

Argent (King's Cross) Ltd

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**King's Cross Central**

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Archaeological Written  
Scheme of Investigation -  
Specification

Shared Service Yard and  
Access Ramp

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Access Ramp

June 2007

**IHCM**

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This report takes into account the particular  
instructions and requirements of our client.  
It is not intended for and should not be relied  
upon by any third party and no responsibility is  
undertaken to any third party.

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# 1 Introduction

## 1.1 Objective of this Specification

Enabling Works are being brought forward within the King's Cross Central development to form a Shared Service Yard and Access Ramp immediately to the west of King's Cross Suburban Station. Details of these Enabling Works are being submitted pursuant to conditions attached to the Outline Planning Permission (ref. 2004/2307/P).

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

This specification provides the strategy for archaeological investigation and mitigation of the potential effects of the Shared Service Yard and Access Ramp, as reported in the Environmental Statement. It commits to undertaking appropriate works and directs the contents of the Written Scheme of Investigation provided by the commissioned archaeological contractor. As such, this specification fulfils in part the requirements of Condition 56 of the Outline Planning Permission (ref. 2004/2307/P).

This specification does not address the above-ground recording and monitoring of the built heritage assets, as explained further in Section 1.2 below.

## 1.2 Planning Conditions

Conditions 55 and 56 of the Outline Planning Permission require programmes of 'Building Recording and Analysis' and 'Archaeological Investigation and Mitigation' respectively to be carried out during the implementation of the scheme.

In compliance with Condition 55, building recording and analysis is to be carried out in advance of development. This work is described separately in the IHCM specification 'Building Recording and Analysis: Shared Service Yard and Access Ramp'.

On this basis, this present specification considers only the archaeological effects of the proposed Enabling Works.

Condition 56 (Archaeological Investigation and Mitigation) requires:

*"the implementation of a programme of archaeological work in accordance with a written scheme of investigation"*

For the Shared Service Yard and Access Ramp Enabling Works an Archaeological Watching Brief process is considered to be the appropriate mitigation measure, as identified within the Environmental Statement. This specification sets out the strategy proposed for the Archaeological Watching Briefs, which will be in place during the engineering works.

## 1.3 Summary History of the Site

When King's Cross Station opened in 1852, the area of the Enabling Works was largely occupied by tightly-packed terrace houses in generally narrow streets, although Upper Edmund Street, serving the station and soon afterwards the Great Northern Hotel, was wider. This road was later renamed Cheney Street, and subsequently Cheney Road. In 1863 the Great Northern Railway constructed three single-track tunnelled connections with the newly-built Metropolitan Railway to the south. Two were on the east side of the station and one on the west, within the Enabling Works area – this was the Hotel Curve Tunnel, on a descending line diverging westwards towards the westbound Metropolitan Railway between the Great Northern Hotel and the Western Range building. This tunnel was last used by railway trains in the late 1970s.

Subsequent congestion of the station platforms led to the construction in 1875 of two further tracks with platforms outside the western wall of the main station, to serve local suburban traffic. This area, with its own independent roof, was known as King's Cross Local.

Continuing pressure on both passenger and freight accommodation led to further expansion to the west of the station. The area was cleared of its original housing, and was occupied instead by dock sidings for milk, horses, and carriages.

The southern part of this area, now known as the Milk Dock site, has been cleared and is currently occupied as a construction site for the Underground Station Redevelopment. North of this has been cleared and is a surface car park. Much of the former railway building fabric has been demolished and removed, although the flank walls of the Hotel Curve Tunnel remain, together with vestiges of the former Milk Dock walls abutting the Suburban Trainshed of King's Cross Station and other building fabric. The tunnel now accommodates services.

Figure 1 shows the site in 1914, with the areas of the Shared Service Yard and the Access Ramp indicated by solid lines.

## 1.4 The Character of the Engineering Works for Construction of the Shared Service Yard and Access Ramp

The engineering works for the construction are described in detail elsewhere within this submission; the relevant works affecting archaeological potential will include:

1. Trial pitting to establish the precise location of services and obstructions buried in the ground.
2. Sinking of one or more bore holes to provide design data in respect of ground conditions and foundation designs.
3. Site preparation including the removal of any surviving upstanding features and removal of obstructions in the way of proposed ground works.
4. Construction and forming of temporary works.
5. Cut and fill earthworks to new formation level including the removal and treatment of any contaminated soils encountered.
6. Repositioning of shallow and deep buried services.
7. Laying of infrastructure, piling and foundation materials.

The nature of these works is described in greater detail in Section 2 of this document. This is to be read with the plans and sections elsewhere in this submission.

