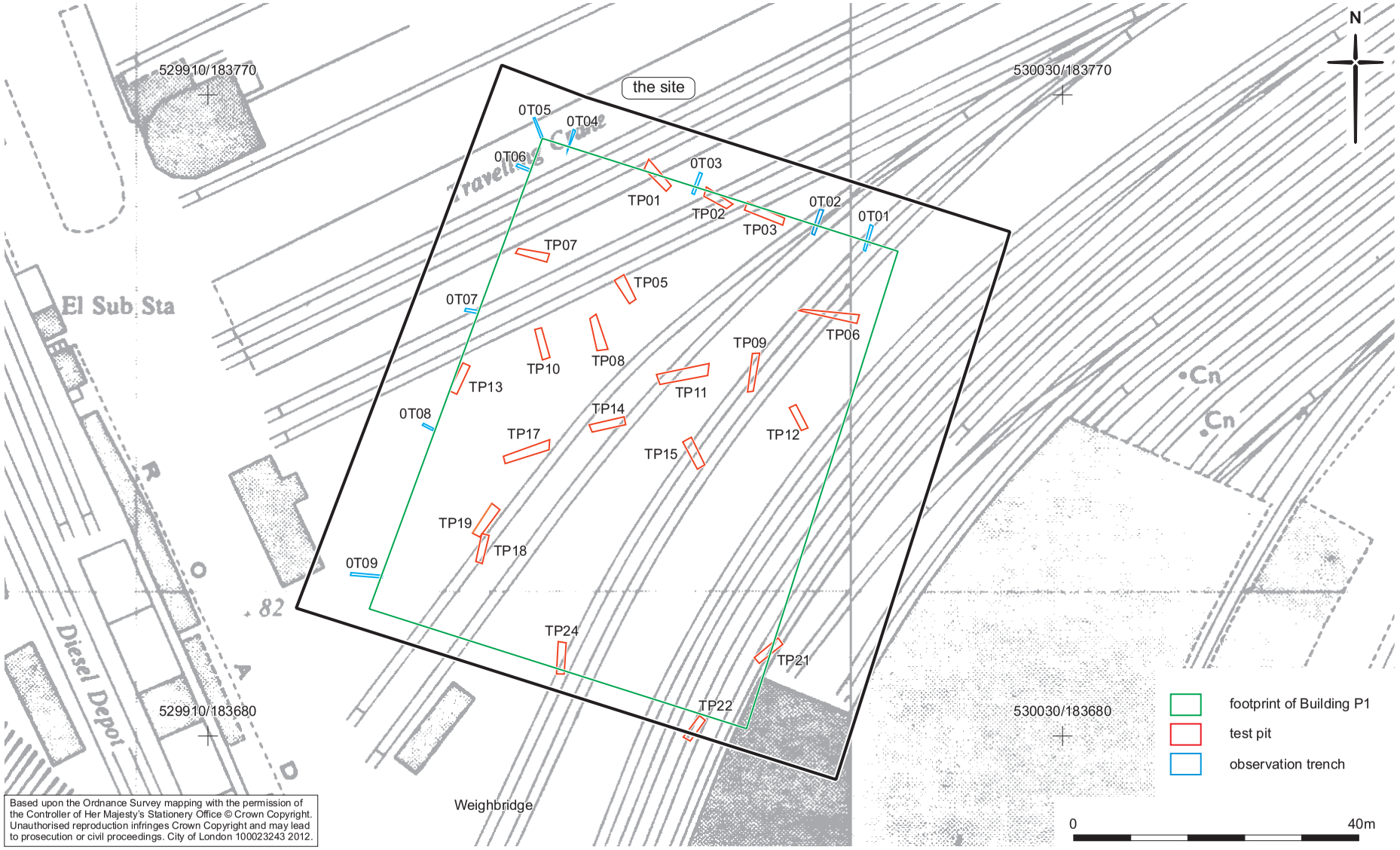


Fig 5: Geotechnical pits as dug with archaeological monitoring over 1868 map

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