## 1.5 Archaeological Watching Brief Process

A series of Archaeological Watching Briefs will accompany the engineering works, providing archaeological information to satisfy the aforementioned Planning Condition 56. Section 3 of this specification defines an Archaeological Watching Brief. Figure 2 defines the area to be covered by the watching brief (provide plan).

Paragraph 10.8.1 and Table 10.8 of the Environmental Statement sets out the mitigation measures proposed. It confirms that Archaeological Watching Briefs would be in place where any engineering ground works would occur which would encounter made ground from the 19th Century or earlier, or River Fleet Alluvium.

The Watching Brief will conform to standards required by the Institute of Field Archaeologists and the guidelines of the Greater London Archaeological Advisory Service of English Heritage. The Archaeological Contractor shall be a member of the Institute of Field Archaeologists.



Ms Diane Walls, the present archaeological officer of English Heritage for the London Borough of Camden, will monitor the site and post-site works on behalf of English Heritage and the London Borough of Camden.

IHCM (International Heritage Conservation and Management) is the Archaeological Consultant to the Employer for this work, Argent (King's Cross) Limited.

**Note**

This specification is one of a series prepared for undertaking Archaeological Watching Briefs in the King's Cross Central scheme. They have common content in regard to general requirements for site and post-site works, together with specific requirements for each development site, based on the nature of the site, the archaeological potential and the works proposed.

## 2 Details of Enabling Works

The design for the construction of the Shared Service Yard and Access Ramp is detailed within other submission documents. Works to achieve this scheme will comprise those referred to in Section 1.4 above. These are explained further below.

To assist in relating the present-day site topography to its former railway and other uses, Figure 1 is included in this Specification. It shows the site in 1914, with the areas of the Shared Service Yard and the Access Ramp indicated by solid lines.

### 2.1 Trial Pitting and Borehole Investigations

The engineering designs for the new construction will require a programme of geotechnical investigations. These would aim to investigate the shallow ground conditions (made-ground and alluvium) with observation trial pits.

The location of the pits would result from the carrying out of an engineering desk study and then be related to where there are concerns and questions in respect of insertion of temporary and permanent new works and ground contamination. The pits would likely be 1 to 4 m deep and shored so the pits can be hand logged.

One or several boreholes are anticipated to provide geotechnical data about the soil formations and hydrology, and as such would likely be more than 20 m deep.

### 2.2 Removal of Old Foundations and Obstructions

The new Shared Service Yard and Access Ramp are to be formed in an area of complex ground conditions resulting from more than 200 years of development and change, the latest (modern) phase of which can be presently observed and relates to an arrangement of 'portacabin' facilities for the LUL construction sites to the south. It is expected that the following types of old/redundant features may be present:

- Backfilled basements
- Basement walls, including those of the Milk Dock
- Railway equipment and related elements of building fabric
- Brick and concrete foundations likely to be of various forms and sizes
- Wells and cess pits (open or backfilled)
- Metal water, gas and hydraulic power pipes
- Sewer brick/stoneware pipes
- Backfilled WWII craters
- Older road fabrics
- Elements of commercial/industrial plant
- Deep undifferentiated fill related to the construction of the retaining wall to the east
- Modern services for the present site facilities.

### 2.3 Treatment of Contaminated Soils

Given the industrial and commercial history of King's Cross, it is possible that there are still localities of 'hot-spots' of soil contamination. The contamination, if it is related to 19th century industrial processes,

may have a heritage interest, especially where such contamination is associated with structural remains and where the contamination may need treatment. Treatment could include on-site encapsulation and / or removal off site.

### 2.4 Repositioning of Shallow and Deep Buried Services

The construction of the Shared Service Yard and Access Ramp may necessitate diversion of existing buried services and insertion of new ones, related both to existing buildings and street functions and also in anticipation of future redevelopment. Shallow infrastructure works may be located above soil formations of archaeological interest. Similarly, services inserted in trenches below 0.5 m deep, and in areas where there may be physical obstructions and ground contamination, could traverse through archaeologically interesting ground conditions.

### 2.5 Laying of Infrastructure, Piling and Foundation Materials

The new Shared Service Yard and Access Ramp will involve deep excavation to achieve the required depth of basement construction. It is likely that excavation would be to 1 m below the basement slab level - the assumed formation level.

It is the new basement areas that would have most effect on potential archaeological remains.

The following engineering impacts are anticipated following site preparation works:

- Phased construction of temporary or permanent retaining walls
- Piling from ground level or basement level
- Phased bulk excavation of made-ground and shallow natural sub soils to new formation level
- Basement slab construction.

Given the removal of all made ground within the basement envelope an archaeological mitigation programme is required.



### 3 Archaeological Objectives of the Watching Brief

#### 3.1 Definitions

##### 3.1.1 Archaeological Watching Brief

An Archaeological Watching Brief, as recommended by the Institute of Field Archaeologists (IFA, 1994), refers to:

*"A formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site on land 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."*

In all cases, the watching brief is 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 a treatment to a satisfactory and proper standard."*

*"to establish and make available information about the archaeological resource existing on a site."*

The Institute stresses that an Archaeological Watching Brief is not intended to reduce the requirement for excavation or preservation of known or probable deposits, and is intended only to guide, not to replace, any requirement for contingent excavation or preservation of possible deposits.

##### 3.1.2 Archaeological Heritage Value

Based on the understanding of the history of the area as considered and presented in the Environmental Statement, the archaeological mitigation strategy will be to undertake Archaeological Watching Briefs as defined above. The strategy responds to the anticipated archaeological features having minor to moderate heritage value, as defined in Table 10.2 of the Environmental Statement.

#### 3.2 General Archaeological Watching Brief Objectives at King's Cross Central

The Archaeological Watching Briefs will collect and interpret data from the several site-based engineering components of the Shared Service Yard and Access Ramp scheme, as described in Sections 1.4 and 2 of this document. The archaeological objectives shall be related to:

1. Determining the character of the site and landscape prior to first-phase industrial development, including information about the rural topography with evidence of Prehistoric to Post-Medieval land use; the exploitation of soils for brick making; early commercial and residential development as part of the rapidly expanding early 18th century urban fabric of London.
2. The mid 18th to early 19th century 'early' urban and commercial land uses prior to the insertion of the great mid 19th century railway buildings and associated railway facilities.
3. The character of foundations and soils of mid to late 19th century, related to residential and commercial occupation and continual urban change processes.
4. Adding archaeological data to that obtained for CTRL and LUL development works that have been taking place for the last few years at King's Cross and St. Pancras.
5. The Watching Brief will also provide specialist advice to the Developer (Argent), the Engineer, and the Principal Engineering Contractor on made ground and historic engineering features during the site works, if and when discoveries are made. The Archaeological Watching Brief will

monitor site works to reduce the chance of accidental damage occurring to retained heritage buildings.

6. Updating Archaeological Watching Brief objectives from time to time, responding to findings and interpretation discussions between all concerned parties.
7. A report on the findings is planned to be issued within one month following the completion of site works.

#### 3.3 The Archaeological Watching Brief Programme

##### 3.3.1 During Engineering Site Investigations

It is likely that the Archaeological Watching Brief will initially be for the engineering site investigation(s) into existing services, and this work will inform future archaeological site-based tasks.

##### 3.3.2 During Removal of Ground Obstructions

No Archaeological Watching Brief will be required during the removal of the present hard landscaping, down to approximately 0.5 m below ground level, as this material is assumed to be formed of modern materials of no heritage value, as defined in Table 10.2 of the Environmental Statement. However, standing walls, particularly Milk Dock walls, will be observed and recorded down to their foundations.

The major phase of archaeological site works will relate to those works occurring deeper than 0.5 m below present ground level. Hard obstructions are most likely to be foundations of former buildings and therefore may have a heritage interest. Soft spots would include backfilled basements, cess pits and wells, these likewise having a heritage documentation value. At the present time it is not possible to be precise as to where such local features are likely to occur.

The removal of the obstructions and replacement with engineered fills (where required) would be mechanically achieved, and would therefore affect the ground around the treatment locations.

At the Shared Service Yard and Access Ramp the Archaeological Watching Brief will add data to the heritage documentation of the above-ground structures.

#### **4 Actions by the Archaeological Contractor Prior to and During the Development Programme**

The entire area is within the King's Cross Conservation Area. All statutory requirements relating to work in a Conservation Area are to be complied with.

To satisfy Archaeological Watching Brief requirements, the appointed Archaeological Contractor shall:

1. Provide a Written Scheme of Investigation (WSI) for IHCM, for onward submission to the London Borough of Camden and English Heritage. This shall be approved in writing prior to any development work starting on site.
2. Provide a Health & Safety Plan under CDM Regulations and work to it.
3. Obtain an archaeological site code.
4. Be fully familiar with the heritage documentation undertaken by IHCM in the Environmental Statement produced for Argent (King's Cross) Limited – to be provided at tender.
5. Be familiar with archaeological site works carried out for CTRL and LUL at King's Cross and St. Pancras.
6. Be familiar with the conditions attached to the Planning, Listed Building and Conservation Area Consents associated with the King's Cross Central development.
7. Coordinate the fieldwork programme with Argent, the Engineer, IHCM and the English Heritage archaeological officer representing the London Borough of Camden.
8. Attend, unless otherwise agreed, all works that penetrate below the present hard landscape surfaces.
9. Generally advise the Principal Engineering Contractor on made-ground and structural features within it, related to the site history potentially spanning Prehistoric to Modern times. Advise on archaeological value of the heritage assets, with an assumption that only remains (including building fabric) of no and low value may be penetrated/removed without the agreement of IHCM and/or Camden/English Heritage.
10. Observe and document, from ground level, machine excavation without shoring and hand digging undertaken by the Principal Engineering Contractor.
11. Descend at agreed times pits and areas less than 1.2 m deep without shoring, and deeper pits with shoring, to observe, explore, photograph and document made ground and alluvial soil formations, structural remains of the various buildings and other archaeological remains.
12. Provide advice to the Principal Engineering Contractor on backfilling and reinstatement, ensuring protection of archaeological features and accurate historic reinstatement respectively.



## **5 Provisions to be Made by the Archaeological Contractor after the Site Works**

The following requirements are to be satisfied by the Archaeological Contractor:

1. Provision of a factual and interpretive report on the site works in respect of made ground and alluvial soil formations, structural remains, artefacts and ecofacts. The report shall conform to methods prescribed by 'MAP2', Management of Archaeological Projects draft 2 (English Heritage, 1991) and by English Heritage Greater London Division (English Heritage, 1998, Archaeological Guidance Papers 3 and 4). The report shall contain text, drawings and photographs as appropriate.
2. Provision of each agreed report in draft one month following the completion of site works, and the final reports one month after receiving comments on the drafts from IHCM.
3. Provision of a completed 'Online Access to the Index of Archaeological Investigation' form (OASIS form) to English Heritage.
4. Lodging of the site paper archive with the Museum of London. Artefacts are to be retained by the landowners or their nominated agency pending consideration of the potential for museum displays.

## **6 Provisions by the Principal Engineering Contractor and Developer in Support of the Archaeological Site Works**

### **6.1 General Developer Provisions**

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1. Office and temporary accommodation for the Archaeological Contractor.
2. Male and female washing and lavatory facilities for the Archaeological Contractor.
3. Secure storage for the Archaeological Contractor.
4. CDM Co-ordinator role for CDM Regulations.
5. Contract Manager.

### **6.2 General Contractor Provisions**

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1. Production of investigation and construction method statements that reference the integration of archaeological site works.
2. Right of legal entry to the site and preparation of the site ready for archaeological attendance.
3. All electricity and lighting necessary for archaeological equipment and working conditions.
4. Site induction to ensure safe working methods by archaeologists and approved visitors.

### **6.3 Technical Contractor Provisions**

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1. Allow inspection of and provide technical advice on services drawings.
2. With the Engineer or other client representative define all possible constraints that have to be taken into account and including those related to:
  - Nearby Listed buildings
  - Conservation Areas.
3. Dispose of the spoil from the agreed archaeological working areas, if and when necessary.
4. Provide geotechnical advice and information to aid archaeological works and interpretation programme.
5. Prepare and undertake break-out of 20th century structures and soils agreed with the Archaeological Consultant.
6. Provide all supportive works to excavations deeper than 1.2 m, where access is required and the excavation faces are not battered.
7. Break out all unnatural obstructions impeding archaeological works when requested by the Archaeological Contractor.
8. Provide, if necessary, tent covers over evaluation areas to be dug in winter conditions where very sensitive archaeological resources are encountered.
9. Provide labour for moving spoil away from evaluation areas, pits and trenches.
10. Provide labour for protecting archaeological surfaces when temporary works are being set in place, and for working pumps, etc.
11. Undertake any required reinstatement of the excavation areas incorporating as necessary special protective materials over important/fragile archaeological resources (Terram and/or sand). (In practice, little or no reinstatement will be required here, as the excavations will be continued down to formation level.)

## **7 The Archaeological Contractor nominated for the Watching Brief**

The Archaeological Contractor proposed for the archaeological Watching Brief is:

**Gary Brown**

Pre-Construct Archaeology Ltd

Unit 54 Brockley Cross Business Centre

96 Endwell Road

Brockley

London SE4 2PD

Tel: 020 7732 3925

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Or, alternatively, the Watching Brief may be undertaken by IHCM to satisfy special client requirements.



## 8    **References**

English Heritage. Management of Archaeological Projects. 1991.

English Heritage. Standards and Practices in Archaeological Fieldwork in London, Archaeological Guidance Paper 3. June 1998.

English Heritage. Archaeological Reports, Archaeological Guidance Paper 4. June 1998.

Institute of Field Archaeologists. Standards for Archaeological Watching Briefs. 1994.





**Figure 2**

Area to be covered by archaeological watching brief  
Nb Area may change according to exact nature of site works